Esi Awuah

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PROFILE

Bio data of Prof. Mrs. Esi Awuah

Vice-Chancellor

University of Energy and Natural Resources (http://uenr.edu.gh/vice-chancellor/)

Professor Mrs. Esi Awuah holds a BSc in Biological Sciences from the Kwame Nkrumah University of Science and Technology, Kumasi (KNUST) Ghana, MS in Environmental Science from the College of Environmental Science and Forestry Syracuse, NY USA and a PhD degree in wastewater treatment (Sanitary Engineering) from the UNESCO-IHE Water Institute Delft, Netherlands. She has over 24 years experience capacity building, consultancy services and providing leadership in water supply and environmental sanitation. She is currently the Director of SNOWS project for research capacity building in water supply, environmental health and sanitation involving 9 universities in Africa and Europe. She is also the Dean of the Faculty of Civil and Geomatic Engineering at KNUST. Before that, she was the Head of Department of Civil Engineering, KNUST, the Head of Department of Environment and Technology at the Institute of Science and Technology for Africa at KNUST. She is a member of the editorial board of the International Journal of Waste Management and Research and the Journal of the University of Science and Technology. She is also a member of the Scientific Advisory Board for SPLASH Project on water and sanitation in Africa and Mekong region, a Scientific Advisor to the International Foundation of Science (IFS) Accra City co-ordinator for SWICTH, an urban water improvement project in Ghana.

In addition to the above she has served a member of several national and international Committees and Boards and several publications to her credit

RESEARCH

Areas: Waste Management and Disposal · Nutrition and Dietetics · Water Science and Technology · Health, Toxicology and Mutagenesis · Infectious Diseases · Pollution

RESEARCH SUMMARY

75	978	18	34	1.07	11%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 75 publications listed below, 2004–2026. Field-weighted impact is the mean over the 74 works scored for it; 1.00 is the world average for works of the same field, type and year. 8 of the 74 papers scored for it are among the world's most cited tenth for their field, type and year.

PUBLICATIONS

Journal articles 72

1. Richard Komla Nyamador, Patrick Boakye, Sampson Oduro-Kwarteng, **Esi Awuah**, Richard Akwasi Buamah (2026). Adsorption of arsenic from gold mine wastewater onto iron oxide-coated sand and activated chars pyrolysed by the traditional-charcoal-production method. *Asian Journal of Water Environment and Pollution*. https://doi.org/10.36922/ajwep026180121
2. Richard Komla Nyamador, Patrick Boakye, Sampson Oduro-Kwarteng, **Esi Awuah** (2026). Ghana's mining legislation: An overview of how the small-scale and large-scale mining environment-related regulations compare. *Journal of Environmental Management*. https://doi.org/10.1016/j.jenvman.2025.128503

3. Dennis Ofori-Amanfo, Eugene Appiah-Effah, Barbara Gyapong-Korsah, **Esi Awuah**, Helen M. K. Essandoh, Miriam Appiah-Brempong, Issahaku Ahmed (2025). Characterisation and Fertiliser Potential of Mechanically Dewatered Faecal Sludge from Anaerobic Digestion. *Waste*. https://doi.org/10.3390/waste3040031
4. Alberta Blay, Sylvester Attakorah-Birikorang, **Esi Awuah** (2025). Development of Emergency Planning Zones for Ghana's Proposed Nuclear Plant Based on Radioactivity Releases From Hypothetical Accident Scenarios. *Science and Technology of Nuclear Installations*. https://doi.org/10.1155/stni/8876882
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6. Panin Asirifua Obeng, Emmanuel Amponsah Donkor, Eric Awere, Sampson Oduro-Kwarteng, **Esi Awuah**, Peter Appiah Obeng (2025). The emergence of prefabricated VIP toilet seats with covers: The implication for odour control and potential improvement. *Journal of Water Sanitation and Hygiene for Development*. https://doi.org/10.2166/washdev.2025.239
7. Panin Asirifua Obeng, Emmanuel Amponsah Donkor, Eric Awere, Sampson Oduro-Kwarteng, **Esi Awuah**, Peter Appiah Obeng (2025). Understanding why Ghanaian informally trained artisans construct the ventilated improved pit latrine the way they do. *Water Practice & Technology*. https://doi.org/10.2166/wpt.2025.151
8. Daniel Mangueina, **Esi Awuah**, Mathias Fru Fonteh, Prince Antwi-Agyei, Emmanuel Tao Nadji (2024). Assessment of current water, sanitation, and hygiene (WASH) practices in the third and ninth districts of N'Djamena, Chad. *Journal of Water and Health*. https://doi.org/10.2166/wh.2024.324
9. Daniel Gyabaah, **Esi Awuah**, Richard Amankwah Kuffour, Prince Antwi-Agyei, Samuel Wiafe, Samuel Boamah Asiedu (2024). Assessment of dumpsites leachate, geotechnical properties of the soil, and their impacts on surface and groundwater quality of Sunyani, Ghana. *Environmental Advances*. https://doi.org/10.1016/j.envadv.2024.100548
10. Panin Asirifua Obeng, Emmanuel Amponsah Donkor, Eric Awere, Sampson Oduro-Kwarteng, Peter Appiah Obeng, **Esi Awuah** (2024). Compliance of private ventilated improved pit latrines to odour and fly control guidelines: A technical audit in selected regions of Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e33980
11. Florence Esi Nyieku, Felix Tetteh Kabutey, Sampson Kofi Kyei, Helen M. K. Essandoh, Frederick Ato Armah, **Esi Awuah** (2024). Oilfield produced water and constructed wetlands technology: a comprehensive review. *Water Reuse*. https://doi.org/10.2166/wrd.2024.148
12. Daniel Kwaku Amoah, **Esi Awuah**, Isaac O.A. Hodgson, Miriam Appiah-Brempong, Elizabeth Von-Kiti, Isaac Nii Yartey Nyarko (2024). The impact of river sand mining and waste management on the Volta Lake: A case study of Asutsuare. *Scientific African*. https://doi.org/10.1016/j.sciaf.2024.e02359
13. Priscilla Addo, Samuel Fosu-Gyasi, Sampson Oduro-Kwarteng, Godwin Armstrong Duku, **Esi Awuah** (2023). Assessing egg deposition behaviour of female black soldier fly (Hermetia: Illucens) in Kumasi, Ghana using MOSW as bait. *Journal of Asia-Pacific Entomology*. https://doi.org/10.1016/j.aspen.2023.102168
14. Samuel Yaw Agyemang-Badu, **Esi Awuah**, Sampson Oduro-Kwarteng, Justice Yao Woelinam Dzamesi, Simon Agongo Azure (2023). Assessment of the Knowledge, Prevalence, and Control Strategies of Malaria Among Households in Sunyani Municipality, Bono Region, Ghana. *Environmental Health Insights*. https://doi.org/10.1177/11786302231176922
15. Daniel Gyabaah, **Esi Awuah**, Prince Antwi-Agyei, Richard Amankwah Kuffour (2023). Characterization of dumpsite waste of different ages in Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2023.e15827
16. Issahaku Ahmed, **Esi Awuah**, Helen M. K. Essandoh, Sampson Oduro-Kwarteng, Dennis Ofori-Amanfo, Florence Cobbold, Joshua Oduro-Adu (2023). Development, Characterisation, and Performance Evaluation of Some Indigenous Plants for Faecal Sludge Treatment in Ghana. *International Journal of Polymer Science*. https://doi.org/10.1155/2023/7470378
17. Samuel Yaw Agyemang-Badu, **Esi Awuah**, Sampson Oduro-Kwarteng, Justice Yao Woelinam Dzamesi, Nazri Che Dom, Girum Gebremeskel Kanno (2023). Environmental Management and Sanitation as a

Malaria Vector Control Strategy: A Qualitative Cross-Sectional Study Among Stakeholders, Sunyani Municipality, Ghana. *Environmental Health Insights*. https://doi.org/10.1177/11786302221146890

18. Clement Afesi-Dei, Miriam Appiah-Brempong, **Esi Awuah** (2023). Health-care waste management practices: The case of Ho Teaching Hospital in Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2023.e15514

19. Peter N-jonaam Mahama, Amos Tiereyangn Kabo-bah, Giacomo Falchetta, Justine I. Blanford, Edmund Ilimoan Yamba, Prince Antwi-Agyei, Franklin Asiedu-Bekoe, **Esi Awuah**, Justin Yieri (2023). Leaving no disease behind: The roadmap to securing universal health security and what this means for the surveillance of infectious diseases in Ghana as a precedent for sub-Saharan Africa. *PLoS ONE*. https://doi.org/10.1371/journal.pone.0284931

20. Mahama, Peter N-jonaam, Kabo-bah, Amos Tiereyangn, Falchetta, Giacomo, Blanford, Justine I., Yamba, Edmund Ilimoan, Antwi-Agyei, Prince, Asiedu-Bekoe, Franklin, **Awuah, Esi**, Yieri, Justin (2023). Leaving no disease behind: the roadmap to securing universal health security and what this means for the surveillance of infectious diseases in Ghana as a precedent to sub-Saharan Africa. *DOAJ (DOAJ: Directory of Open Access Journals)*. https://doi.org/10.5281/zenodo.7510270

21. Issahaku Ahmed, **Esi Awuah**, Helen M. K. Essandoh, Sampson Oduro-Kwarteng, Dennis Ofori-Amanfo, Florence Cobbold (2023). Performance Evaluation of Dry Faecal Sludge-Derived Activated Carbon (DFSAC) for Wastewater Pollutant Removal: A Case Study of the Lavender Hill Faecal Treatment Plant. *Advances in Materials Science and Engineering*. https://doi.org/10.1155/2023/4883492

22. Daniel Gyabaah, **Esi Awuah**, Prince Antwi-Agyei, Richard Amankwah Kuffour (2023). Physicochemical properties and heavy metals distribution of waste fine particles and soil around urban and peri-urban dumpsites. *Environmental Challenges*. https://doi.org/10.1016/j.envc.2023.100785

23. Panin Asirifua Obeng, Emmanuel Amponsah Donkor, Eric Awere, Peter Appiah Obeng, Sampson Oduro-Kwarteng, **Esi Awuah** (2023). ventilated improved pit latrine: a theoretical evaluation of conventional design guidelines, user adaptations and prospects for improvement. *Journal of the Ghana Institution of Engineering (JGhIE)*. https://doi.org/10.56049/jghie.v23i1.48

24. Priscilla Addo, Sampson Oduro-Kwarteng, Samuel Gyasi, **Esi Awuah** (2022). Bioconversion of municipal organic solid waste in to compost using Black Soldier Fly (Hermetia Illucens). *DOAJ (DOAJ: Directory of Open Access Journals)*. https://doi.org/10.30486/ijrowa.2022.1939781.1333

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26. Isaac Bainin, Samuel Fosu Gyasi, **Esi Awuah**, Daniel Obeng-Ofori, Faisal Abdallah, Emmanuel Timmy Donkoh, Akwasi Asamoah, Robert Adu (2022). Manganese, Iron, Lead, and Zinc Levels and Haematological Profile among Welders in Bibiani Anhwiaso Bekwai District, Ghana. *Journal of Environmental and Public Health*. https://doi.org/10.1155/2022/1508523

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28. Florence Esi Nyieku, Helen M.K. Essandoh, Frederick Ato Armah, **Esi Awuah** (2022). Oilfield wastewater contaminants removal efficiencies of three indigenous plants species in a free water surface flow constructed wetland. *Sustainable Environment*. https://doi.org/10.1080/27658511.2022.2076361

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30. Ama Mbeaba Quarshie, Samuel Fosu Gyasi, Francis Atta Kuranchie, **Esi Awuah**, Eugene Darteh (2021). Conceptual Behaviour Underpinning the Occurrence of Nonfaecal Matter in Faecal Sludge in Some Urban Communities, Ghana. *Journal of Environmental and Public Health*. https://doi.org/10.1155/2021/2672491

31. Florence Esi Nyieku, Helen M. K. Essandoh, Frederick Ato Armah, **Esi Awuah** (2021). Environmental conditions and the performance of free water surface flow constructed wetland: a multivariate statistical

approach. *Wetlands Ecology and Management*. https://doi.org/10.1007/s11273-021-09785-w

32. Bernice Mawumenyo Senanu, Patrick Boakye, Sampson Oduro-Kwarteng, Divine Damertey Sewu, **Esi Awuah**, Peter Appiah Obeng, Kobina Afful (2021). Inhibition of ammonia and hydrogen sulphide as faecal sludge odour control in dry sanitation toilet facilities using plant waste materials. *Scientific Reports*. https://doi.org/10.1038/s41598-021-97016-w

33. Kenneth Bentum Otabil, Samuel Fosu Gyasi, **Esi Awuah**, Daniels Obeng-Ofori, Seth Boateng Tenkorang, Justice Amenyo Kessie, Henk D. F. H. Schallig (2020). Biting rates and relative abundance of Simulium flies under different climatic conditions in an onchocerciasis endemic community in Ghana. *Parasites & Vectors*. https://doi.org/10.1186/s13071-020-04102-5

34. Bismark Dwumfour-Asare, Kwabena B. Nyarko, Helen M.K. Essandoh, **Esi Awuah** (2020). Domestic greywater flows and pollutant loads: A neighbourhood study within a university campus in Ghana. *Scientific African*. https://doi.org/10.1016/j.sciaf.2020.e00489

35. Martha Osei-Marfo, Nanne de Vries, **Esi Awuah** (2020). Dynamics of Household Heads' Intentions to Adopt Biogas Technology in Ghana. *Journal of Energy Research and Reviews*. https://doi.org/10.9734/jenrr/2020/v4i230125

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37. Issahaku Ahmed, Dennis Ofori-Amanfo, **Esi Awuah**, Florence Cobbold (2019). A Comprehensive Study on the Physicochemical Characteristics of Faecal Sludge in Greater Accra Region and Analysis of Its Potential Use as Feedstock for Green Energy. *Journal of Renewable Energy*. https://doi.org/10.1155/2019/8696058

38. Samuel Fosu Gyasi, Abigail Antwiwaa Boateng, **Esi Awuah**, Eric Ofosu Antwi (2019). Ellucidating the incidence and the prevalence of Schistosomiasis spp infection in riparian communities of the Bui dam. *Journal of Parasitic Diseases*. https://doi.org/10.1007/s12639-019-01089-4

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41. Samuel Fosu Gyasi, Bismark Boamah, **Esi Awuah**, Kenneth Bentum Otabil (2018). A Perspective Analysis of Dams and Water Quality: The Bui Power Project on the Black Volta, Ghana. *Journal of Environmental and Public Health*. https://doi.org/10.1155/2018/6471525

42. Florence Asiamah, Issahaku Ahmed, **Esi Awuah**, Florence Cobbold, Lola Asiseh Ashitey (2018). Assessing the Impact of Computer Mediated Communication (CMC) on Productivity and Efficiency in Faecal Sludge Management: A Case Study of the Giant Faecal Sludge Management Company in Ghana. *Journal of Human Resource and Sustainability Studies*. https://doi.org/10.4236/jhrss.2018.64040

43. Amankwah Kuffour, Richard, **Awuah, Esi**, Koné, Doulaye (2018). Effect of physical conditioners (sawdust) on the dewatering of faecal sludge using unplanted filter beds. *Applied Journal of Environmental Engineering Science*. https://doi.org/10.48422/imist.prsm/ajees-v5i4.12566

44. Bismark Dwumfour-Asare, Kwabena B. Nyarko, Helen M. K. Essandoh, **Esi Awuah**, Kofi K. A. Anim, Archibald Quaye (2018). Greywater in the drains of a sewered community in Ghana. *Water Practice & Technology*. https://doi.org/10.2166/wpt.2018.103

45. Bismark Dwumfour-Asare, Kwabena B. Nyarko, **Esi Awuah**, Helen M. K. Essandoh, Bernard A. Gyan, Hilda Ofori-Addo (2018). Indigenous plants for informal greywater treatment and reuse by some households in Ghana. *Journal of Water Reuse and Desalination*. https://doi.org/10.2166/wrd.2018.061

46. Peter A. Obeng, Sampson Oduro-Kwarteng, Bernard Keraita, Henrik Bregnhøj, Robert C. Abaidoo, **Esi Awuah**, Flemming Konradsen (2018). Optimising ventilation to control odour in the ventilated improved pit latrine. *Modeling Earth Systems and Environment*. https://doi.org/10.1007/s40808-018-0523-0

47. Issahaku Ahmed, Dennis Ofori-Amanfo, **Esi Awuah**, Florence Cobbold (2018). Performance Assessment of the Rehabilitated Mudor Sewage Treatment Plant at James Town Accra-Ghana. *Journal of Water Resource and Protection*. https://doi.org/10.4236/jwarp.2018.108041

48. Eugene Appiah-Effah, Kwabena Biritwum Nyarko, **Esi Awuah**, Eric Ofosu Antwi (2018). Rotary drum composter as a low cost method for the removal of Ascaris lumbricoides and Trichuris Trichiura in faecal sludge compost. *Water Practice & Technology*. https://doi.org/10.2166/wpt.2018.018

49. Mercy Derkyi, Samuel G.K. Adiku, Valerie Nelson, Benjamin Delali Dovie, Samuel Codjoe, **Esi Awuah** (2018). Smallholder farmers' perception of climatic and socio-economic factors influencing livelihoods in the transition zone of Ghana. *AAS Open Research*. https://doi.org/10.12688/aasopenres.12839.1

50. Kenneth B. Otabil, Samuel F. Gyasi, **Esi Awuah**, Daniels Obeng-Ofori, Mario A. Rodríguez-Pérez, Charles R. Katholi, Thomas R. Unnasch (2018). The Search for an Efficient Black Fly Trap for Xenomonitoring of Onchocerciasis. *Journal of Parasitology Research*. https://doi.org/10.1155/2018/5902367

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56. Eugene Appiah-Effah, Kwabena Biritwum Nyarko, Eric Ofosu Antwi, **Esi Awuah** (2015). Heavy metals and microbial loads in raw fecal sludge from low income areas of Ashanti Region of Ghana. *Water Practice & Technology*. https://doi.org/10.2166/wpt.2015.014

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Book chapters 3

1. Peter Appiah Obeng, Sampson Oduro-Kwarteng, Bernard Keraita, Henrik Bregnhøj, Robert C. Abaidoo, **Esi Awuah**, Flemming Konradsen (2019). On-Site Sanitation Systems for Low-Income Countries. *Waste Management*. https://doi.org/10.4018/978-1-7998-1210-4.ch048

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