

SAMUEL AKOWUAH OKYEREH

+(233)506366712 ◊ okyerehsamuel@gmail.com ◊ Sunyani, Ghana

<https://linkedin.com/in/samuel-akowuah-okyereh-45a7116b> ◊ <https://orcid.org/0000-0001-9640-797X>

PROFESSIONAL SUMMARY

Skilled evaluator and research professional with expertise in designing methodologies, leading comprehensive data analysis, and preparing high quality reports for energy and environmental sustainability projects. Proven track record of managing multi-stakeholder initiatives, conducting monitoring and evaluation (M&E) and delivering actionable insights for policy and strategy development. Adept at interdisciplinary collaboration, technical writing, and capacity building, with a commitment to sustainable development goals.

EDUCATION

Master of Science in Environmental Engineering, University of Energy and Natural Resources **2018**

Research work: Modelling the Impacts of Bui Dam operation on downstream competing water uses

Relevant Coursework: Water Resource Management, Environmental Law, Policy and Governance, Water and Wastewater Treatment, Environmental Quality Assurance and Management

Bachelor of Science in Civil Engineering, Kwame Nkrumah University of Science and Technology, Kumasi **2013**

Relevant Coursework: Development Engineering, Environmental Quality Engineering.

Research works: Functionality of Rural water systems in the Bosumtwi area

Achievements: Top 10% of graduating class (140 students)

West African Senior Schools Certificate Exam WASSCE, St. James Minor Seminary and SHS, Abesim-Sunyani **2008**

Options: Biology, Physics, Chemistry and Elective Mathematics

Member of Students Disciplinary Committee 2007

Basic Education Certificate Exam BECE, St. Theresa's JSS, Nkoranza **2005**

School Prefect 2004/2005

Overall Best Student (Nkoranza District)

CORE SKILLS

Evaluation Design	Monitoring and Evaluation frameworks, performance assessments & risk analysis
Data Analysis & Visualization	R programming, Tableau, WEAP Modelling, and Statistical Analysis
Project Management	Planning, budgeting, scheduling, risk management, and stakeholder engagement
Report Writing	Technical reporting, policy analysis, and grant proposals
Soft Skills	Communication, leadership, adaptability, and collaboration

RELEVANT EXPERIENCE

Research Fellow Jan 2019 - Present
Regional Centre for Energy and Environmental Sustainability *RCEES*
University of Energy and Natural Resources *Sunyani, Ghana*

• Research Activities

- Research and Analysis: Conducting literature reviews, designing experiments, analyzing data (including statistical analysis), and interpreting results.
- Project Management: Developing research methodologies, managing research projects, and potentially supervising research assistants.
- Communication: Writing research reports, proposals for grants, and presenting findings at conferences or workshops.
- Collaboration: Working with other researchers, including principal investigators, and potentially collaborating with external institutions.

- Publish research findings in peer-reviewed journals, books, and conference proceedings
- **Teaching** (Department of Civil and Environmental Engineering)
 - Prepare and deliver engaging lectures, seminars, and tutorials to undergraduate and graduate students
 - Design and develop course curricula, syllabi, and instructional materials
 - Incorporate innovative teaching methodologies and technologies to enhance the learning experience
 - Supervise and guide students in their research projects, theses, and dissertations
 - Set and grade assignments, tests, examinations, and other assessments
- **Administrative Coordinator**
 - Day-to-day administrative running of the centre’s activities
 - Postgraduate research coordination and support
 - Managing personnel, financials and correspondences
 - Office Management: Scheduling meetings, managing calendars, handling travel arrangements, and overseeing office supplies.
 - Communication and Coordination: Answering phones and emails, greeting visitors, and acting as a liaison between staff and departments.
 - Record-keeping and Documentation: Maintaining filing systems (digital and physical), organizing documents, and preparing reports and presentations.
 - Project and Task Support: Assisting with projects, data entry, and administrative tasks as assigned by Centre Directors.

Senior Technician, Department of Civil and Environmental Engineering

Nov 2018 - April 2019

- **Key Responsibilities**
 - Instructor, Computer-Aided Design - Autodesk AutoCAD
 - Lab Maintenance and Safety
- **Key Achievements**
 - Development of proposal for the setting up of the African Centres of Excellence for Development Project

RELEVANT PROJECTS

NDC Action Project, M&E Specialist Funded by UNEP/UNEP Copenhagen Climate Centre (UNEP-CCC), Denmark

- Brief
Sustainable Management and Planning of Hydropower Generation in West Africa under Climate Change and Land Use/Land Cover Dynamics. The NDC Action Project supports Ghana in translating its Nationally Determined Contributions (NDCs) into actionable strategies, focusing on climate smart agriculture and solar powered irrigation systems. Implemented by RCEES in collaboration with UNEP and key stakeholders, the project built stakeholder capacities, developed financial models, and fostered investment to drive low-carbon, climate-resilient development. It emphasizes technical assistance, policy development, and knowledge sharing to optimize NDC implementation and ambition.
- **Key Responsibilities**
 - Designed and implemented the monitoring and evaluation (M&E) framework for the NDC Action Project in Ghana, ensuring alignment with project objectives and international best practices.
 - Supported the development of a portfolio of climate-smart agriculture policies and programs, with a focus on solar-powered irrigation systems.
 - Conducted capacity-building workshops for government entities, private project developers, and financial institutions to enhance their role in NDC implementation and climate financing.

- Collaborated with state and non-state actors, including the Ministry of Food and Agriculture (MoFA), EPA, Ministry of Energy, smallholder farmers, and financial institutions, to ensure stakeholder engagement and project success.
- Drafted proposals to facilitate access to climate funds and optimize resource mobilization for low-carbon, climate-resilient development.
- Prepared detailed progress reports and contributed to knowledge sharing through best practices and lessons learned at regional and international levels.

- **Key Achievements**

- Secured multi-stakeholder support for project implementation through a robust consultation mechanism
- Enhanced the capacity of over 100 stakeholders in steering NDC implementation and accessing climate funds
- Delivered actionable recommendations for scaling up solar-powered irrigation systems under Ghana's climate-smart agriculture strategy .

World Bank - ACE Impact Project: Project Coordinator & Monitoring & Evaluation Officer, UENR-RCEES . Association of African Universities as Regional Facilitation Unit

- Brief

The World Bank's Africa Centres of Excellence for Development Impact (ACE Impact) Project tackles Africa's higher education needs by improving the quality of postgraduate programs at universities. By focusing on Science, Technology, Engineering, Math (STEM) and other crucial areas like Agriculture, Health, and Education, the project aims to create specialized training grounds for future generations. This initiative supports universities in collaborating and developing regional expertise, ultimately empowering graduates with in-demand skills to address Africa's specific challenges like food security and environmental issues.

- **Key Responsibilities**

- Coordinated and managed all aspects of the ACE Impact project, ensuring smooth implementation and adherence to project timelines, budgets, and deliverables.
- Prepared yearly project implementation plans and budgets. Managed project resources, including human resources, finances, and procurement processes, ensuring efficient utilization and compliance with organizational policies and donor requirements
- Developed and executed comprehensive monitoring and evaluation (M&E) strategies, frameworks, and tools for tracking project progress, performance, and impact.
- Conducted regular project monitoring and evaluation exercises, gathering data and evidence to assess project outcomes, identify challenges, and recommend corrective measures
- Risk Management: Identified and mitigated potential risks to project success
- Prepared and presented comprehensive project reports, highlighting key achievements, lessons learned, and recommendations for future initiatives.
- Represented the project at meetings, conferences, and events, promoting its objectives and fostering collaboration with relevant partners and stakeholders. Communication and correspondence with the World Bank and the Association of African Universities
- Facilitated capacity-building initiatives, training programs, and knowledge-sharing sessions for project teams and stakeholders to enhance their skills and understanding of project management and M&E practices. .

- **Key Achievements**

- ASIIN International Accreditation for 2 groups of programs in Sustainable Energy Engineering and Management, and Environmental Engineering and Management in 2024
- ASIIN International Accreditation for the University of Energy and Natural Resources in 2024
- Recruited over 40 international students from 11 African countries from 2019 - 2024
- Trained over 300 professionals in a short course including 80 international participants
- Built a state-of-the-art academic infrastructure with classrooms, labs, office and conference facilities

- Developed a regionalization strategy to make an impact in Africa
- Generated over 2 million USD in additional funding

SustainDAM Project, *Coordinator/Researcher* Funded by French National Research Agency, France Future Earth, International/Africa German Research Foundation, Germany National Research Alliance for the Environment, France

- Brief

Sustainable Management and Planning of Hydropower Generation in West Africa under Climate Change and Land Use/Land Cover Dynamics. the project aims to build communities of practices with HPG stakeholders (dam managers, local policymakers, representatives of civil society, associations of women, etc) to address the challenges, synergies and trade-of in the climate-land-energy-water systems (CLEWS) in West Africa for sustainable management and planning of HydroPower Generation. This project will be focused on four (4) dams (pilot sites) in Ghana (Akosombo), Côte d'Ivoire (Buyo), Burkina Faso (Bagré) and Senegal (Manantali), located in different climates.

- **Key Responsibilities**

- Coordinator (UENR Team) -Project Implementation and Reporting
- Modelling - Water Evaluation Analysis and Planning (WEAP) modelling for Hydropower management on the Akosombo Generation Station .

- **Key Achievements**

- Development of a random-forest model for hydropower generation of Akosombo Hydropower Dam .

Energy Planning And Modelling Through Integrated Assessment Of Climate Land Energy Water Nexus In Sub-Saharan Africa (EPIC-AFRICA)

- Brief

The EU-funded EPIC Africa project will build on transparent water-energy-food and resource modelling tools to undertake an integrated assessment. The overall aim of the project is to support sustainable development governance in sub-Saharan Africa, where access to energy and irrigated agriculture are among the worst in the world. The project focuses on the Tana (Kenya) and Volta (Ghana and Burkina Faso) river basins and together with stakeholders and local research networks will help shape policy for the coming decades. The EPIC Africa project is handled by a consortium including TU Delft, KTH Sweden, VITO Belgium, KALRO Kenya, VBA Burkina Faso and UENR Ghana.

- **Key Responsibilities**

- To set up a network of expertise from within Africa on the Water-Energy-Food Nexus .

- **Key Achievements**

- Setting up of the EPIC Africa Research Network (EARN) .

OTHER PROJECTS

(SPIS) Solar Powered Irrigation System - Green People's Project

- Brief

The 'Green People's Energy (PGE)' Project has an overall objective to improve conditions for supplying rural regions in selected African countries, including Ghana, with decentralized renewable energy. The project supports the adoption of modern energy services through the introduction of alternative and sustainable renewable energy and energy-efficient technologies with the participation of citizens and businesses

- **Key Responsibilities**

- Development of Curriculum, Training Handbook and Lecture Slides for Solar Powerd Irrigation Systems (SPIS)
- Facilitator - Technical training of short course on SPIS

- **Key Achievements**

- Technical and financial training manuals for Solar Powered Irrigation Sustainability
- Technical training on Solar Powered Irrigation for over 60 trainees (farmers, solar installers, pump technicians and Agric extension officers)
- Financial training for over 35 trainees for Credit officers

PUBLICATIONS

Mensah, J. K., Ofori, E. A., Akpoti, K., Kabo-Bah, A. T., **Okyereh, S. A.**, & Yidana, S. M. (2022) **Modeling current and future groundwater demands in the White Volta River Basin of Ghana under climate change and socio-economic scenarios** *BJournal of Hydrology: Regional Studies*, 41, 101117.

Yeboah, K. A., Akpoti, K., Kabo-bah, A. T., Ofori, E. A., Siabi, E. K., Mortey, E. M., & Okyereh, S. A. (2022) **Assessing climate change projections in the Volta Basin using the CORDEX-Africa climate simulations and statistical bias- correction** *Environmental Challenges*, 6, 100439

Okyereh, S. A., Ofori, E. A., & Kabobah, A. T. (2019) **Modelling the impact of Bui dam operations on downstream competing water uses** *Water-Energy Nexus*, 2(1), 1–9. <https://doi.org/10.1016/j.wen.2019.03.001>

Kabo-bah, A.T., Amo-Boateng, M., Kabo-bah, K., Sey, N.E.N., Siabi, E., **Okyereh, S.**, & Sarquah (2022) **Sendai Framework Implementation—A Regional Assessment of Wildfires in West Africa**. Contributing Paper to GAR 2019

SELECTED CERTIFICATIONS

- **SELECTED CERTIFICATIONS Monitoring, Evaluation Accountability and Learning (MEAL)**. (Introduction to MEAL, M&E Planning, Performance Management Planning, Monitoring, Conducting Evaluation, Accountability, Planning and Management) Asset Africa Institute **2023**
- *Certificate of Completion. Introduction to CLEWS*. (Climate, land-use, energy and water systems (CLEWs) models are tools for simultaneous consideration of food, energy and water security) *offered by Climate Compatible Growth* **2024**
- *Certificate of Completion. Modeling, Policy and Political Economy*. (policymaking process, the role of modelling in policymaking, and the complex relationship between economic, social, and political considerations that shape energy policies.) *offered by Climate Compatible Growth* **2024**
- *Certificate of Completion. capacity Building Workshop on Monitoring and Evaluation & Endowment Management*. Trust Training Limited, Accra **2020**

SEMINARS AND CONFERENCES

- 8th Africa Higher Education Centres of Excellence for Development Impact Project (ACE Impact) workshop. *Banjul, Gambia*. Organized by the World Bank and Association of African Universities (AAU) November 2022
- WACEENET SYMPOSIUM - Harnessing clean energy for sustainable Development October 2022 *Port Novo, Benin*.
- 7th Africa Higher Education Centres of Excellence for Development Impact Project (ACE Impact) workshop. *Cotonou, Benin*. Organized by the World Bank and Association of African Universities (AAU) February 2022
- 4th Africa Higher Education Centres of Excellence for Development Impact Project (ACE Impact) workshop. *online*. Organized by the World Bank and Association of African Universities (AAU) October 2022
- 3rd Africa Higher Education Centres of Excellence for Development Impact Project (ACE Impact) workshop. *Abuja, Nigeria*. Organized by the World Bank and Association of African Universities (AAU) February 2020
- ICEASSM CONFERENCE 2nd International Conference on Engineering, Applied Sciences and System Modeling *Sunyani, Ghana* December 2019

- 2nd Africa Higher Education Centres of Excellence for Development Impact Project (ACE Impact) workshop. *Dakar, Senegal*. Organized by the World Bank and Association of African Universities (AAU) September 2019
- 1st Africa Higher Education Centres of Excellence for Development Impact Project (ACE Impact) workshop. *Djibouti*. Organized by the World Bank and Association of African Universities (AAU) February 2019

PROFESSIONAL MEMBERSHIP AND OTHER ASSOCIATIONS

- Ghana Institution of Engineering (GhIE No. 10962) since 2022
Professional Engineer (Civil Division)
- University Teachers Association (UTAG-UENR Chapter) since 2019
Member

AWARDS AND HONOURS

- Scholarship, Water Resources Commission through the Re-optimization and re-operation study of the Akosombo, Kpong dams project, sponsored by the African Development Bank (AfDB). December 2015