

Curriculum Vitae – MARY ANTWI (PhD)

PERSONAL DETAILS

Date of birth: 9th June, 1982

Nationality: Ghanaian

Marital status: Married

Place of birth: Kumasi - Ghana

Address: P.O. Box BP 336, Bohyen, Kumasi/ Department of Environmental Management, P. O. Box 214, UENR, Sunyani, Ghana

Position: Senior Lecturer, Geospatial and Environmental Management

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SCIENTIFIC QUALIFICATIONS

1. Land management and Surveying
2. Environmental modelling
3. Geographic Information Systems/ Remote Sensing expert
4. Geostatistical/spatial analyst
5. Soil scientist

EMPLOYMENT HISTORY

1. 2020 – date, Senior Lecturer, Department of Environmental Management, University of Energy and Natural Resources. Sunyani
2. 2016 to 2020, Lecturer, Department of Environmental Management, University of Energy and Natural Resources, Sunyani
3. 2014 – 2016, Part-time instructor at College of Agriculture and Natural Resources (CANR), KNUST, Kumasi
4. 2010 – 2011, National Service Personnel at the office of the Provost, CANR, KNUST

EDUCATION (ACADEMIC DEGREES WITH DATES)

1. PhD soil science, Kwame Nkrumah University of Science and Technology (KNUST), September, 2011 to November, 2015
2. Master of Science in Geographic Information System and Land Management, Faculté des Sciences, Hassan II University, Casablanca – Morocco, October 2008 – June, 2010.
3. Practical French Study Certificate, Faculté des sciences et L'Education, Rabat – Morocco, September 2007 – June 2008
4. BSc. (Hons) in Geodetic Engineering, KNUST, August, 2003 – May, 2007

PROJECT INVOLVEMENT

1. Fellow, Regional Centre for Energy and Environmental Sustainability
2. Assistant project manager, Advance Fire Information Systems project funded by the Skills Development Fund.
3. Building the Resilience of Lake Bosomtwe to Climate Change (RELAB) project funded by DANIDA – involved in the watershed modelling, land use change and sedimentation rates.

4. Assistant to Project facilitator – Alliance for Green Revolution in Africa (AGRA) project, KNUST, Ghana.
5. Beneficiary of research award – AGRA Soil Health Project, KNUST
6. GIS/Map analyst – Institutionalization of quality assurance mechanism and dissemination of top-quality commercial projects (COMPRO), KNUST
7. GIS/Map analyst – Building Stronger Universities (BSU) project, KNUST

RESEARCH INTERESTS

1. GIS and remote sensing technologies/Geospatial analysis
2. Integrated soil fertility management
3. Land management systems
4. Environmental management/Disaster risk reduction and modelling
5. Surveying and mapping

MANAGERIAL SKILLS/ RESEARCH ACTIVITIES

1. Postgraduate Coordinator, School of Natural Resources (since August, 2020)
2. Head, Environmental Management Department (September, 2019 – July, 2021)
3. Team member, collaboration between University of Energy and Natural Resources and Lakehead University, Canada.
4. Exams Officer, School of Natural Resources (2018/2019 academic year)
5. Data collection, analysis and mapping for decision making
6. Data modelling and creating decision support systems
7. Laboratory soil analyses and database management
8. Participatory research, lecturing, mentoring and supervision of students' project works
9. Conducting field experiments and trials
10. Attending conferences and networking, surfing for geographic data

SCIENTIFIC/PROFESSIONAL NETWORKS

1. Global Landscape Forum, Wageningen Centre for Development Innovation
2. Member, Ghana Institution of Engineering (GhIE No. 11203)
3. Member, Ghana Science Association
4. Member, Organisation of Women in Science in the Developing World
5. Subscriber/Member, African Soil Health Consortium, CABI, Nairobi, Kenya
6. Beneficiary, Alliance for Green Revolution in Africa project
7. Subscriber/Member, African Women in Agricultural Research and Development (AWARD)

PUBLICATIONS

Journals

1. Linderhof, V., Cervi, W. R., van Oosten, C., Duku, C., Witte, E., Derkyi, M., ... & Kwadwo, S. A. (2022). *Rainwater harvesting for irrigation for climate-resilient and circular food systems: The case of Ghana's Bono East Region* (No. WCDI-22-204). Wageningen Centre for Development Innovation.
2. Sterk, M., van Oosten, C. J., Linderhof, V., Cervi, W. R., Derkyi, M., Antwi, M., ... & Verweij, P. J. F. M. (2022). Nature-based adaptation pathways for climate-resilient and safe food systems.

3. van Oosten, C., Derkyi, M., Antwi, M., Nassah, V. F., Nuamah, S. K., Ralitsa, V., ... & Witte, E. (2022). *Restoring forested landscapes for climate resilient and circular food systems: The case of Ghana's Bono East Region* (No. WCDI-22-203). Wageningen Centre for Development Innovation.
4. Antwi, M. (2022) Evaluation of District-Based Indigenous Farmers' and Researchers' Fertilizer Application for Optimal Maize Production. *Agricultural Sciences*, **13**, 591-611. doi: [10.4236/as.2022.134040](https://doi.org/10.4236/as.2022.134040).
5. Austin Asare, Hans Thodsen, Mary Antwi, Emmanuel Opuni-Frimpong, Peter Sanful. (2021). Land Use and Land Cover changes in Lake Bosumtwi Watershed, Ghana (West Africa). *Remote Sensing Applications: Society and Environment*, **23**, 100536. <https://doi.org/10.1016/j.rsase.2021.100536>. (<https://www.sciencedirect.com/science/article/pii/S2352938521000720>)
6. Adams, E. D., & **Antwi, M.** (2021). Modelling the risk of forest to fire for the Bosomkese Forest Reserve, Ahafo Region, Ghana. *South African Journal of Geomatics*, **10**(1). DOI: [10.4314/sajg.v10i1.5](https://doi.org/10.4314/sajg.v10i1.5)
7. Höflinger, S., Antwi, M., Amprofi, A.A., and Kabo-Bah, A.A. (2020). Spatial Identification of Potential Dump Disposal Sites for Effective Waste Management in the Sunyani Municipality, Ghana. *Journal of Geoscience and Environment Protection*. Vol. 8(11). DOI: [10.4236/gep.2020.811005](https://doi.org/10.4236/gep.2020.811005)
8. Bienibuor, A.K., Preko, K., Aning, A.A., **Antwi, M.**, and Emahi, I. (2020). Application of Elcetromagnetic and Electrical Resistivity Methods for Borehole Siting in Low-Grade Metavolcanic and Metasedimentary Rocks, Sunyani West, Ghana. *Journal of Environment and Earth Science*. Vol. 10 (10), DOI: [10.7176/JEES/10-10-05](https://doi.org/10.7176/JEES/10-10-05)
9. Amproche, A.A., **Antwi, M.**, Kabo-bah, A.T. (2020). Geospatial Assessment of Land Use and Land Cover Patterns in the Black Volta Basin, Ghana. *Journal of Remote Sensing and GIS*. Vol. 9 (1), 1000269. 1-7. DOI: [10.35248/2469-4134.20.9.269](https://doi.org/10.35248/2469-4134.20.9.269)
10. **Antwi, M.**, Duker, A. A., Fosu, M., and Abaidoo, R. C. (2019). Using Geographic Information Systems to Assess the Distribution of Major Soil Nutrient Contents in the Northern Region of Ghana. *Journal of Energy and Natural Resource Management, Special Issue ICCCSDA, 2017*. Vol 1, Theme 1: Environment, Technology and Sustainable Development. DOI: <https://doi.org/10.26796/jenrm.v1i1%20SPECIAL.84>
11. Appiahene, P. and **Antwi, M.** (2019). Application Of GIS To Create Social Media Awareness To The Effects Of Illegal Mining On Natural Resources In The Tano North District Of Ghana. *Journal of Energy and Natural Resource Management, Special Issue ICCCSDA, 2017*. Vol 1, Theme 1: Environment, Technology and Sustainable Development. <https://doi.org/10.26796/jenrm.v1i1.121>
12. **Antwi, M.**, Appiahene, P. and Boakye – Ansah, Y. A. (2019). Promoting Afforestation for Sustainable Communities Using Gamification. *Journal of Energy and Natural Resource*

Management, Special Issue ICCCSA, 2017 Special Issue: Agriculture and Natural Resources Vol 1, 43-49. <https://doi.org/10.26796/jenrm.v1i2.130>

13. **Antwi, M.**, Duker, A.A., Fosu, M. and Abaidoo, R. C. (2017). Simulation of major soil nutrients requirement for maize production using the QUEFTS model in the Northern region of Ghana. *Direct Research Journal of Agriculture and Food Science*, Vol 5 (2), 133-140. Article number: DRJA43071532
14. **Antwi, M.**, Duker A.A., Fosu M. and Abaidoo R. C. (2016). Geospatial approach to study the spatial distribution of major soil nutrients in the Northern region of Ghana. *Cogent Geoscience*, 2 (1), Taylor and Francis publications, <http://dx.doi.org/10.1080/23312041.2016.1201906>

Books and Book Chapters

1. Kabo-Bah, Amos T., Daniella D. Sedegah, **Mary Antwi**, Webster Gumindoga and Saied Eslamian. "How to Increase Water Harvesting in Africa". *Handbook of Water Harvesting and Conservation: Case Studies and Applications Examples* (2021):141 – 151. Wiley Online Library. <https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119776017.ch9>
2. **Antwi, M.** (2020). Integrated soil fertility management as a potential for Ghana's development: A geospatial approach, In *The challenge of African Potentials: Conviviality, Informality and Futurity*. Editors: Yaw Ofosu-Kusi and Motoji Matsuda. Langaa RPCIG publications, Cameroon. ISBN: 9789956551149; 276 pp.
3. **Antwi, M.** and Sedegah, D. D. (2018). Climate change and societal change – impact on hydropower energy generation, In *Sustainable Hydropower in West Africa: Planning, operation, and challenges*. Editors: Amos Kabo-bah and Chukwuemeka J. Diji. Academic Press, Elsevier publications, United Kingdom. ISBN: 978-0-12-813016-2; 236 p.
4. **Antwi, M.** (2015). Using Geospatial analysis to monitor impact of integrated soil fertility management on major soil nutrients in selected Districts of Northern region, Lambert Academic Publishing, Germany. ISBN: 978-3-659-80782-4

Conference Proceedings

5. Peter Sanful, Yaw Agyeman, Dennis Trolle, Emmanuel Opuni-Frimpong, **Mary Antwi**, Adelina Mensah, Francis Nunoo, Thomas Davidson, Hans Thodsen, Torben Lauridsen, Anders Nielsen, Austin Asare, Asha Damoah, Amos Asase, Elizabeth Kwakye, Sylvia Baidoo, Augustine Yeboah, Solomon Amfoh (2019). A multidisciplinary and integrated approach to sustainable management and building resilience of Lake Bosumtwi to Climate Change: Preliminary Results of the RELAB Project. Presented at the 31st Biennial Conference by the Ghana Science Association at the University of Cape Coast, Ghana. Conference Theme: Promoting Science, Technology and Innovation for sustainable growth and development.

List of manuscripts under review

1. Asare, A., Antwi, M., Thodson, H., Opuni-Frimpong, E. Sanful, P.O., and Trolle, D. Land Use and Land Cover transitions from 1986 to 2018 in the Lake Bosumtwi Watershed, Ghana (West Africa) submitted to Journal of Lakes & Reservoirs: Science, Policy and Management for Sustainable Use.

Conferences/Workshop/Seminars/Webinar/Short courses Attended for the last five years

1. Landscape Governance, an online short course organised by the Wageningen Centre for Development Innovation, May – June, 2021.
2. Bridging the Gap – Science for the public, an online short course delivered by the Danida Fellowship Centre, December, 2020.
3. Conducting Excellent and Innovative Research despite the pandemic, a webinar series organised by CSIR branch of OWSD Ghana Chapter and supported by Elsevier, October, 2020.
4. Research Paper Writing Workshop and Retreat organised by the office of Grants and Research (KNUST) and WABER conference at Kwame Nkrumah University of Science and Technology from 30th July to 1st August, 2019.
5. Researcher Connect Workshop on Academic writing and Publications organised by the British Council at the Accra City Hotel from the 13th to 16th March, 2019.
6. Good Assessment practices in Higher Education: improving Teaching and Learning Workshop organised by the Quality Assurance Unit of University of Energy and Natural Resources, Sunyani at the Sheila's Executive Hotel from the 16th to 17th January, 2019.
7. The 8th African Forum: Futurity in African Realities organised by the Japan Society for the promotion of Science Grant-in-aid for scientific research in Accra, on the 7th to 9th December, 2018.
8. Workshop o Curriculum Development organised by Centre for Climate Change and Gender studies, USAID and Winrock International at the University of Energy and Natural Resources on the 14 – 16 August, 2018.
9. Workshop facilitator for Geographic Information System training organised by the Earth Observation and Innovation Centre at the University of Energy and Natural Resources, Sunyani on the 6th to 10th August, 2018.
10. ASSAf-TWAS-AAAS Regional Workshop on Science Diplomacy organised by the Department of Science and Technology, South Africa, on the 21st May to 25th May, 2018.
11. Instructional Skills Workshop, organised by Sunyani Technical University in conjunction with Vancouver Island University at the University of Energy and Natural Resources from 30th January to 2nd February, 2018.
12. First International conference on climate change and sustainable development in Africa, (ICCCSDA 2017), held at the Eusbett International conference centre, Sunyani from the 25th July to 28th July, 2017.

13. SEACRIFOG Project Stakeholder consultation workshop on user needs and knowledge gaps in the area of food security and climate change mitigation and adaptation held at the University of Energy and Natural Resources, Sunyani on 16th June, 2017.
14. Second AfriGEOSS Symposium on delivering Earth observations for policy and sustainable societal impacts in Africa, held at the Tyco Hotel conference hall Sunyani from the 13th June to 15th June, 2017
15. Researcher-Practitioner symposium organized by the Centre for Climate Change and Gender Studies, University of Energy and Natural Resources in February, 2017.

REFERENCES

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