

## CURRICULUM VITAE

**Ing. Michael Asare Opare Bsc.**

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*Nationality:* Ghanaian



### *Education*

- 1994–1997** SDA High School, Agona, Ghana, specialization: General Science [Physics, Chemistry, and Biology]
- 2000–2003** Wiawso Anglican College of Education, Ghana, Specialization [Science and English Language]
- 2010–2014** University of Education, Winneba, Ghana, specialization: [Integrated Science – Physics, Chemistry, Biology, and Agricultural Science]
- 2015–2017** Czech University of Life Sciences Prague, Czech Republic, specialization: [Landscape Engineering – Environmental Modelling]
- 2017–** Czech University of Life Sciences Prague, Czech Republic – postgraduate studies [Ph.D.], specialization [Soil science, General Ecology]

### *Research interest*

Soil chemistry, Geochemistry, Stratigraphy analysis, Soil contamination, Organic waste analysis, Waste management, Environmental Archaeology, Biodiversity management, and Protected area management

### *Employment*

Laboratory analyst of soil and sediment samples

### *Diploma Thesis consultations*

- 2020** Anna Peslova - (Bachelor thesis)- Is it possible to distinguish wood ash from horse feces according to the elemental composition
- 2020** Noheem Abiola Tijani – (Master thesis) – Soil contamination by risk elements in Awotan dumpsite.
- 2020** Ramgopal Biswas – (Master thesis) – Estimation of the intensity of settlement activities in the Early Medieval Hillfort Kralovice according to the accumulation of anthropogenic elements in the soil.
- 2021** Moses Ayodeji Olalekan – (Master thesis) – Can wood ashes of selected European woody species be used as fertilizers?

### *Professional experience*

- 2018** July – Tel Burna Excavation Project [Israel] - Chemical analysis of soils.  
**2018** August – Protected Areas Management [Ghana] – management effectiveness of Wildlife and tracing of former settlement sites within protected areas.  
**2018** September – Internship [University of Education, Winneba, Ghana]  
**2019** March-May – Mlada Boleslav, Kolin [Czech Republic] field practice on soil analysis  
**2018** Practical application of analytical tools [Institute of Geology, Czech Republic]  
**2019** June – Practical attachment in the analysis of soils in the Volta Region of Ghana [Under University of Ghana]

### ***Computer skills***

**Statistical tools:** Statistica, IBM SPSS statistics, R studio

**Microsoft Office:** Word, Access, PowerPoint, Excel

**Operating systems:** Windows, Ubuntu Linux

### ***Participation in projects***

CIGA 20185007 Evaluation of Management Effectiveness of Protected Areas in Ghana (2018-2019), co-investigator.

### **Conferences/seminars**

- 2017** January - 31<sup>st</sup> Conference on Hydrology, Washington State Convention Center, US  
**2017, 2018, 2019** Kostelic Inspiravoni, Czech Republic  
**2018** Euroleague for Life Sciences conference, Wageningen, The Netherlands  
**2020** January - 16<sup>th</sup> Conferences of Environmental Archaeology, CZU, Prague  
**2021** Global Biodiversity Conservation Conference, Prague, Czech Republic

### **Academic awards**

- 2021** Excellent results in Ph.D. studies  
**2021** Rector's Award for publication in the 1<sup>st</sup> decile

### **Journal contributions and Review activities**

**2020-12-14 to present** Editorial board member- Global Journal of Art and Social Science Education

- Reviews in Environmental Science and Bio-Technology
- Proposal review for National Research, Development, and Innovation Office (NRDI), Hungary NKFIH- 'DAAMBA? Domestic Anthropogenic Activity Markers of Bronze age settlements: A multiproxy methodological approach to understand household-related activities'

### ***Publication activities***

## 1. *Papers in scientific journals with impact factor*

- Asare, M. O.,** Apoh, W., Afriyie, J. O., Horák, J., Šmejda, L., Hejčman, M., (2020). Traces of German and British settlement in soils of the Volta Region of Ghana. *Geoderma Regional* 21, e00270. <https://doi.org/10.1016/j.geodrs.2020.e00270>.
- Asare, M. O.,** Horák, J., Šmejda, L., Janovský, M., Hejčman, M., (2020). A medieval hillfort as an island of extraordinary fertile Archaeological Dark Earth soil in the Czech Republic. *European Journal of Soil Science*. <https://doi.org/10.1111/ejss.12965>.
- Asare M. O.,** Afriyie, J. O., (2020). Tracing the past from the analysis of Cu, Zn, Mn, Sr, and Rb in Archaeological Dark Earth soils from the Tropics and Temperate zone. *Quaternary International*. <https://doi.org/10.1016/j.quaint.2020.09.017>
- Asare, M.O.,** Šmejda, L., Horák, J. *et al.* (2020). Human burials can affect soil elemental composition for millennia — analysis of necrosols from the Corded Ware Culture graveyard in the Czech Republic. *Archaeological and Anthropological Science*. **12**, 255. <https://doi.org/10.1007/s12520-020-01211-1>
- Janovský, M., Karlík, P., Horák, J., Šmejda, L., **Asare, M. O.,** Beneš, J., Hejčman, M., (2020). Historical land use in an abandoned mountain village in the Czech Republic is reflected by the Mg, P, K, Ca, V, Cr, Mn, Fe, Ni, Cu, Zn, Rb, Zr, and Sr content in contemporary soils. *Catena*. <https://doi.org/10.1016/j.catena.2019.104347>.
- Afriyie, J. O., **Asare, M. O.,** (2020). Danquah, E., Hejčmanova, P. Assessing the management effectiveness of three protected areas in Ghana. *Conservation and Society*. [https://doi.org/10.4103/cs.cs\\_20\\_28](https://doi.org/10.4103/cs.cs_20_28)
- Afriyie, J. O., **Asare, M. O.** (2020). Use of local ecological knowledge to detect declines in mammal abundance in Kogyae Strict Nature Reserve, Ghana. *Environmental Management*.
- Asare, M. O.,** Afriyie, J. O., Hejčman, M., (2020). Analysis of physical and chemical characteristics of Anthrosols- The case of former Bremen missionary's settlement in Ghana. *Soil Use and Management*. <https://doi.org/10.1111/SUM.12681>.
- Anning, C., **Asare, M. O.,** Junxiang W., Yao, G., Xianjun, L., (2021). Effects of physicochemical properties of Au cyanidation tailings on cyanide microbial degradation. *Journal of Environmental Science and Health Part A Toxic/Hazardous Substances & Environmental Engineering*. 56, 1-21. <https://doi.org/10.1080/10934529.2021.1885259>
- Asare, M. O.,** Afriyie, J. O., (2021). Ancient mining and metallurgy as the origin of Cu, Ag, Pb, Hg, and Zn contamination in soils– A review. *Air, Water, and Soil Pollution* 232 (6) <https://doi:10.1007/s11270-021-051664>.
- Afriyie, J. O., **Asare, M. O.,** Osei-Mensah, J., Hejčmanová, P., (2021). Evaluation of long-term law enforcement monitoring in a West African Protected area. *Oryx* 55, 1-7. <https://doi:10.1017/S0030605320000228>
- Asare M. O.,** Afriyie, J. O., Hejčman, M., Jungová, M., K., Can wood ashes of commonly planted tree species in Ghana be applied as fertilizers? *Waste and Biomass Valorization*. <https://doi.org/10.1007/s12649-021-01588-7>
- Afriyie, J. O., **Asare, M. O.,** Hejčmanová, P., (2021). Exploring the knowledge and perception of local communities on illegal hunting: long-term trends in a West African protected area. *Forest* 12(11), 1454. <https://doi:10.3390/f12111454>

## 2. *Submitted papers*

**Asare M. O.,** Afriyie, J. O., Hejčman, M., Origin, distribution, and characteristics of

- Archaeological Dark Earth soils- A review. *Soil*.
- Asare, M. O.**, Apoh, W., Afriyie, J. O., Hejzman, Human altered soils: Impact of past settlement activities on the physicochemical attributes of Anthrosols in Northern Ghana by physicochemical analyses of soil. *European Journal of Soil Science*.
- Anning, C., **Asare, M. O.**, Li, H-J., Zhao, J., Wang, L., Nyabire, A., Yao, G., Xianjun, L., Detoxification of cyanide-containing gold mine tailings by indigenous *Aeromonas media* strain C4. *International Journal of Environmental Research and Public Health*.
- Afriyie, J. O., **Asare, M. O.**, Hejzmanova, P. Perception of law enforcement rangers about factors affecting their attitude to work in West African protected areas. *Oryx*
- Jungova, M., **Asare M. O.**, Jurasova, V., Hejzman, M., (2021). Distribution of micro (Fe, Zn, Cu, and Mn) and risk (Al, As, Cr, Ni, Pb, and Cd) elements in the organs of *R. Alpinus L.*

### 3. *Papers in other scientific journals*

- Asare, M. O.**, Afriyie, J. O., Hejzman, M. (2019). What constitutes Archaeo-anthrosols? Review on the effects of ancient anthropogenic activities on the chemical signatures of archaeological soils. *African Journal of Soil Science*.

### 4. *Papers in proceedings from scientific conferences*

- Asare, M. O.**, Apoh, W., Afriyie, J. O., Horák, J., Šmejda, L., Hejzman, M.: Seventy years of settlement activities at former German-Togoland resulted in the development of African dark earth soil characterized by the accumulation of C, N, P, K, Ca, S, Mn, Fe, Zn, Cu, Sr, and Rb. In: Michael O. Asare, Wazi Apoh, Jerry Owusu Afriyie, Jan Horák, Ladislav Šmejda, Michal Hejzman (Eds): Traces of German and British settlement in soils of the Volta Region of Ghana. *Geoderma Regional*, 21, e00270 - *Book of abstract*, 16<sup>th</sup> Conference of Environmental Archaeology (CEA2020), Czech Republic, pp. 11.
- Asare, M. O.:** Estimation of reference Evapotranspiration using meteorological data for Nemcice catchment area – Czech Republic. American Meteorological Society (Washington State Convention Center, USA, 25<sup>th</sup> January 2017).
- Asare, M. O.**, Hejzman, M.: Medieval hillfort as an island of extraordinary fertile Archaeological Dark Earth soil in Central Europe. In: Asare, M. O., Horák, J., Šmejda, L., Janovský, M., Hejzman, M., (Eds). A medieval hillfort as an island of extraordinary fertile Archaeological Dark Earth soil in the Czech Republic. *European Journal of Soil Science*. 1–16. *Book of abstract*, Kostelecké Inspirování (November 2018).
- Afriyie, J. O., **Asare, M. O.**, Osei-Mensah, J., Hejzmanova, P. Long-term performance and potential of an adaptive management system for effective law enforcement in African protected areas. In: Owusu J. A., Asare, M. O., Hejzmanová, P., (Eds): Evaluated of long-term law enforcement monitoring in a West African Protected area. *Oryx- Book of abstract*, Kostelecké Inspirování (November 2018).
- Afriyie, J. O., **Asare, M. O.**, Osei-Mensah, J., Hejzmanova, P. Law enforcement in Wildlife Protected Areas. In: Owusu J. A., Asare, M. O., Hejzmanová, P., (Eds): Evaluated of long-term law enforcement monitoring in a West African Protected area. *Oryx – Book of abstract*, Euroleague for Life Sciences conference (Wageningen 2018), pp 181.
- Asare, M. O.**, Hejzman, M., Multi-elemental analysis of wood ashes of selected tree species in the

tropics. In: Asare M. O., Owusu J. A., Hejcman, M., Jungová, M., K., (Eds.). Can wood ashes of commonly planted tree species in Ghana be applied as fertilizers? Waste and Biomass Valorization.

Afryie, J. O., **Asare, M. O.**, Hejmanova, P.,(Eds) Can we make it together? Local communities' and rangers' perceptions on protected areas management in Ghana. Book of abstract, Global Biodiversity Conservation Conference (Prague 2021), pp. 30.

### **Referees**

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