

CURRICULUM VITAE

PERSONAL INFORMATION

Dr. Nat Owusu Prempeh

(Geo-Information, Landuse and Climate Change Scientist)

Department of Land Reclamation and Rehabilitation

Faculty of Forest Resources Technology

College of Agriculture and Natural Resources

Kwame Nkrumah University of Science and

Technology (KNUST), Kumasi



Tel: +233 (0)-245-749-374, +233 (0)-201-419-373

**E-mail: Nowusu-prempeh.canr@knust.edu.gh,
npowusu@gmail.com**

EDUCATIONAL INSTITUTIONS ATTENDED AND CERTIFICATES OBTAINED WITH DATES

- | | |
|--------------------|--|
| 2012 - 2015 | Kwame Nkrumah University of Science and Technology (KNUST),
Department of Civil Engineering, Kumasi, Ghana
PhD in Climate Change and Land Use (Awarded in July, 2015) |
| 2002 - 2003 | Cranfield University, Silsoe, Bedfordshire. MK45 4DT, U. K.
MSc in Geographic Information Management (Awarded in July, 2004)
▪ Modules include: Geographical Resource Survey, Aerial Photograph Interpretation, Digital Photogrammetry, Image Processing and Analysis, |

GIS Methods, Spatial Data Management, Physical Principles and Technology of Remote Sensing and Programming Fundamentals.

1996 – 2000 Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.
BSc (Hons.) Natural Resource Management (Silviculture and Forestry option), First Class Honours Division

▪ **Main topics:** Forestry management, Forest nursery and Plantation Silviculture, Ecology, EIA, Agroforestry, Soil Science, Natural resource economics and Policies, GIS and Remote sensing, Land surveying, Watershed management, Statistics and experimental design.

AWARDS HELD

- Awarded WASCAL sponsorship (from Government of Germany) to pursue PhD studies in Climate change and Land use at KNUST, Kumasi, Ghana from 2012-2015
- Won Canadian International Development Agency (CIDA) sponsorship to participate in a study tour Canada hosted by Vancouver Island University (VIU), Nanaimo, BC, Canada, in 2010
- A winner of Department for International Development (DfID), British government award to pursue MSc at Cranfield University, UK from 2002-2003
- Won Shell achievement award for best first year student in Natural Resource Management in 1996/97 academic year.

EMPLOYMENT HISTORY

2015 – **Lecturer and Academic tutor,** Department of Land Reclamation & Rehabilitation, Faculty of Forest Resources Technology, KNUST

- Teaches courses in Basic Geology, Computers and Computer Applications, Rural land use planning, Remote sensing and GIS, Soil and water conservation, Biomass energy production and Ecological restoration
- Undertakes practical demonstration on the use of GPS equipment for mapping and inventory of vegetation cover and natural resources
- Supervises students' theses/dissertations and deals with students' academic challenges
- Undertakes research, consultancy services and extension of knowledge for career development

2010 - 2012 **Lecturer and Head,** Department of Land Reclamation & Rehabilitation
Faculty of Forest Resources Technology, KNUST

- Responsible for day-to-day teaching and learning in the department
- Represented the department on the Faculty and College Board meetings
- Implemented the University, College and Faculty visions and strategic plans
- Sought consultancy and industrial attachment placement for students

2008 - 2010 **Lecturer,** Department of Land Reclamation & Rehabilitation, Faculty of
Forest Resources Technology, KNUST

- Taught courses in Remote sensing and GIS, Soil science, plantation establishment and biomass energy production
- Undertook practical demonstrations on the use of GPS equipment for mapping and inventory of vegetation cover and related natural resources
- Supervised undergraduate dissertations and dealt with students' academic complaints
- Undertook research, consultancy services and extension of knowledge for career development

- 2004** **Scientific Assistant**, Forest Research, NRS, Bush Estate, Roslin, Midlothian, Scotland, UK. (May – August, 2004)
- Analysed wood discs and modelled tree parameters using statistical software
 - Captured, managed and maintained data in a GIS and access databases
 - Researched and reviewed relevant literature for project final report
- 2000 – 2002** **Project Officer**, Women's Action & Solidarity Aid (WASA), Sunyani, Ghana
- Organised training workshops for project beneficiaries.
 - Raised tree seedlings for the Taungya system, established community woodlots and afforestation projects for demonstration
 - Researched into potential project areas for extension of activities

SKILLS PROFILE

Computing Skills

I have excellent keyboard skills and good working knowledge of GIS and remote sensing packages, land use and climate modelling, Programming in HTML, Visual Basic and NetLogo and Microsoft Office suite for office duties, Statistical packages such as MS Excel, Minitab and SPSS for data analysis.

Communication Skills

Excellent communication skills both verbal and written gained from formal education, working and personal interactions, undergraduate theses supervision and producing reports and dissertations.

Teamwork

I have excellent teamwork skills gained through working with other people and on my own, making decisions and solving problems.

Interpersonal Skills

I have excellent interpersonal skills. My career history demonstrates my ability to get on very well with people from varied backgrounds. I am capable of adapting to different working conditions.

Planning and Organizing

I am capable of meeting deadlines, work schedules and balancing work load with family demands and extra curricula activities. I am organized and effective under pressure.

RESEARCH INTERESTS AND EXPERTISE

I have interests and expertise in GIS and Remote sensing, Land use and Climate change with particular focus on soil trace gas flux measurements, mapping spatial variability of soil nutrient contents, land use/land cover dynamics, inventory and mapping of vegetation cover health, nutrient cycling and ecosystem functioning/services, climate change adaptation and mitigation, sustainable land management for crop yield and carbon sequestration, carbon accounting and amelioration of degraded lands.

RESEARCH PUBLICATIONS AND TECHNICAL REPORTS

Owusu Prempeh, N., Amekudzi, L. K., Kyere, B., and Bruggemann, N. (2016). Seasonal and spatial variability of soil CO₂ flux in semi-arid savannah ecosystem of Ghana (*Draft paper*)

Owusu Prempeh, N., (2015). Soil respiration across predominant land uses in the Veacatchment in the Sudan Savannah zone, North East of Ghana. PhD thesis submitted to the Department of Civil Engineering, KNUST, Kumasi, Ghana. (online) <http://www.wascal.org/special-pages/file-show/container/show//soil-respiration>

Owusu-Prempeh, N., and Asare, A. (2015). Assessment of spatial variability and concentration of heavy metals in soils under the influence of mining at Anglogold Concession, Adubirem, Ghana. *Asian Academic Research Journal of Multidisciplinary, (AARJMD) Vol. 1 No. 32, 400 - 422pp*, ISSN: 2319 - 2801

Owusu-Prempeh, N., Siaw, D. E. K. A, and Asamoah, E. F. (2015). Hydraulic conductivity of soils under continuous maize (*Zea mays*) cultivation. *Journal of Natural Sciences Research, Vol.5, No.10, 60-65pp*, ISSN: 2225-0921 (Online), www.iiste.org

Siaw, D.E.K.A., **Owusu-Prempeh, N.,** Asare, A., Duodu, C., and Akoto, S. A. (2014). Performance of *Terminalia superba* and *Triplochiton scleroxylon* seedlings under different forest canopy. *JENRM, Vol. I, No. 2, 98-105 pp*, ISSN: 2026-6189

Owusu Prempeh, N. (2010). Protected areas and sustainable livelihoods issues: opportunities and challenges from the Pacific Rim National Park Reserve, BC, Canada. Presentation made at the Study Tour Canada, Vancouver Island University, BC, Canada, 26th July-27th August, 2010.

Owusu Prempeh, N. (2010). Relevance of Geographic Information Systems in Natural Resource management and Mango production. Workshop for Ministry of Food & Agriculture (MoFA) staff participating in the Village Mango Project (VMP), FFRT-KNUST, Sunyani. 11th-12th June, 2010

Siaw, D.E.K.A., Gyiele, A. L., **Owusu Prempeh, N.,** and Dankyira, J. O. (2010). Progress report on Village Mango Project submitted to Ministry of Agriculture (MoFA), Ghana.

Owusu Prempeh, N., Gyiele, A. L., and Siaw, D.E.K.A. (2009). Technical report for the Village Mango Project submitted to Ministry of Agriculture (MoFA), Ghana.

Owusu Prempeh, N. (2003). Population and built environment area estimation using remote sensing in the Peri-urban interface of Kumasi, Ghana. MSc thesis submitted to Faculty of Agriculture and Integrated Rural studies, Cranfield Univ. Cranfield, UK

GENERAL INTERESTS

I enjoy reading novels and travelling in a group for site-seeing, hiking and orienteering

REFERENCES

Prof. Robert C. Abaidoo
Dean, School of Graduate Studies
KNUST-Kumasi, Ghana
Tel: +233 (0) 208438958
Email: abaidoorc@yahoo.com

Prof. Kyere Boateng
Dean, Faculty of Forest Resources
Technology (FFRT)
CANR- KNUST, Kumasi, Ghana
Tel: +233 (0) 24 463 6669
Email: kyereb@yahoo.com

Dr. Graham Thomas
Head of Skills and Employability,
Educational and Staff Development
Queens' Building
Queen Mary University of London,
Mile End Road, London, E1 4NS
Tel: +44 (0) 7745572107
Email: graham.thomas@qmul.ac.uk