**Curriculum Vitae**

**PERSONAL**

**Name**: SAMUEL **AIKINS**

**Date and Place of Birth**: 3rd February 1968, Kumasi

**Address**: Department of Theoretical and Applied Biology, College of Science

KNUST, Kumasi.

**Nationality**: Ghanaian

**Marital Status** Married

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**A. ACADEMIC DEGREES EARNED WITH DATES**

**Profile**

Experience researcher as well as educator with strong academic background in aquatic ecology. Specialized in community ecology in relation to ecosystem management and restoration. Primary and secondary productivity studies as well as nutrient cycling in freshwater ecosystem.

1. **Ph.D**.: Biology (Aquatic Ecology), **March 2001**,
2. **M. Sc**.: Biology (Aquatic Ecology), **March 1998**,
3. **B. Sc (Hons)**: Biological Sciences, **August 1993**,

**B. INSTITUTIONS ATTENDED WITH DATES**

1. Tohoku University, Sendai, Japan, **1996 - 2001**
2. University of Science and Technology, Kumasi, Ghana,.**1989 - 1993**

**UNIVERSITY TEACHING AND RESEARCH EXPERIENCE**

**A. ACADEMIC RANK HELD AND SUBJECTS TAUGHT**

1. LECTURER**; June 2003 to date**

Department of Theoretical and Applied Biology, Kwame Nkrumah University of Science and Technology, Ghana. I have been teaching the following courses;

1. **Theoretical and Applied Biology:**
2. BIOL 451 Biosystematics
3. BIOL 454 Environmental Physiology
4. BIOL 463 Aquatic Ecology
5. BIOL 458 Fish and Fisheries Biology

1. **Environmental Science:**
2. ENVS 255 Biological Oceanography
3. ENVS 254 Ecology of Inland Waters

**2.** PART-TIME LECTURER AND RESEARCH FELLOW**;** **April 2001 - March 2003**

Center for Northeastern Asian Studies, Division of Regional Ecosystem Studies. Tohoku University, Japan,

Taught Aquatic (Lagoon) Ecology

**3.** PART-TIME LECTURER**;** **July 2001 - June 2002**

Tohoku Semiconductors (evening classes) at Temple University Sendai, Japan.

Taught English (Communication Skills)

**4. GRADUATE** TEACHING ASSISTANT**;** **April 1998 - March 2000**

Biology Department, Graduate School of Science,. Tohoku University, Japan,

Assisted in Undergraduate ecology practical

B. **SUPERVISION OF STUDENT PROJECT WORK**

In addition to teaching students, I have been supervising graduate and undergraduate student project work since I started teaching in this University. So far I have supervised the work of two (2) doctorate students (PhD), fifteen (15) master students (MPhil and MSc) and forty one (41) undergraduate students in three Departments. Below is a list of some of the projects undertaken by my students.

**PhD Student Projects**

1. Spatio-Temporal Variability of Phytoplankton Composition, Biomass and Primary Productivity of Lake Bosomtwe, Ghana, **(2010).**

2. Seasonal and Inter Annual Variability of Pelagic Zooplankton Community Structure and Secondary Production in Lake Bosomtwe, Ghana **(2010).**

**Master (MSc and MPhil) Student Projects**

1. Carwash Wastewater Characterization and Impact on Surface Water Quality, A Case Study of Washing Bays Sited on the Banks of Streams in Kumasi, **(2008**).

2. Evaluation of the Microbial and Physico-Chemical Parameters in Borehole Water: A Case Study of the Offinso District of Ashanti Region, (**2009)**.

3. Effects of Tillage Practices on Soil Fertility: A Case Study of the West Mamprusi District of the Northern Region **(2011**).

4. Ecological Studies of the Flora of Afram East Headwaters Forest Reserve **(2011**).

5. Effects of Municipal Solid Waste on four major Rivers in Gyenegyene, Berekum Municipal (**2011**).

6. Physico-Chemical Quality of Water Sources in the Gold Mining Areas of Bibiani, (**2012**).

7. Seasonal Nutrient Cycling of Lake Bosomtwe, (**2012**).

8. Physico-Chemical and Bacteriological assessment of selected Boreholes and Hand-Dug Wells in New Edubiase, Ashanti Region, **(2013**).

9. Suitability of Drinking Water from Karaga Dam, **(2013**)

10. Assessment of Illegal Forest Activities in Tano Offin Globally Significant Biodiversity Area in the Nkawie Forest District (**2014**)

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11. Levels of Heavy Metals contaminations of Soil and Water at Agbogbloshie Scrap Market, Accra **(2014**).

12. Public Health considerations of African Catfish (*Clarias gariepinus,* Burchell 1822)cultured in Waste Stabilization Pond System in Kumasi, Ghana (**2014**)

13. The Cocoa Certification Program and its Effect on Sustainable Cocoa Production in Ghana: A Case Study in the Upper Denkyira West District, **(2014**).

14. Q**uality of** D**rinking** W**ater from** G**roundwater and Pipe-Borne Sources**: A Case Study of Kwahu West Municipality of the Eastern Region, Ghana **(2015**)

15. Assessment of The W**ater** Q**uality used for Domestic Activities in Achimota School** and its Environs (**2015**)

**Undergraduate Student Projects**

**BSc Biology**

**2014/2015**

1. Effect of Anthropogenic Activities on the Water Quality of Lake Bosumtwe
2. Assessment of Pollution Levels in Wiwi River and Jimi River using Microinvertebrates as Indicators
3. A Prevalence Study of Schistosma in Mabang Community

**2013/2014**

1. .Assessing the Water Quality of the Wiwi and Sisa Rivers, using the Biological Monitoring Working Party
2. Assessing Water Quality of River Sisai and Subin using Macro-Invertebrates as Bio-Indicators
3. The Biological Measurement of Pollution in the Nsuben River and the Aboabo River using Trent Biotic Index

**2012/2013**

1. The use of *Trichoderma Harzianum* as a Biological Control Agent against *Sclerotium rolfsii*
2. Determination of the rates of Primary Productivity In Barekese Dam and Lake Bosumtwe
3. Microbiological Load along the Processing Chain of African Catfish *(Clarias gariepinus*) from Wastewater Fed Pond

**2011/2012**

1. Physico-Chemical analysis of River Wiwi and River Subin

**2010/2011**

1. Comparing the Pollution Levels of the Wiwi and Sisa Rivers, using The Biological Monitoring Working Party

**2009/2010**

1. Prevalence of Schistosomiasis and other Intestinal Parasites in Weweso (M/A) Basic School Children

**2008/2009**

1. The effects of some Environmental Factors on Malaria Incidence on KNUST Campus, Ayeduase and Ayigya

**2007/2008**

1. Influence of Car Washing Activity on Water Bodies (River Sisa)
2. Effect of Car Washing Activities on the Aboabo River

**2005/2006**

1. Hydrobiology of River Sisa
2. A Study of The Hydrobiology of River Subin, Kumasi
3. Characterization of a Littoral Zone of Lake Bosumtwe

**2004/2005**

1. Relationship between Ecological Factors and the Incidence of Malaria in KNUST Campus and surrounding Environs
2. A Study of the Hydrobiological of River Wiwi, Kumasi
3. Prevalence of Schistosomiasis along the River Volta and Factors affecting the Habitat of the Intermediate Host

**2003/2004**

1. The Impact of Agricultural Activities on the Quality of Peri-Urban Water Bodies - A Case Study of Sisa River Sepetimpom, Kumasi
2. Effects of Pollution on Freshwater Organisms: A Case Study ff Fish in River Jimi at Obuasi
3. Physico-Chemical Study of River Wiwi at KNUST, Kumasi

**BSc Environmental Science**

**2014/2015**

1. Analysis of the Efficiency of the Wastewater Treatment Plants of a Brewery and Soft Drink Companies
2. The Effect of Car Washing Facility on the Surface Water Quality of River Danyame at Deduako

**2013/2014**

1. Environmental Factors Contributing to the Spread of Malaria in Ayigya and Bomso, Kumasi
2. Assessment of the Water Quality of Rivers Subin and Susan, Using Phyisco-chemical and Microbial Parameters

**2012/2013**

1. Determination of Physico-Chemical and Microbial Quality of Subin River, Kumasi
2. Analysis of the Treatment Efficiency Of Wastewater from Two Brewery Processing Industries
3. Effects of Industrial Wastewater on the Water Quality of Sisa River

**2011/2012**

1. Water Quality of Underground Water in Ayeduase and Kwamo
2. Analysis of Water Quality of River Wiwi and River Subin

**2010/2011**

1. Assessment of Water Quality of Hand Dug Wells from Emena and Boadi

**2009/2010**

1. Water Quality Analysis of some selected Sachet Water Brands in the Obuasi Municipality
2. The Effects of Anthropogenic Activities on the Water Quality of River Wiwi

**2008/2009**

1. The Chemical effect of Bethel Car Wash Facility on the Aboabo River
2. The Perception and Practices of the People in Abono Community on the Concept of Sustainable Development

**2007/2008**

1. Impact of Mine Tailings Dams on Water Bodies

**C. OTHER PROFESIONAL RELATED EXPERIENCE**

**Affiliation to Professional bodies**

2001 – 2003: Member, Ecological Society of Tohoku Region, Japan

2001 – 2003: Member, Japan Association of Benthology, Japan

2003 to date: Member, Ghana Optometric Association

2003 to date: Member, Ghana Optometric Educators Association

2003 to date: Member, Ghana Science Association

2003 to date: Member, University Teachers Association of Ghana

**Other Professional related experiences**

1. KNUST Coordinator for Master of Development Management by University of Adger, Norway, **2007 to date**

2. External Examiner for Global Environmental Issues (UT 403) of Master of Development Management by University of Adger Norway. **2007 to date**

3. External Examiner for Planning and Environmental Assessment: Theories, Methods and Techniques (UT-502) of Master of Development Management by University of Adger, Norway **2008 to date**

4. President, Kumasi Branch of Ghana Science Association (GSA) **2006 to 2011**:

5. Fellow Republic Hall, KNUST **2003 to date**

6. Examination Officer of the Departments of Theoretical and Applied Biology and Environmental Science, KNUST **2005 to 2009**

7. IDL Coordinator for Master of Development Management by Department of Theoretical and Applied Biology **2013 to date**:

8. Biology Coordinator for B. Sc. Biological Sciences programme in Distance Learning mode Department of Theoretical and Applied Biology **2009**

9. Examination Officer of the M.Sc. Environmental Science, programme at Institute of Distance Learning (IDL) KNUST **2011to date:**

**Membership of Boards and Committees**

1. Member of National Executive Committee (NEC) of Ghana Science Association, **2006 to 2011:**

2. Executive Member, Regional Centre of Expertise Ghana (RCE Ghana) **2006 to date**

3. Member, LOC for organizing UNU Global Seminar by RCE Ghana in collaboration with UNU Rector at Miklin Hotel, Kumasi, Ghana **2007**

4. Chairman, LOC for organizing Ghana Science Association 11th Biennial Workshop on affordable housing in Kumasi, Ghana, **2008**:

5. Chairman, LOC for organizing Ghana Science Association 27th Biennial Conference on Agro-Processing in Kumasi, Ghana, **2011:**

6. Member, committee on final year project report format appointed by the Departmental Board of Theoretical and Applied Biology. **2003**

7. Member, committee on Environmental Science syllabus appointed by the Departmental Board

of Theoretical and Applied Biology. **2003**

8. Member, committee to review OD (Doctor of Optometry) programme syllabus for Optometry

Department by the Academic Board, KNUST **2003**

9. Member, Faculty of Science TALIF committee. Representative from Theoretical and Applied Biology **2004**

10. Board member, Faculty of Science Cognate member on Faculty of Agriculture Board. **2003 – 2004**

11. Board member, College of Science Representative on College of Agriculture and Natural

Resources Board, **2004 to 2006**:

12. Board member, Department of Optometry representative on Faculty of Bioscience Board. **2004 to 2009**:

13. Member, committee to plan for the establishment of the Lake Bosomtwe cultural Meteorite

Center appointed by the College Board, **2007**

14. Member, committee to monitor the use of student’s contribution of the 10% Academic

Facility User Fee (AFUF) for the improvement of teaching and learning at the Department of

Theoretical and Applied Biology, KNUST, **2009**

15. Member, committee to review Diploma in Dispensing Optics programme documents for

School of Dispensing Optics, Oyoko by the Academic Board, KNUST, **2010**

**3. DETAILS OF RESEARCH OR PROJECTS UNDERTAKEN**

**A. Research/Project conducted**

1. Primary and Secondary productivity of Lake Bosumtwe, **2006 to 2010**

2. Effect of car washing facilities on surface water quality **2006 to 2008**

3, Wastewater recycling for aquaculture, **2011 to 2014**

**B.** **Publications arising out of the Research**.

1. P. Sanful, E. Frempong, **S. Aikins**, R. Hall, R. Hecky (2012) Secondary production of *Chaoborus ceratogones* (Diptera: Chaoboridae ) in Lake Bosomtwi, Ghana. *Aquatic Insects* 30 No. 2, 115-134

2. P. Sanful, E. Frempong, **S. Aikins**, R. Hall, R. Hecky (2012) Secondary production of crustacean zooplankton and biomass of major rotifer species in Lake Bosumtwi/Bosomtwe, Ghana, West Africa, *Afr. J. Ecol*., 51, 456–465

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| 3. T. A, Amantoge and **S. Aikins** (2013) Drinking Water Suitability from the Karaga Dam in the Northern Region, Ghana *ARPN Journal of Science and Technology*VOL. 3, NO. 12, 1242-1246 |

4. I. Tindjina, **S. Aikins**, K.M.L. Tengan (2014). Effect of tillage practices on soil fertility. *Journal of Biodiversity and Environmental Sciences* (JBES) Vol. 5, No. 2, p. 181-191

**5. S. Aikins** and D. O. Boakye (2015). Carwash Wastewater Characterization and Effect on Surface Water Quality: A Case Study of Washing Bays Sited on Oda and Daban Streams in Kumasi, Ghana. *ARPN Journal of Science and Technology*VOL. 5, NO. 4, 190-197

6. **S. Aikins,** F. N.Gyawu-Asante and R. B. Voegborlo, (2015) Physico-chemical quality of water sources in the Gold mining areas of Bibiani, Ghana. *International Journal of Innovative Science, Engineering & Technology,* Vol. 2 Issue 9, 229 – 238

7. **S. Aikins** and D. O. Boakye (2015). The Potential effects of Car Washing Facilities on Surface Water Bodies in Kumasi Metropolis, Ghana. *ARPN Journal of Science and Technology*VOL. 5, NO. 10, 484-490

8. Yeboah-Agyepong M., Amoah P., Agbo W. N., Ashley M. and **S. Aikins** (In Press) Pathogen and heavy metal concentrations in African catfish (*Clarias gariepinus*) cultured in waste stabilization pond system in Kumasi, Ghana *Journal of Water and Health*

9. PO Sanful, **S Aikins**, E Frempong, RE Hecky and RI Hall (In Press) Species composition and temporal variability of the zooplankton community of Lake Bosumtwi (Ghana, West Africa): physical dynamics and bottom-up influences *African Journal of Aquatic Science*

10. **Aikins, S**. and E. Kikuchi. Studies on habitat selection by amphipods using artificial substrates within an estuarine environment. *Hydrobiologia* 457:77-86, 2001.

11. **Aikins, S.** and E. Kikuchi. Water current velocity as one of the environmental factors regulating the distribution of amphipod species in Gamo Lagoon, Japan. *Limnology* 2:185-191, 2001.

12. **Aikins, S.** and E. Kikuchi. Grazing pressure effects on microalgae by amphipods in Gamo Lagoon. *MEPS* 245: 171-179, 2002.

13. F. E. Awotwi, E. Frempong, **S. Aikins**, R. E. Hecky and M. Puchniak, (2015). The Relationship between Mixing and Stratification Regime on the Phytoplankton of Lake Bosumtwe (Ghana) West Africa. *West African Journal of Applied Ecology*, vol 23(2), pp 43- 75.

**4. WORKSHOPS AND EXHIBITIONS ATTENDED**

1. Workshop on Community Eye Health for optometrist by West African Health Organization (WAHO), Lagos, Nigeria. **March 2005:**

2. Delegates conference of World Council of Optometry (WCO) held in Accra, Ghana **April 2005**:

3. Workshop on Sharing Environmental Knowledge in Africa by United Nations University and KNUST Kumasi, Ghana **October 2005:**

4. UNU Global Seminar on Education for Sustainable Development, Kumasi, Ghana **March 2007**

5. Launching of Regional Centre of Expertise (RCE) Ghana at Miklin hotel, Kumasi, Ghana **May 2007**

6. 2nd International Regional Centre of Expertise (RCE) Conference in Penang, Malaysia **August 2007**

7. Workshop of Coordinators from Partner Universities of Development Management in Norway **August 2007**

8. Workshop on African Wetlands at University of Ghana, Accra, Ghana **March 2008**

9. Workshop of Coordinators from Partner Universities of Development Management in Tanzania **May 2008**

10. 3rd International International Regional Centre of Expertise (RCE) Conference in Barcelona, Spain **July 2008**

11. Workshop of Coordinators from Partner Universities of Development Management in Norway

**August 2008**

12. Workshop of Coordinators from Partner Universities of Development Management in Sri Lanka, **May 2009**

13. Workshop of Coordinators from Partner Universities of Development Management in Norway **November 2010**

14. Workshop of Coordinators from Partner Universities of Development Management in Uganda **November 2011**

15. Workshop of Coordinators from Partner Universities of Development Management in Sri Lanka **January 2013**

16. Represented the Department of Optometry at the National Science Exhibition held in Accra International Center, Accra, Ghana **March 2004:**

17. Ghana Science Association 10th Biennial Workshop on rainwater harvesting, Accra, Ghana, **July 2006.**

18. Launching of Regional Centre of Expertise (RCE) Ghana at Miklin hotel, Kumasi, Ghana **May 2007**

19. Ghana Science Association 11th Biennial Workshop on affordable housing in Ghana **July, 2008**.

20. Ghana Science Association 26th Biennial Conference on role of Science in National Building in Cape Coast, Ghana **August 2009**.

21. Ghana Science Association 12th Biennial Workshop on Post-Harvest loses in Tamale, Ghana **August 2010.**

22. Ghana Science Association 27th Biennial Conference on Agro-Processing in Kumasi, Ghana **July 2011.**

23. Represented College of Science at 1st Ghana Science Congress on Water, Sanitation and Environment, Accra, Ghana **August 2011**.

24. Workshop on improved pedagogy and research proposal writing by Quality Assurance Unit, KNUST, Kumasi, Ghana **February 2004**

25. Represented the Department of Optometry at the National Science Exhibition held in Accra International Center, Accra, Ghana **March 2004**:

26. Workshop on Sharing Environmental Knowledge in Africa by United Nations University and KNUST Kumasi, Ghana **October 2005**:

27. Workshop on biometry and statistical analysis by Challenge Programme for Water and Food Project 38, KNUST, Kumasi, Ghana **January 2006:**

28. First KNUST Summer School on equipping staff for leading change in Academia by the Quality Assurance and Planning Unit of KNUST, Kumasi, Ghana **August 2011**:

**5. CONFERENCE PRESENTATIONS AND PROCEEDINGS**

Aikins, S. and E. Kikuchi, 1998. Relationship between amphipods and their habitats, including artificial substrates in Gamo Lagoon. Ann. Eco. Soc. Tohoku, Japan. 59 : 16.

Aikins, S. and E. Kikuchi, 1999. Current velocity as an environmental factor for the distribution of amphipod species. Ann. Eco. Soc. Tohoku, Japan. 60 : 16.

Aikins, S. and E. Kikuchi, 2000. Water current velocity as an environmental factor regulating distribution of amphipod species in Gamo Lagoon, Japan. Ann. Jpn. Asso. Benthology. 14 : 40.

Aikins, S. and E. Kikuchi, 2000. Grazing pressure effects on microalgae by amphipods in Gamo Lagoon. Ann. Eco. Soc. Tohoku, Japan. 61 : 15.

S. Aikins, K. A. Hayford and C. M. Amissah, 2006 Prevalence of Schistosomiasis along the River Volta and Factors affecting the Habitat of the Intermediate Host, College of Science 1st Research Conference, Pg 172

S. Aikins and D. O. Boakye, 2011. Carwash wastewater characterization and effects on surface water quality: A case study of washing bay sited on banks of stream in Kumasi. Ghana Science Association, 27th Biennial conference. Pg. 52