

CURRICULUM VITAE



ISAAC OGANGU JUMBA (Ph.D)

**PROFESSOR OF CHEMISTRY
UNIVERSITY OF NAIROBI**

A. SYNOPSIS

Prof. Jumba is a Kenyan Citizen by birth, with origins in Vihiga County of Western Kenya. He is married with children.

His academic life started with primary education at Womulalu and Gavalagi Primary Schools (1961 – 1967) before joining Kakamega High School (1968 – 1971), and Murang'a High School in Murang'a County (1972 – 1973) for "O" and "A" levels, respectively. He then proceeded to the University of Nairobi for a Bachelor of Science degree in Chemistry and Biochemistry (1974 – 1977), Master of Science in Chemistry (1978 – 1980), and finally Doctor of Philosophy in Chemistry (1986 – 1989) with a special attachment course in Analytical Chemistry and Animal Nutrition at the Moredun Research Institute and University of Edinburgh, Scotland (1988 – 1989), under sponsorship of the British Council.

His working career started in the Civil Service when he was employed as a Research Officer by the then Ministry of Agriculture in 1977 and posted to several research centres of the then Kenya Agricultural Research Institute, now called Kenya Agricultural and Livestock Research Organization (KALRO). He then joined the University of Nairobi as a Tutorial Fellow in September 1985 where he progressed to Lecturer (1987), Senior Lecturer (1993), Associate Professor (1998) and finally Professor (2006) in the Department of Chemistry. As he was pursuing these academic functions, he also took up administrative duties as Chairman of the Faculty of Science Postgraduate Studies Committee (1993 – 2001), Chairman, Department of Chemistry (2001 – 2007); Associate Dean Science, Kenya Science Campus (August 2007 – October 2007). Deputy Principal, College of Education and External Studies in Charge of Kenya Science Campus (formerly Kenya Science Teachers College) (October 2007 – May 2013), and finally Ag. Principal, College of Education and External Studies (May 15th 2013 to January, 2014). He was

confirmed Principal, College of Education and External Studies in February, 2014 for a 5-year contract. Upon expiry, the contract was renewed for another five years effective February 5 2019.

Prof. Jumba therefore has 8 years of experience in the Civil Service; 12 years of dedicated service as a member of the University of Nairobi senior management; 18 years as a member of the University of Nairobi Senate, and 35 years of teaching experience at the University of Nairobi.

Prof. Jumba has published over 70 scientific journal articles, book chapters and research papers that have made him a distinguished Google Scholar cited internationally. He has also successfully supervised numerous postgraduate students at masters and PhD levels.

Prof. Jumba has also received a number of awards and certificates in recognition of his achievements. Notable among these are the World Bank End-of-Project Certificate of Merit award for being ranked 2nd out of 145 Agricultural Research Grant Projects evaluated. In the course of his duties, Prof. Jumba has also accomplished numerous tasks at the College of Education and External Studies, including hosting of eight international education conferences between 2013 and 2018, improvement of teaching and learning facilities, as well as establishment of international links and collaborations with other institutions to enhance benchmarking and College visibility and image.

PRESENTATION OF CV:

This Curriculum Vitae was last updated in April 2019. For ease of reference, the content is organized and presented as follows:

A. Synopsis	-	Page 2
B. Personal Particulars	-	Page 5
C. Education Background	-	Page 6
D. Employment Record	-	Page 6
E. Work Experience and Achievements	-	Page 8
F. Scholarships and Research Funds Awarded	-	Page 15
G. Certificate of Merit Awards	-	Page 16
H. Google Scholar Platform/Ranking	-	Page 17
I. Current Research Interests	-	Page 18
J. Collaborative Research Projects Undertaken	-	Page 18
K. Some Conferences and Workshops Attended	-	Page 19
L. Postgraduate Supervision	-	Page 20
M. Research Publications	-	Page 23
N. External Examination	-	Page 33
O. Referees	-	Page 33

B. PERSONAL PARTICULARS

EMPLOYMENT DESIGNATION: Principal,
College of Education and External Studies (CEES)
University of Nairobi

ADDRESS: P.O. Box 92-00902, Kikuyu
Tel. No. (Wireless) : 2010411
Fax No. : 020-2346604
Mobile No. : +254722336886/0728
999744
E-mail Address : ijumba@uonbi.ac.ke

NATIONALITY: Kenyan

DATE AND PLACE OF BIRTH: 22nd February, 1954, Central Maragoli
Location, Vihiga County, Western Kenya

ACADEMIC DESIGNATION: Professor

ACADEMIC QUALIFICATIONS: BSc. Chemistry and Biochemistry (1977)
MSc. Chemistry (1981), University of Nairobi
PhD Chemistry (1989), University of Nairobi
Certificate in Analytical Chemistry, Animal Nutrition and
Biostatistics (Moredun Research Institute, Edinburgh
Scotland).

LANGUAGES: English, Swahili, Luhya

MARITAL STATUS: Married with Children

C. EDUCATION BACKGROUND

Date	Institution	Place	Qualification
1967	Gavalagi Primary School	Vihiga	Primary Certificate
1961-1966	Womulalu Primary School	Vihiga	Primary Education
1968-1971	Kakamega High School	Kakamega	East African Certificate of Education
1972-1973	Muranga High School	Muranga	East African Advance Certificate
1974 -1977	University of Nairobi	Nairobi	B.Sc (Chemistry & Biochemistry)
1978 -1980	University of Nairobi	Nairobi	M.Sc (Chemistry)
1986 -1989	University of Nairobi	Nairobi	Ph.D (Chemistry)
1988 - 1989	Moredun Research Institute Edinburgh, Scotland (Special Attachment)	Britain	Advanced PhD course in Chemical Analytical Techniques, Animal Nutrition and Biostatistics

D. EMPLOYMENT RECORD

February 5 th 2019 todate	:	Principal College of Education and External Studies University of Nairobi - 2 nd Tour
5 th February, 2014 to February 4, 2019	:	Principal, College of Education and External Studies University of Nairobi - 1 st Tour
May 15 th , 2013 to 5 th February, 2014	:	Ag. Principal, College of Education and External Studies

- October 2007 - May, 2013 : Deputy Principal, CEES in charge of Kenya Science Campus, University of Nairobi
- December, 2006 to date : Professor of Inorganic/Analytical Chemistry, Department of Chemistry, University of Nairobi.
- July 1998 – December 2006 : Associate Professor, Department of Chemistry, University of Nairobi.
- November 1993 to July, 1998 : Senior Lecturer, Department of Chemistry, University of Nairobi.
- April, 1987 to November, 1993 : Lecturer, Department of Chemistry.
- September 1985 to March, 1987 : Tutorial Fellow, Department of Chemistry University of Nairobi.
- June, 1985 to September, 1985 : Senior Research Officer and Head of Biochemistry Section, National Agricultural Laboratories, KARI, Nairobi.
- July 1977 to June 1985 : Research Officer and Head Chemist, Animal Research Division, KARI Kitale.
- November, 1971 to May, 1972 : Trainee Technician in Electrical Installation, Kenya Power and Lighting Co., Training School, Ruaraka, Nairobi.

E. WORK EXPERIENCE AND ACHIEVEMENTS

I. Principal, College of Education and External Studies. (May 15th 2013 to date)

Major Objectives:

1. To effectively manage of the College resources and facilities
2. To produce high quality graduates
3. To improve University ranking both nationally and internationally
4. To enhance quality of academic programmes to match industry needs
5. To intensify enrolment for University education at all campuses and Extra-Mural Centres.

Duties and Responsibilities:

1. Provision of leadership and promotion of efficient management of the College.
2. Continue to propel the College in matters of performance contracting as had been done since 2007/2008.
3. Membership of every School/Centre Board and College Committees.
4. Optimal management of College resources.
5. Exploit available opportunities to make the College grow in training and services.
6. Chair Appointment Committees for Grades I-IV, A-F, and Academic Staff upto Graduate Assistant, Tutorial Fellows and Assistant Lecturer.
7. Perform any other duties assigned or delegated by the Vice Chancellor (Statute I.II).

Tasks Accomplished:

1. Managed the College optimally and provided administrative leadership that has ensured continuity in operations, teaching and learning since May 15th, 2013.
2. Effectively managed the College Performance Contracting Secretariat that made the College achieve position 1 overall among the six Colleges of the University between 2007/2008 and 2013/2014 with "Excellent" score.

3. Facilitated the upward mobility for 59 staff for all cadres through promotion to Full Professor (6) and Associate Professor (14), Senior Lecturer (14), Lecturer (13), and Assorted Support Staff in Grades II to EF (19).
4. Constructed the 120 parking capacity School of Education Car Park at Kikuyu Campus in 2015.
5. Facilitated construction of 400 capacity Cafeteria at Library Hill Complex Kikuyu Campus.
6. Maintained revenue generation by the College, enhancing it from Kshs.538M in 2007/2008 to 994M in 2013/2014, then to 1.013B in 2014/2015 before declining to 812 Million in 2016/2017 due to staff strikes.
7. Established the Reproductive Health Unit in 2014 for screening of breast and cervical cancer cases, in addition to other tests.
8. Branded 7 Extra Mural Centres: Eldoret, Nakuru, Kakamega, Malindi, Meru, Kisumu and Mombasa.
9. Rehabilitated the Clinical Laboratory at UHS Kikuyu Campus in 2014.
10. Developed and implemented the 2013-2018 College Strategic Plan.
11. Developed the 2018 – 2023 College Strategic Plan which is now under implementation.
12. Carried out networking and internet connection at 6 Extra-Mural Centres (EMCs) to improve on fees collection and on-line registration of students at the Centres.
13. Propelled the College to excel in Webometrics ranking parameters thus contributing to the University's position among the top 3% in the world.
14. Successfully hosted 8 International Conferences and one workshop. These were:
 - (a) 1st Annual International Conference on Research and Innovation in Education: Education Reforms – Towards Sustainable Development Kikuyu Campus 24 – 26 October 2018.
 - (b) International Conference on Value Creating Education for Sustainable Development – Chiromo Campus University of Nairobi, 2017.
 - (c) International Conference on Value Creating Education for Sustainable Development in collaboration with Soki University, Japan 2016, Kenya Science Campus.

- (d) The Nairobi Symposium: Maximizing Impact of Women, Peace and Security Policies in Africa. The Institute for Inclusive Security/University of Nairobi. July 22 – 25, 2014. Grown Plaza Hotel, Nairobi
 - (e) Distance Education and Teacher Education in Africa (DETA 2013) hosted at Kenya Science Campus in collaboration with University of Pretoria: July 29th – 1st August, 2013. Participants were drawn from 37 countries around the world.
 - (f) Pan-African Reading for All Conference hosted at Kenya Science Campus from August 12th -16th 2013. Participants were drawn from 30 countries. Conference was sponsored by the Canadian Organization for Development through Education (CODE).
 - (g) Association of Commonwealth Universities Conference and Centenary celebrations held at Taifa Hall and Mount Kenya Safari Club, 26th – 30th September, 2013.
 - (h) Africa for Research in Comparative Education Conference (AFRICE) held at Kenya Science Campus in June 2015.
15. Launched the University of Nairobi Alumni Association Education Chapter in 2015.
 16. Constructed and modernized the entrance to the College headquarters.
 17. Launched 8 Flagship Programmes to support the realization of the Kenya Vision 2030
 1. Master of Education in Educational Foundations with specialization in History of Education, Sociology of Education, Philosophy of Education and Comparative and Contemporary Issues in Education
 2. Master of Education in Educational Administration and Planning with specialization in: Economics of Education, Educational Planning, Educational Administration, Education in Emergencies, Curriculum Studies and Corporate Governance.
 3. Master in Distance Education
 4. Master of Arts in Peace Education
 5. Master of Arts in Project Planning and Management
 6. Bachelor of Education in ICT at Kenya Science.
 7. Master of Education in Physical Education and Sport.
 8. Master of Arts in Religious Studies

18. Operationalized the Bulk SMS System that enables the College to communicate with all students in College, including those in Kisumu Campus. This has greatly improved service delivery.
19. Organized and facilitated introduction of 8 new programmes and review of 7 others to meet current stakeholder and, market demands.

II. Deputy Principal, College of Education and External Studies, (October 3rd, 2007 – May 15th, 2013)

Major Objectives:

1. To transform Kenya Science Teachers College (KSTC) into a University of Nairobi Campus status.
2. To phase out the existing Diploma programmes and introduce degree courses.
3. To effect smooth transition and integrate hired KSTC staff into University Service.
4. To manage the Campus effectively

Duties and Responsibilities:

1. Administrative and Academic Head of the Kenya Science Campus.
2. Ensure effective transition and create an appropriate teaching and learning environment commensurate with University of Nairobi standards.
3. Launch Bachelor of Education (Science) and other programmes at the Campus
4. Manage campus resources optimally.
5. Play a leading role in Strategic Planning and Performance Contract of the College.
6. Coordinate improvements, maintenance and repair of existing physical facilities at Kenya Science Campus.
7. Successfully phased out the Diploma programme of the Ministry of Education.
8. Chair Performance Contract Meetings at the College on behalf of the Principal.

9. Play oversight role in the management and refurbishment of Extra Mural Centres.
10. Carry out any other duties as may be assigned by the Principal or Vice Chancellor.

Achievements:

1. Became a team player in the College Management Board.
2. Managed the Campus resources optimally.
3. Developed a plan to grow and refurbish Extra Mural Centres in an effort to increase student enrolment and fees collection.
4. Successfully managed the transition and transformation of Kenya Science Teachers College (as the Ministry of Education institution) to University of Nairobi Campus status.
5. As a result of Achievement No. 3 above, witnessed revenue growth from Kshs.538 Million in 2007/2008 to 988.5 Million in 2013/2014, translating to 84% growth.
6. Successfully launched B.Ed Science and B.Ed ICT programmes at Kenya Science Campus to full cycle with student population of just over 1000.
7. Successfully phased out the Ministry of Education Diploma Teacher Training programme. Teaching Practice supervision was successfully undertaken.
8. Successfully held three graduation ceremonies for the Diploma students at Kenya Science on behalf of the Ministry of Education in 2007, 2008 and 2009.
9. Developed a customized 2007 -2012 Campus Strategic Plan whose targets have were met within the period.
10. Provided technical input and support during the construction and equipping of the new Science Laboratories and Lecture theatre.
11. Improved environmental management at Kenya Science that has an atmosphere conducive to learning and working.
12. Facilitated the overhaul improvement of ICT facilities including installation of both WAN and LAN, at Kenya Science Campus.

III. Associate Dean, Science, Kenya Science Campus (August – October, 2007)

Objectives:

1. To prepare for the 1st intake and launch of Bachelor of Education Science Programme at Kenya Science.
2. To make provisions for launch of other programmes at Kenya Science Campus.
3. Make preparations for the Teaching Practice and Graduation Ceremony of the Diploma students of the Ministry of Education.
4. Wind up the Diploma programme of the Ministry of Education.
5. Plan for introduction of any other STEM programmes at Kenya Science Campus.

Achievements:

1. Successfully launched the B.Ed Science Programme with the 1st admission of 186 students on October 15th, 2007.
2. Successfully launched the B.Ed ICT Programme in October, 2012.
3. Successfully wound up the Diploma programme of the Ministry of Education in 2009.

IV. Chairman, Department of Chemistry - (2001-2007)

Responsibilities:

1. Administrative and academic Head of the Department, responsible for day to day operations
2. Preparation of Department Strategic Plan and Annual Budget.
3. Make recommendations to the CMB regarding teaching, examinations, and syllabus.
4. Member of the University of Nairobi Senate.

Achievements:

1. Equipped the Laboratories with more instruments and apparatus for practicals.
2. Renovated and completely refurbished the Department to ISO standards.
3. Refurbished and equipped the fume extraction chambers, and improved water supply to the Science Laboratory.
4. Increased student enrolment in the department from 1,200 in 2002 to over 2,000 in 2006.
5. Organized several stakeholders' workshops to discuss relevance of programmes offered and subsequent review of curricula in 2006.
6. Organized and hosted the 1st Regional Conference on Trace Element Research in Africa in collaboration with Trace Element Institute for UNESCO, Silver Springs Hotel, Nairobi.
7. Facilitated signing of a number of MOUs hosted in the Department between the University and other institutions, including: - UNEP – GEF Chemicals Branch for Accreditation of the Pesticides Laboratory and Nairobi River Pollution Monitoring, and International Union for Conservation of Nature and Natural Resources – World Conservation Union for Survey and analysis of Nairobi River Pollutants. These MOUs brought in a total of over 300,000 USD.

V. Research Officer, Civil Service (Ministry of Agriculture and Livestock Development)**Duties:**

Head of the Chemistry and Biochemistry laboratories at the National Agricultural Research Centre Kitale and National Agricultural Laboratories Nairobi.

1. Manage resources effectively.
2. Coordinate the analytical laboratory services to ensure effective support to all researchers.
3. Carry out research on animal feeds and forage chemistry.

Achievements:

1. Coordinated services effectively to all sections and departments in the base stations.
2. Conducted research that led to data generation for my PhD thesis in the field of tropical soil – plant interactions in relation to mineral imbalances in grazing livestock in Western Kenya.
3. Conducted research work on pastures and forage chemistry that later led to publication of several articles in peer reviewed journals.

F. SCHOLARSHIPS AND RESEARCH FUNDS AWARDED

1. Government of Kenya scholarship to pursue M.Sc studies at the University of Nairobi (**1978 to 1980**).
2. DAAD scholarship to pursue Ph.D. Studies at University of Nairobi (**1986 to 1989**).
3. British Council scholarship (**September, 1988 to December 1989**) to pursue a special training course in animal nutrition, chemical analytical techniques and chemical analytical techniques and Biostatistics. Practical and theory courses were based at the following institutions:
 - (a) Base station: Moredun Veterinary Research Institute, Edinburg, Scotland.
Activity: Animal experiments, serology and fluorometric analysis.
 - (b) Scottish Agricultural Statistics Service, Kings Buildings, Edinburgh Scotland.
Activity: Biostatistics.
 - (c) West Scotland College of Agriculture, Edinburgh, Scotland.
Activity: Graphite Furnace Atomic Absorption Spectrometric analysis techniques.
 - (d) Edinburgh Research Station of MacCaulay Land Use Research Institute, Scotland.
Activity: X-ray fluorescence analysis.
4. Agricultural Research Fund (USD 37500) through Kenya Agricultural Research Institute for the project: The Identification, Distribution and Impact of Mineral Imbalances in Grazing Livestock in Western Kenya, (**2002**).
5. Princeton University USA (Chromatographic equipment worth USD 10,000) for collaborative research: Worker exposure and occupational health risks associated with organic compounds utilized in the paint manufacturing industry in Kenya (**2001**).

6. Kenya Wildlife Service Nairobi (USD 10,000) for research on animal health in the Lake Nakuru National Park ecosystem **(2006)**.
7. Ministry of Transport and Communications through University of Nairobi Enterprises and Services (UNES) Ltd (Kshs.54 Million) for Environmental Impact assessment of pollution along the Northern Corridor. The Northern Corridor Road Transport Improvement Project/the UNES Task Team **(2004)**. Specific Assignment: Determination of baseline levels of Sulphur Dioxide emissions from vehicular traffic along the Northern Corridor (Mombasa-Nairobi-Nakuru-Kisumu-Busia Route).
8. Ministry of Environment and Natural Resources Kenya POPS Office through UNES Ltd (Kshs. 38 Million) for project on: Kenya National Inventory of Persistent Organic Pollutants (POPS) under the Stockholm Convention. GEF/UNEP/GOK Project: Enabling Activities for the Development of a National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants. The UNES Task Team. **(2003/2006)**. Specific Assignment: Identification of Pentachloro dibenzo dioxins (PCDD) and Polychloro dibenzo furans (PCDF) in Kenya.
9. Deans Committee Grant, University of Nairobi (Kshs.240,000.00) for research on: Identification of mineral imbalances in soils, forages and blood serum as constraints to cattle production in the Mt. Elgon region of Western Kenya.

G. CERTIFICATE OF MERIT AWARDS

1. Kenya Agricultural Research Institute (KARI): The World Bank Agricultural Research Fund END-OF-PROJECT Evaluation. Awarded Certificate of Merit for winning. **SECOND OVERALL AWARD** In recognition of outstanding Project Report on: **“THE IDENTIFICATION, DISTRIBUTION AND IMPACT OF MINERAL IMBALANCES IN GRAZING LIVESTOCK”**. Presented at the KARI Annual Conference KARI HEADQUARTERS, NAIROBI 2nd - 4th December, 2003
2. University of Nairobi College of Biological and Physical Sciences. Awarded Certificate of Recognition for outstanding work performance in the category of **“Best Department in Maintaining a Clean Environment – Department of Chemistry” for the Year 2006**.

3. United Nations Industrial Development Organization (UNIDO) & Ministry of Industry Republic of Indonesia. Awarded Certificate and award for best presentation of Kenya Country Report: **“THE STATUS OF EFFLUENT TREATMENT AND SAFE WASTE DISPOSAL OF TOXIC AND OBSOLETE PESTICIDES UNDER THE STOCKHOLM CONVENTION.”** UNIDO-RENCAP WORKSHOP, Bogor, INDONESIA, 18 – 20 December 2006

H. GOOGLE SCHOLAR PLATFORM/RANKING

Google Scholar is a web-search engine research tool that indexes scholarly literature and academic resources across many disciplines and data bases. Google Scholar indexes individual academic papers from journal articles and conference papers, theses and dissertations, academic books, pre-prints, abstracts, technical reports and other scholarly literature from all broad areas of research.

The University of Nairobi has been using the Google Scholar Platform since 2015 to profile research portfolio of all academic members of staff. This has improved the University’s position in the World Webometrics Ranking system which is based on four parameters: **Presence, Impact, Excellence and Transparency**. The Transparency parameter accounts for the number of citations in the top Google Scholar research profiles. In January 2019, the University of Nairobi was ranked among the top 5% universities globally in terms of Transparency, and continues to hold Position 1 in Kenya.

The citations are determined by the metric indices, the H-Index and the i-10 index. The h-index measures both productivity and citation impact of a scholar’s publications, thus it is a count of the author’s largest number of papers(h) that have as many citations. The i-10 index refers to the number of papers with 10 or more citations. This means the most highly cited articles contribute to the Google Scholar rating. These are the articles published in the high impact journals.

The College has 74 academic members of staff. To keep pace with global citations of their research profiles, the College has created accounts for ALL the staff, and conducts regular Google Scholar updates to ensure the accounts are current, active and visible to students and other researchers worldwide.

In January 2019, Prof. Jumba's research publications had 454 global citations, with H-Index of 11 and i10-index of 15.

I. CURRENT RESEARCH INTERESTS

Current research interests include chemical and environmental pollution; occupational toxicology; mineral metabolic profile in testing in grazing animals; pesticide degradation profiles in soils, sediments, and water, and nutrient flux measurements in marine environments and terrestrial ecosystems; animal health research..

J. COLLABORATIVE RESEARCH PROJECTS UNDERTAKEN

1. Kenya Wildlife Service, Nairobi. Nutritional factors affecting animal health in Kenya's National Game Reserves. Contact: Dr. Richard Kock, KWS Box 40241 Nairobi. 2006.
2. Stockholm Environmental Institute, Sweden. Development of Sensitivity Maps on the effects of acidic deposition on local ecosystems. 2001.
3. Princeton University, USA. Assessment of volatile organic pollutants in the Paint manufacturing industry in Kenya. 2002.
4. Max Plank Institute for Chemistry, Mainz Germany. Impacts of biomass burning in relation to atmospheric pollution in Kenya. 1997 – 2000.
5. Trace Element Institute for UNESCO. Trace Element research in East and Central African region. Kenya Satellite Centre. 2004.
6. Ministry of Transport and Communications and University of Nairobi Enterprises and Services (UNES) Ltd: Environmental Impact Assessment of Aerial Pollution along the Northern Corridor. 2003 – 2006.
6. UNES Ltd and Ministry of Environment and Natural Resources. Establishment of Kenyan Inventory on persistent organic pollutants (POPs) with special reference to Unintentional POPs – Polychlorodibenzo Dioxins and Polychlorodibenzo Furans. 2006.

K. SOME CONFERENCES AND WORKSHOPS ATTENDED

1. 1st Annual International Conference on Research and Innovation in Education: Education Reforms – Towards Sustainable Development. Kikuyu Campus 24 – 26 October **2018**.
2. International Conference on Value Creating Education for Sustainable Development – Chiromo Campus University of Nairobi. **2017**.
3. International Conference on Value Creating Education for Sustainable Development. In collaboration with Soki University, Japan **2016**. Kenya Science Campus.
4. Africa for Research in Comparative Education (AFRICE) Conference at Kenya science Campus, June **2015**,
5. The Nairobi Symposium: Maximizing Impact of Women, Peace and Security Policies in Africa. The Institute for Inclusive Security/University of Nairobi. July 22-25, **2014**. Growne Plaza Hotel, Nairobi.
6. Distance Education and Teacher Education in Africa (DETA). July 29th – August 2nd, **2013**, Kenya Science Campus. Theme: “The need for Access, equity, sustainability, quality and relevance within the context of globalization”. www.deta.up.ac.za.
7. The 8th Pan-African Reading for All (PARFA) Conference 12th – 16th August, **2013**, Kenya Science Campus. Theme: “Literacy for All: Leading the way to Literacy excellence”.
8. Association of Commonwealth Universities Conference and Celebrations, Taifa Hall, University of Nairobi. Theme: Beyond 2015: Gender Milestones in Education in Developing Countries 26 – 30 September **2013**.
9. Peace Education International Workshop – A joint collaboration between University of Nairobi and University of Coventry, 27th August, **2013** - Silver Springs Hotel, Nairobi. Theme: “Community Tensions, Dialogue and Peace Building in Kenya and East African region, including Somalia”.
10. Effluent treatment and safe waste disposal of toxic and obsolete pesticides. UNIDO/RENAP/Ministry of Industry Indonesia. Bogor, Indonesia 18-20 September, **2006**. Paper presented: The Status of Effluent Treatment and Safe Waste Disposal of Toxic and Obsolete Pesticides under the Stockholm Conventions. Kenya Country Report.

11. The 11th World Lakes Conference, October 31 – November 4, **2005**, Grand Regency Hotel, Nairobi.
12. The Agricultural Research Fund Annual Conference, KARI Headquarters Nairobi 3rd – 4th December, **2003**.
13. The International Society for Trace Element Research in Humans (ISTERH): Paper presented: Prospects of Heavy Metal Poisoning in Wild herbivores in Lake Nakuru National Park, Kenya. Book of Abstracts, 338 – 339, 8 – 11 September **2002**. Quebec, Canada.
14. National workshop on Science and Technology Parks Development for sustainable industrial growth: In commemoration of the Scientific Revival Day of Africa. June 30th **2004**, Holiday Inn, Nairobi.

L. POSTGRADUATE SUPERVISION

	NAME/PROGRAMME	TITLE OF THESIS/RESEARCH PROJECT	STATUS
1.	Njagi-Kithure J. G. (PhD), UoN	Distribution of chlopyrifos and some pesticides Residues in the upper Tana River catchment	Graduated 2014
2.	Abong'o D. A. (PhD), UoN	Occurrence, distribution and environmental Impact Of organo-chlorine pesticide residues in Lake Victoria Catchment: A Case Study of River Nyando drainage Basin of Winam Gulf in Kenya	Graduated 2010
3.	Lelon, J. K. (PhD), UoN	Uptake of micronutrients by Acacia Senegal varieties and its possible effect on gum Arabic quality	Graduate 2009
4.	Oduor, F. D.O. (PhD), UoN	Identification of the mineral deficiencies in soils, forages and animal blood as constraints to cattle production in Mount Elgon Region of Western Kenya.	Graduated 2004
5.	Kituyi, E.N. (PhD), UoN	Atmospheric emission budgets for domestic biomass burning in Kenya.	Graduated 2000

- | | | | |
|-----|---|---|-----------------------|
| 6. | Pembere, A. (M.Sc.), UoN | Influence of industrial and agricultural activities on the heavy content of vegetables along Nzoia River. | Graduated 2013 |
| 7. | Musila, N. S. (M.Sc), UoN | Fate of chlorothalonil on and assessment of its residues sampled in Nairobi in French beans, passion fruits and snowpeas. | Graduated 2010 |
| 8. | Mwiluka J. Tenge(M.Sc), UoN | Assessment of alternative resources in Kenya - A case study on coal energy | Graduated 2009 |
| 9. | Shisia, K.S. (M.Sc), Kenyatta University | Soil-plant composition in relation to macro and trace element for grazing cattle in Uasin Gishu | Graduated 2006 |
| 10. | Madadi, V.O. (MSc.), UoN | Chemodynamic studies and assessment of pesticide residues in Lake Victoria Catchment Area for Rivers Sio and Nzoia | Graduated 2005 |
| 11. | Mutaaga, G. (MSc.), UoN | The distribution, metabolism and toxicity of ¹⁴ C-DDT in a model ecosystem simulating a tropical marine environment. | Graduated 2000 |
| 12. | Yugi, P.O. (M.Sc), UoN | The distribution of pesticide residues in the marine organochlorine environment along the coastal region of Kenya. | Graduated 2000 |
| 13. | Barasa, M.W. (M.Sc), UoN | Studies on the distribution of organochlorine pesticide residues in the tropical environment along the Kenyan Coast. | Graduated 1999 |
| 14. | Ongeri, D.M.K. (M.Sc), UoN | The distribution, dissipation a volatization of DDT in a tropical marine system. | Graduated 1999 |
| 15. | Wafula, G.A. (M.Sc), UoN | Measurement of some air pollutants in selected areas of Nairobi, its Environs, and in other selected industrial sites. | Graduated 1999 |

- | | | | |
|-----|---|---|-----------------------|
| 16. | Limo, S.K. (M.Sc),
UoN | Investigation of the physico- chemical properties and characteristics of palm oil | Graduated 1988 |
| 17. | Mwashote, B.M. (M.Sc),
UoN | Sources of dissolved inorganic nutrient fluxes in the Gazi Bay and implications for coastal ecosystems. | Graduated 1998 |
| 18. | Siva, K.S. (M.Sc),
UoN | Mineral status of soils and forages of Lake Nakuru National Park and implications for animal Health. | Graduated 1998 |
| 19. | Kiarie, P.K. (M.Sc),
Egerton | Assessment of heavy metals acid pollution from lead storage battery and extent of manufacturing firms in Nairobi. | Graduated 1995 |
| 20. | Kituyi, E.N. (M.Sc.),
UoN) | Occurrence of chlorfenviphos in cow's milk sampled at a range of sites in Western Kenya. | Graduated 1995 |
| 21. | Wafula, G.A. (Ph.D),
UoN | Determination of mass aerial suspended fine particulate matter and implications for environmental health in Nairobi and its environs. | On-going |

M. PUBLICATIONS AND SPECIAL RESEARCH ARTICLES

1. Abong'o, DA, Wandiga SO, **Jumba I.O.**, (2018). Occurrence and distribution of organochlorine pesticide residue levels in water, sediment and aquatic weeds in the Nyando River catchment, Lake Victoria, Kenya. **African Journal of Aquatic Science**. 43 (3), 255-270.
2. Abong'o, DA, Wandiga SO, **Jumba I.O.**, den Brink PJV, Naziriwo BB, Madadi VO, WAFULA GA, Nkedi-Kizza P, Kylin H. (2015). Occurrence, abundance and distribution of benthic macro invertebrates in the Nyando River catchment, Kenya. **African Journal of Aquatic Science**. 40 (4) (1608-5914):373-392
3. Abong'o, DA, **Jumba, I.O.**, den J. VBP, Bbosa NB, Odongo MV, Angoe WG, Henrik K. Peter NK. (2015). Organochlorine pesticide residue levels in soil from the Nyando River Catchment, Kenya. **Africa Journal of Physical Sciences**, 2(1):18-32.
4. Abong'o, DA, Wandiga, SO, **Jumba, I.O.**, Madadi, VO, and Kylin, H. (2014). Impacts of pesticides on human health and environment in the River Nyando Catchment, Kenya. **BEST: Int. J. Humanities, Arts, Medicine and Sciences (IJHAMS) 2(3), 1 – 14.**
5. Kithure, JGN. Wandiga, SO, **Jumba, I.O.**, Kariuki, D.K. (2014). Dynamics of Chlorpyrifos in water from Upper Tana River in Kenya. **Open Science Repository Chemistry, Online (Open Access), e23050487**
6. Lelon, JK, **Jumba, I.O.**, Keter, J.K. and Oduor, FDO, (2013). Influence of Acacia Senegal varieties on Quality of gum arabic in Baringo District, Kenya. **Afr. J. Plant Science Vol. 7 (6) 190 – 200. ISSN 1996 -0824- Academic Journals.**
7. Shisia, KS. Nyambaka, H., **Jumba, I.O.**, Oduor, F.D.O., and Ngure, V. (2012). Minerals Deficiency diagnosis in grazing cattle of Uasin Gishu District, Kenya. **J. Environ. Chem. & Ecotoxicology 4(13) – 233. ISSN – 2141 – 226X.**

8. Shisia, K.S., Murungi, J., Nyambaka, H., **Jumba I.O.**, Oduor, F.D.O., and Ngure, V. (2011). Soil-plant composition in relation to mineral requirements for grazing cattle in Uasin Gishu District. **J. Technol. & Socio-Economic Dev.** 1, 126 – 130.
9. Lelon, J.K., **Jumba, I.O.**, Keter, J.K., Chemuku, w. and Oduor, F.D.O. (2010). Assessment of physical Properties of gum Arabic from Acacia Senegal varieties in Baringo District, Kenya. **Afr. J. Plant Science** 4 (4), 95 – ISSN 1996 – 0824 Academic Journals.
10. Kariuki, D.K., Ndolo, J.M., **Jumba, I.O.** and Riaroh, D.R.O. (2008). Alternative energy sources from Mui Basin in Kituyi District, Kenya: A case of Coal. **Kenya Journal of Sciences Series A** 13 (1), 42-57.
11. **Jumba I O.**, Kisia, S. M., and Kock, R.A. (2007). Animal health problems attributed to environmental contamination in Lake Nakuru National Park, Kenya: A Case study on heavy metal poisoning in the waterbuck *Kobus ellipsiprymnus defassa* (Ruppel 1835). **Archives Environ. Contamination & Toxicology (USA)**.52, 270-281.
12. Madadi, V0, Wandiga, S. O. and **Jumba, I. O.**, (2005). The status of Persistent Organic Pollutants in Lake Victoria Water Catchment. **Proc. 11th World Lake Conference Vol. II** pp107-112. October 31- Nov.4, 2005 Nairobi.
13. Mbakaya, C.F.L., Orege, P.A., **Jumba, I. O.**, Bulimo, W., Kisingu, W., Nyambaka, H., Waudu, J., Ndemwa, P., Omondi, P. (2004). Micronutrient Zinc Deficiency as a possible co-factor in the transmission and progression of HIV/AIDS in Kenya. **Afri. J. Food, Agric., Nutr. and Development Vol. 4 (2)**. Also available at www.talcuk.org: Community Nutrition - Nutrition materials for healthcare workers in resource - poor areas, and **UNICEF1 SBN: 0-9549467-9-0/978-09549467-9-1**.
14. Wandiga, S. O. **Jumba, I. O.**, Mutaaga, W. G. and Lalah, J. O. (2003). The distribution, metabolism and toxicity of 14C-DDT in model aquarium tanks with fish and sediment simulating a tropical marine environment. **Toxicol and Environ. Chem.** 84, 253-268 (Trailer Francis Group).

15. Lalah, J. O. Yugi, P.O., **Jumba, I. O.**, and Wandiga, S.O. (2003). Organochlorine pesticide residues in Tana and Sabaki Rivers in Kenya. **Bull. Environ. Contam. and Toxicology**. **71**, 98-307.
16. Lalah, J.O., Ondieki, D., Wandiga, S. O. and **Jumba, I. O.**, (2003). Dissipation, distribution and uptake of 14C-Chloropyrifos in a Model Tropical Seawater/Sediment/Fish Ecosystem. **Bull. Environ. Contam. and Toxicology**, **70**, 883-890.
17. Mwashote B, M. and **Jumba I. O.**, (2002). Quantitative aspects of inorganic nutrient fluxes in the Gazi Bay Kenya): Implications for coastal ecosystems. **Marine Pollution Bulletin**, **44 (11): 1194-1205**.
18. Wandiga, S. O., Ongeru, D. M. K., Mbuvi, L. Lalah, J. O., and **Jumba, I. O.**, (2002). Accumulation, distribution and Metabolism of 14C-1, 1-Trichloro-2, 2- bis-(p-Chlorophenyl) ethane (ppDDT) residues in model tropical marine ecosystem. **Environmental Technology (U.K.)** **23**, 1285-1292.
19. Wandiga, S. O., Yugi., P. O. Barasa, M. W., **Jumba, I. O.**, and Lalah, J. O. (2002). The distribution of organochlorine pesticides in marine samples along the Indian Ocean coast of Kenya. **Environmental Technology (U.K.)** **23**, 1235-1246.
20. Kisia, S. M. **Jumba, I. O.**, and Kock, R. A. (2002). The waterbuck *Kobus ellipsiprymnus defassa* (Ruppel 1835) as an indicator of ecosystem health in the Central Rift Valley Lake Systems of Kenya, East African Wildlife Society. **Afr. J. Ecology** **40**, 390 -392.
21. **Jumba, I.O.**, Knock, RA., Kisia, SS., Ogana, W., Kisia, SM., Oduor, FDO. Oduor and Wainaina G. (2001). Prospects of heavy metal poisoning in wild Herbivores in Lake Nakuru National Park, Kenya. **The Journal of Trace Elements in Experimental Medicine**. Vol. **14**, No. **3**, 338-339.
22. **Jumba, I. O.**, and T. Likimani (2001). Chemistry and its applications. ISBN 9966 846 247. Nairobi University Press. 315 pp.

23. Kituyi, E., Marufu, L., Wandiga, S. O., **Jumba, I.O.**, Andreae, M. O. and Helas, G. (2001). Biofuel availability and domestic use patterns in Kenya. **Biomass and Bioenergy** 20, 71 - 82.
24. Kituyi, E., Marufu, L., Huber, B., Wandiga, S. O., **Jumba, I. O.**, Andreae, M. O. and Helas, G. (2001). Biofuel consumption rates and patterns in Kenya. **Biomass and Bioenergy** 20, 83-99.
25. Kituyi, E., Marufu, Huber, B., Wandiga, S. O. **Jumba, I. O.**, Andreae, M. O. and Helas, G. (2001). Carbon Monoxide and nitric oxide from biofuel fires in Kenya. **Energy Conversion and Management** 42, 1517-1542.
26. Purvis, K. **Jumba, I. O.**, Wandiga, S O., Zhang, J. and Kammen. D. M. (2001). Worker exposure and health risks from volatile organic compounds utilized in the paint manufacturing industry in Kenya. **Applied Occupational and Environmental Hygiene (U.S.A.)** 16 (11):1035-1042.
27. Oduor, F. D., **Jumba, I. O.**, Wandiga, S. O. (2000). Evaluation of the trace mineral status of lactating during cattle in Trans Nzoia District, Western Kenya. In: A.M. Roussel, R. A. Anderson and E., E. Favier eds. "**Trace Elements in Man and Animals** 10, 786. Kluwer Academic Plenum Publishers, New York.
28. Kinyua, A. M., Kofi Tsekpo, W. M., Tolo, F., Kamau, G. N., **Jumba, I. O.**, and El Busaidy, A. H.S. (1999). Essential trace element analysis of traditional medicines used in anticonvulsant therapy. In: M. Abdullah, M. Bost, S. Gamon, P. Armand and G. Chazot eds: "**New Aspects of Trace Element Research**" pp 235 - 240. Smith Gordon and Co. Ltd. London.
29. Kisia, S. M. and **Jumba, I. O.**, (1998). Skull abnormalities in the Waterbuck Kobus ellipsiprymnus defassa (Ruppel 1935) in the Rift Valley Lake Systems of Kenya. **The Kenya Veterinarian** (Journal of the Kenya Veterinary Association) 23, 85-86. August 1998 Issue.
30. **Jumba, I. O.**, S. O. Wandiga and J. M. Njoroge (2002). Sensitivity of Kenyan Ecosystems to acidic deposition: Validation of the 1996 SEI map. Proc. **Global Terrestrial Ecosystem Sensitivity Mapping**. African Region Report – pp1-11 Stockholm Environment Institute, Sweden.

31. Kinyua, A.M., Maina, D.M., Maina, C., Mangala, M.J., **Jumba, I. O.**, Gatebe, C.K. and Ggarard, M.J. (1997). Non-destructive analysis of mercury by the energy dispersive X-ray fluorescence technique in beauty creams sold in Kenya. **Proc. Int. Symposium Harmonization of Health Environmental Measurements using Nuclear and Isotopic techniques, IAEA Vienna, 361 - 368.**
32. Kituyi, E.N., Wandiga, S.O. and **Jumba, I. O.**, (1997). Occurrence of chlorfenvinvos in cow's milk sampled at a range of sites in western Kenya. **Bull. Environ. Contam. and Toxic. (USA) 58(6), 969 - 975.**
33. **Jumba, I. O.**, Suttle, N.F., Hunter, E.A. and Wandiga, S.O. (1996). Effects on botanical composition on mineral concentrations in dry sean pastures in "Western Kenya. In: Appleton, J.D., Fuge, Rand MaCall, G.J.H. (eds). **Environmental Geochemistry and Health with Special Reference to Developing Countries, British Geological Society Special Publication No. 113, 39 - 45.**
34. **Jumba, I. O.**, Suttle, N.F. and Wandiga, S.O. (1996a). Mineral composition of tropical forages in the Mount Elgon region of Kenya. I. Macro-minerals. **Tropical Agriculture (Trinidad), 73 No.2 (April) 108 - 112.**
35. **Jumba, I. O.**, Suttle, N.F. and Wandiga, S.O. (1996b). Mineral composition of tropical forages in the Mount Elgon region of Kenya. II. Trace Elements. **Tropical Agriculture (Trinidad), 73 No.2 (April) 113 - 118.**
36. **Jumba, I. O.**, Suttle, N.F., Wandiga, S.O. and Hunter, E.A. (1995a). Effects of soil origin and mineral composition of herbage species on the mineral composition of forages in the Mount Elgon region of Kenya I. Calcium, Phosphorus, Magnesium and Sulphur. **Tropical Grasslands (Journal of Australian Grassland Society) 29, 40 - 46.**

37. **Jumba, I. O.**, Suttle, N.F., Wandiga, S.O. and Hunter, E.A. (1995b). Effects of soil origin and mineral composition of herbage species on the mineral composition of forages in the Mount Elgon region of Kenya II. Trace Elements. **Tropical Grasslands (Journal of Australian Grassland Society) 29, 47 - 52.**
38. Owuor, P.O., Gone, F.O., Onchiri, D.B. and **Jumba, I. O.**, (1990). Levels of aluminium in green leaf of clonala teas, black tea and black tea liquors and effects of rates of nitrogen fertilizers on the aluminium black tea contents. **Food Chemistry 35, 59 - 68.**
39. Wandiga, S.O. and **Jumba, I. O.**, (1982). The determination of mercury in body beauty soaps and creams sold in Kenya and Norway. **Kenya J. Sci Technol (a) 3, 89 - 91.**
40. Wandiga, S.O. and **Jumba, I. O.**, (1982). Factors affecting the simultaneous determination of cooper, lead, cadmium and zinc concentrations in human head hair using differential pulse anodic stripping voltammetry method. **Kenya J. Sci Technol. (A) 3, 9 - 25.**
41. Wandiga, S.O. and **Jumba I. O.**, (1982). The concentrations of heavy metals, zinc, cadmium, lead, copper, mercury, iron and calcium concentrations in human head hair of a randomly selected sample of Kenyan people. **Kenya J. Sci Technol (A) 3, 27 - 41.**
42. **Jumba, I. O.**, Suttle, N.F. and Wandiga, S.O. (1993). Macro and trace element composition of forages in Western Kenya: Implications for sheep and cattle health and production. **Proc. Kenya Chemical Society Inaugural Conference, pp 149 – 154, June 7-11, 1993. Nairobi.**
43. Oduor. FDO. **Jumba, I. O.**, and Wandiga, S.O. (1996). Evaluation of the mineral status of grazing cattle in Trans Nzoia: Preliminary assessment of Data. **Proc. 2nd Kenya Chemical Society Conference. 2nd-6th September 1996 pp 20 - 24. Moi University, Eldoret Kenya.**
44. **Jumba, I.O.** and International Geosphere Biosphere Programme (IGBP) Kenya Task Team (1994). Implications of sea level rise in some areas of Kenya coast. **Report No.1. United Nations Environment Programme, Nairobi.**

45. **Jumba, I. O., (1995)**, Coastal pollution. In: IGBP Kenya Task Team. "Implications of the expected climate change on some selected low-lying coastal parts of Kenya: A case study on tourism and hotel industry. **“Report No.2 pp 60-74. United Nations Environment Programme (UNEP), Nairobi.**
46. **Jumba, I. O.,** Musungu, F. and Nyaoro, J. **(1998)**. The Energy Sector: A case study on Hydropower. In: Climate Change Impacts, Vulnerability and Adaptation. **"UNDP/GEF Capacity Building Project Report, United Nations Environment Programme, Nairobi.**
47. Kock, R.A. **Jumba, I. O.,** Mwanzia, J., Wambua, J., Siagi, A. and Kisia, S.M. **(1994)**. Status of some trace elements in Waterbuck (*Kobus ellypsiprymnus defassa*) in relation to soil and forage composition and implications for animal health in the Lake Nakuru National Park. **Proc. Research and Planning Workshop on use of Research findings in the conservation and management of biodiversity, pp31-37 KWS, Nakuru 1 - 4 December.**
48. **Jumba, I. O.,** Suttle, N.F., Hunter, E.A. and Wandiga, S.O. **(1993)**. Botanical composition has a greater influence on mineral concentrations in dry season pastures in W. Kenya than either soil origin or composition. **"Environmental Geochemistry and Health in Developing Countries Conference", London, October 20-21. Book of Abstracts, 36 - 37.**
49. Limo, S.K., **Jumba I. O.,** and G.N. Kamau **(2005)**. Variation of physico-chemical properties of palm oil with temperature. **Int. J. Biochemiphysics 39-42.**
50. **Jumba, I. O.,** Wandiga, S.O., Mirikau, C., Oduor, F.D., Wafula, G. A., and Madadi, V. **(2006)**. The status of effluent treatment and safe waste disposal of toxic and obsolete pesticides under the Skockholm convention - Kenya Country Report. **Proc. UNIDO-RENPAP Workshop, pp1-10 Bogor Indonesia 18-20 Sept. 2006.**

51. **Jumba, I. O.**, and Mirikau, C. W., Sikuku, R, Madadi, V. O. and Wafula, G. A. (2006). Unintentional Persistent Organic Pollutants (UPOPs). In: Kenya National Inventory of Persistent Organic Pollutants under Stockholm Convention. **Activities of a National Final Report Part IV. GEF/UNEP/GOK Project, on Enabling Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPS). UNEP Nairobi. July 2006**
52. **Jumba, I. O.**, (2003). The Identification, distribution and impact of mineral imbalances and disorders in grazing livestock. A case study in Western Kenya. **Proceedings of the Agricultural Research Fund Annual Conference, KARI, HQs Nairobi. December, 2003.** Pp 1-36.
53. Odada, E.O., **Jumba, I. O.**, Barongo, J. O. and Olago, D.O. (1999). Environmental impact assessment of the proposed National Oil Corporation of Kenya Truck Loading Facility, Industrial Area, Nairobi, Kenya. Report prepared for the Ministry of Energy. pp1 - 35.
54. Wafula. G.A. **Jumba, I. O.**, and Kamau, G.N (2002). Measurement of the atmospheric levels of zinc in Nderi and Muguga areas of Kikuyu, Kenya. Proc. 1st Regional Conference on Trace Element Research in Africa. pp 34-35. Trace Element Satellite Centre of UNESCO. Silver Springs Hotel Nairobi, 27 – 29 March.
55. **Jumba, I.O.**, Kock, R.A., Kisia S.S., Ogana, W., Kisia, S.M. Oduor, F.D.O and Wainaina, G. (2002). Diagnosis of trace element nutritional disorders in herbivores: A case study in Lake Nakuru National Park. Proc. 1st **Regional Conference on Trace Element Research in Africa. Pp 40-42 Trace Element Satellite Centre of UNESCO. Silver Springs Hotel, Nairobi, 27 – 29 March.**
56. **Jumba, I.O.**, (2002). Prospects of heavy metal poisoning in wild herbivores in Lake Nakuru National Park, Kenya. **Proc. International Society for Trace Elements Research in Humans (ISTERH) Conference, Book of Abstracts, Pg. 338 – 339. Quebec Canada, September 8 – 11.**

57. **Jumba, I. O., (1989).** Tropical soil-plant interactions in relation to mineral imbalances in grazing Livestock. **Ph.D. Thesis, University of Nairobi, Digital Repository.**
58. **Jumba, I. O., (1980).** The determination of heavy metal pollutants in environmental samples by Differential Pulse Anodic Stripping Voltammetry and Atomic Absorption spectrophotometry. **M.Sc. Thesis, University of Nairobi Digital Repository.**
59. Madadi O. V., Wandiga S. O., and **I. O. Jumba, (2004).** Degradation versus Mineralization of 2,4-D and Metribuzin in Tropical soils. **Proc. Africa Network for Chemical Analysis of Pesticide (ANCAP), Arusha, Tanzania.**
60. **UNEP/GEF Kenya Task Team (2014).** **Supporting the Global Monitoring Plan (GMP) on Persistent Organic Pollutants in Kenya: Development of methodologies for analysis of PFOS and polar POPs in water samples,** in support of the Implementation of the GMP in Kenya. Project GFL 4A80.
61. **MEWNR (2014).** National Research, Monitoring and Public Awareness Activities on persistent organic pollutants in Kenya. Update Report for the Ministry of Environment, Water and Natural Resources (MEWNR) on the Kenya National Implementation Plan (NIP) for Persistent Organic Pollutants including Organochlorine Pesticides, PCBs, Dioxins/Furans. **PFOS and Perfluorinated Compounds under the Stockholm Convention.**
62. **UNEP-UON TaskTeam (2006):** Industrial effluents in the Nairobi River Basin (NRB). Chapter 5: **NRBP Report: Desktop Study of Water Quality and Quantity. Final Report Submitted by the Department of Chemistry, University of Nairobi to UNEP. April 2006.**
63. **UNEP/GEF Kenya Task Team (2007).** Assessment of Existing Capacity and Capacity Building Needs to Analyse POPs in Developing Countries. **Final Report: UNEP/GEF PROJECT 421/GFP 040300501.**

64. Madadi O.V., S.O. Wandiga and I.O. Jumba (2005). **Analysis of organochlorine pesticides in river Nzoia drainage system. Proc. ANCAP Symposium, Makerere University. Kampala-Uganda. July 21 – 22.**
65. Madadi O. V, S. O. Wandiga, and I. O. Jumba (2005). **Cyclization and distribution of organophosphorus pesticides in Lake Victoria Drainage system. Proc. of Regional Network on Nitrogen, phosphorus and sulphur derivatives in the environment. Sources, Methods of Quantification, Effects and Fate of NPS Derivatives in the environment. Hotel Africana, Kampala-Uganda. January 21 – 22.**
66. Madadi O. V., S. O. Wandiga, and I. O. Jumba, (2004). **Delineating the challenges of unsustainable development and exploitation of Lake Victoria resources. Proc. “The 1st Annual Science conference”. University of Nairobi. College of Biological and Physical Sciences. Nairobi. November 19 – 20.**
67. Madadi O. V., S. O. Wandiga, and I. O. Jumba, J. Makopa, and F. Kengara (2004). **Pesticide transport and Fate Processes. “The 1st Annual Science conference”. University of Nairobi. College of Biological and Physical Sciences. November 19 – 20.**
68. Madadi O. V., S. O. Wandiga, and I. O. Jumba (2003). **Bioactivation and Bioremediation of 2,4-D and metribuzin in tropical soils. Proc. ANCAP Symposium. Department of Chemistry, University of Nairobi. Nairobi-Kenya. September 17 – 19.**
69. **UNEP/GEF Kenya Task Team (2013).** Supporting the Global Monitoring Plan on Persistent Organic Pollutants in Kenya. UNEP-GEF Project Report on **Supporting the Implementation of the GMP in Kenya.** Project GFI 4A80.
70. **UNEP/GEF Kenya Task Team (2012).** Supporting the Implementation of the GMP in Africa Region. UNEP-GEF Project Report on **Supporting the Implementation of the GMP in Eastern and Southern Africa Sub-Region.** Project GFI 4A80.

71. **UNEP-Kenya Task Team (2015).** The Second Africa POPs Monitoring Report under the effectiveness Evaluation of the Stockholm Convention on Persistent Organic Pollutants, **Report submitted to the Stockholm Convention Secretariat** on: "Effectiveness of evaluation of the Stockholm Convention-1 coordinated report drafting. **March 2015.**
72. **UNEP-Kenya Task Team (2015).** Challenges in implementing Global Monitoring Plan under the Stockholm Convention. In "**The Global Monitoring Plan Report for the Stockholm Convention on Persistent Organic Pollutants**". Geneva Switzerland.

N. EXTERNAL EXAMINATION

1. External Examiner – Kenyatta University, Department of Chemistry.
2. External Examiner, Maseno University, Department of Environmental Studies.
3. External Examiner – Egerton University, Department of Chemistry
4. External Examiner – Moi University, Department of Chemistry
5. External Examiner – Moi University, School of Environmental Studies. Both M.Sc and Ph.D.
6. External Examiner – Dar es Salaam University, Department of Chemistry.

O. REFEREES

- | | |
|--|---|
| 1. Prof. S. O. Wandiga
Director, Centre for Climate Change
and Adaptation and Professor of
Chemistry
Chiromo Campus
<u>University of Nairobi</u> | 2. Prof. J. M. Onyari
Chairman Department of Chemistry and
Professor of Chemistry
College of Biological & Physical Sciences
Chiromo Campus
<u>University of Nairobi</u> |
| 3. Prof. I. M. Mbeche
Deputy Vice Chancellor and
Professor of Management Science
<u>University of Nairobi.</u> | 4. Prof. Madara ogot
DVC Research, Innovation and
Enterprise and Professor of Mechanical
Engineering
<u>University of Nairobi.</u> |