

CURRICULUM VITAE

1.0 PERSONAL INFORMATION

NAME : DR. ISAIAH BOSIRE OMOSA PE
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NATIONALITY : KENYAN
GENDER : MALE
DATE OF BIRTH : 8TH APRIL 1974

2.0 QUALIFICATIONS

2.1 *Academic Qualifications*

- **2013:** Doctor of Engineering degree (Environmental Science), Doctor of Engineering certificate (Environmental Management and Sustainable Development), UNEP-Tongji Institute of Environment for Sustainable Development, Tongji University, Shanghai, China.
- **2005:** MSc (Civil Engineering- Environmental Health Engineering option), University of Nairobi, Kenya.
- **1998:** BSc (Civil Engineering), University of Nairobi, Kenya.

2.2 *Professional Courses*

- **2004:** Completed a course on ArcView GIS 3.2a at the Regional Centre for Mapping of Resources for Development, Nairobi, Kenya.

2.3 *Other Courses*

- **2013:** Completed a course on Teaching Methodology at the Centre for Teaching Excellence and Evaluation, Kenyatta University.

3.0 EMPLOYMENT HISTORY

- **2011-to date:** Lecturer, Civil Engineering Department, Kenyatta University
- **2008:** Appointed part-time lecturer at the Civil Engineering Department of the University of Nairobi.
- **2006-2011:** Tutorial Fellow, Water and Environmental Engineering Department, Kenyatta University
- **2005-2006:** Civil/Structural Engineer, Ministry of Public Works, Kenya.
- **2003-2004:** Research Assistant, UNEP, Nairobi, Kenya.
- **2000-2003:** Projects Engineer, Masosa construction Ltd, Nairobi, Kenya.

3.1 Professional Assignments Completed

2001: Research on a study of water demand management for the City of Nairobi under the 'Managing water for African Cities' project undertaken by UN- Habitat/Nairobi City Council.

2002: Site Agent on El nino emergency repairs and extensions to Kisii, Keroka and Gesusu Water supplies in Kisii District (Contract No. ENEP/WSS/PW54). In charge of all technical and administrative activities while implementing the works under Masosa Construction Ltd Kisii- Kenya

2004:

- Feasibility study and detailed design of improvements on non-motorized transport for Kakamega, Eldoret, Kisii & Kisumu towns for the Ministry of Local Government as a drainage engineer.
- Feasibility study on the Conceptual Trade-off Study on Water Supply for Titanium Mining operations in Kwale District of Kenya.
- Environmental Audit for Henkel (East Africa) Limited in 2004. Henkel has a factory in Ruiru, two warehouses in Industrial area of Nairobi and a factory and warehouse in Mbaraki, Mombasa.

2005:

- Millennium Development Goals; Needs Assessment for water & sanitation sector in Kenya.
- Feasibility study and detailed design of storm water drainage in Naivasha, Karuri, Nyeri & Kerugoya/Kutus Towns for the Ministry of Local Government as a drainage engineer.
- Design of a conservation plan for Mbumbuni and Mulima Water Supply Projects in Makueni District for the Belgian Technical Corporation (BTC).

2005-2006:

- Rehabilitation and extension of sewerage works at Prisons staff Training College, Ruiru. Appointed Resident Engineer by the Ministry of Roads and Public Works.
- Design, Documentation and Supervision of Civil Works associated with Completion works to Kapkatet District Hospital
- Design, Documentation and Supervision of Civil Works associated with Completion works to Kapsabet Divisional Police Headquarters
- Design, Documentation and Supervision of Civil Works associated with Completion works to Tegat Health Centre
- Design, Documentation and Supervision of Civil Works associated with Completion works to Migori District Headquarters
- Design and Documentation of Civil Works associated with construction of Moi University swimming pool

2009: Feasibility Study and design for the Construction and Rehabilitation of 84km Road Surrounding Lake Muhazi in Rwanda.

2008-2009: Feasibility Study and design of the Hola - Garsen Road construction project. Involved in the hydrological study and drainage design for the 92km road

2012: Consultancy services for preparation of guidelines on minimum requirements for disaster preparedness and mitigation measures for water utilities in Kenya.

2014:

- On-going design of water supply, wastewater management and solid waste management at Karen Waterfront Development for Crossroads Ltd.
- Off-farm facilities development in Machakos County; Assessing, design and documenting selected abattoir facilities for upgrading. Client: LAND O' LAKES INC.

2015:

- Consultancy Services for the Technical Feasibility Studies and Designs for Special Sewer line to offload sewage from Lake vessels at Kisumu and Homa Bay Ports. This project is being carried out under the auspices of Lake Victoria Environmental Management Project Phase II.
- Consultancy services for carrying out survey works, detailed designs, preparation of tender documents and operations & maintenance manuals for storm water drainage, road improvement and security lighting in Kisii town.

4.0 ADMINISTRATIVE RESPONSIBILITY

4.1 *At Kenyatta University*

- 2nd April 2013 to October 23rd 2014: Appointed Civil Engineering Departmental Examinations Coordinator.
- October 23rd 2014 to date: Appointed Civil Engineering Departmental Chair

4.2 *At other Institutions*

- Projects Engineer, Masosa Construction Ltd, P.O Box 3067 Kisii.

5.0 FELLOWSHIPS

- 2009: Chinese government scholarship for PhD studies
- 1999: University of Nairobi scholarship for MSc studies

- 2011: Hosei University Fellowship for summer school

6.0 POSTGRADUATE SUPERVISION/EXAMINATION OF THESES

- On-going Supervision of Mr. Isaac Kiunga's (J104/22984/2012) MSc. Research entitled 'Performance of Solar Water Distiller Utilizing Evacuated Tube Solar Concentrator'
- On-going supervision of Mr. Job Muthini Kitetu's (J98/26821/2013) PhD entitled 'Development Of Gravity Duct Micro Hydropower Generation System For Rural Community Electrification In Makueni County, Kenya'
- On-going supervision of ANNAH AWUOR DIANG'A's (J104/CTY/PT/22989/2012) MSc. Research entitled 'Development Of A Bio Methane And Organic Manure Producing System From Kitchen Waste Using Effective Micro-Organisms (EM) Technology'
- Successfully examined a MSc. Thesis for Mr. Humphrey Mulindi entitled 'Development of Biomass Wastes Briquette Stove for Domestic Use'. Appointment letter attached.

7.0 CONFERENCES/SEMINARS/WORKSHOPS

- 2005: Attended and successfully completed an Institution of Engineers of Kenya Training Seminar on Preparation for the Professional Interview.
- 2011: Attended and participated in the 2011 ProSPER.Net Young Researchers' School on 'Learning from Japan's Experiences on Urban Sustainability' held at Hosei University, Tokyo, Japan.
- 2011: Attended and participated in the 2011 Asia-Pacific Leadership Programme on Environment for Sustainable Development sponsored by UNEP and Tongji university, Shanghai, China.
- 2012: Attended and participated in the workshop on South-South Cooperation on Science and Technology to Address Climate Change held on October 19th-20th, 2011 in Beijing, China. The Workshop was hosted by the Department of International Cooperation, MOST and China Science and Technology Exchange Center (CSTEC).

8.0 RESEARCH AND PUBLICATIONS

- **Omosa Isaiah** and Oonge Z.N.I. Assessment of the Biological Treatability of Black Tea Processing Effluent. *Journal of Civil Engineering Research and Practice* 2007, Vol 4 (1)
- **Omosa, I. B.**; Wang, H. T.; Cheng, S.; Li, F. T. Sustainable Tertiary Wastewater Treatment Is Required for Water Resources Pollution Control in Africa. *Environ. Sci. Technol.* 2012, 46 (13): 7065-7066.
- Wang, H. T.; **Omosa, I. B.**; Keller, A. A.; Li, F. T. Ecosystem protection, integrated management and infrastructure are vital for improving water quality in Africa. *Environ. Sci. Technol.* 2012, 46 (9), 4699-4700
- Hongtao Wang, Tao Wang, Bingru Zhang, Fengting Li, Brahim Toure, **Isaiah Bosire Omosa**, Thomas Chiramba, Mohamed Abdel-Monem³, Mahesh Pradhan. *Water and Wastewater Treatment in Africa - Current Practices and Challenges*, 2013, CLEAN-Soil, Air, Water. DOI: 10.1002/clen.201300208
- Liu Wei, Yang Dianhai, Xu li, Jia Chuan, Lu Wenjian, **Bosire Omosa Isaiah** and Shen changming. Effect of Return Sludge Pre-concentration on biological phosphorous removal in a novel oxidation ditch. *Chinese Journal of Chemical Engineering*, 2012, 20(4), 747-753.
- **Isaiah Omosa**. Tertiary treatment of municipal wastewater from lagoons; use of constructed wetlands and UV irradiation, 2014, Scholar's Press, ISBN: 978-3-639-70900-1.
- Mutui F.N, **Omosa I.B.**, B. Cun-kuan, Oonge Z, Gaitho V. Kenya's Water Resources: Scarcity or Sheer Mismanagement? *International Research Journal of Environmental Sciences*, 2016, Vol. 5(4), 54-60.

Under review

- Omosa Isaiah Bosire, Yang Dianhai and Odira P.M.A. Review of wastewater treatment in Kenya; Need for reuse and way forward (submitted)
- Omosa Isaiah Bosire, Hongtao Wang and Fengting Li. Comparing polyaluminium chloride and aluminium sulphate in drinking water treatment in Kenya (submitted)
- Omosa Isaiah Bosire, Shuiping Cheng, Hongtao Wang and Fengting Li. The Railway-Water Supply Nexus in Kenya: A historical Perspective (submitted)
- Omosa Isaiah Bosire, Oonge Zablun Isaboke, and Muhandiki Victor Shiholo. Catchment conservation and management in community water supply in Kenya: the case of Mbumbuni water scheme (submitted)

9.0 AWARDS/RECOGNITION

2011: Tongji University presidential award, Shanghai-China.

2014: Kenyatta University award

10.0 GRANT APPLICATION

Applied for research equipment as a grant from the China-Africa Science and Technology Partnership Program (CASTEP).

11.0 COMMUNITY OUTREACH

2010: Appointed as Member by the Minister for Education to the District Education Board, Njiru District, Nairobi County.

12.0 ACADEMIC LEADERSHIP

- Currently developing and/or revising the Civil Engineering Curriculum in line with the Engineering Board of Kenya and Commission for University Education requirements
- Involved in the review of the Kenya Water Institute curriculum in December 2014.

13.0 OTHERS

13.1 Membership in Professional Bodies

- Professional Engineer, Engineers Board of Kenya.
- Corporate Member, Institution of Engineers of Kenya.

14.0 REFEREES

1. Prof. P.M.A. Odira, Professor, Department of Civil and Construction Engineering, University of Nairobi, P.O. Box 30197-00100 Nairobi;

Tel: 318262 Ext 28394

Mobile No: 0722849191

2. Dr. Oonge Z.N. Isaboke, Senior Lecturer, Department of Civil and Construction Engineering, University of Nairobi, P.O. Box 30197-00100 Nairobi;

TEL: +254-020-318262 ext. 28390

CELL: 0733750231/0720801680

3. Dr. S. M. Maingi, Lecturer, Department of Environmental Science, Kenyatta University P.O Box 43844-00100, Nairobi Kenya.

CELL: 0721769102