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**Position:** Principal Research Scientist / Plant Ecologist

## **1. PERSONAL INFORMATION**

1.1 NAME: John Otuoma

1.2 POSTAL ADDRESS: P.O. Box 5199 – 40108, Kisumu, Kenya

1.3 TELEPHONE NUMBER: +254 722 619 860

1.4 EMAIL ADDRESS: [jmotuoma@kefri.org](mailto:jmotuoma@kefri.org) or [jmotuoma@gmail.com](mailto:jmotuoma@gmail.com)

1.5 NATIONALITY: Kenyan

1.6 GENDER: Male

## **2. QUALIFICATIONS**

### **2.1 Academic qualifications**

2012-2015: PhD in Plant Ecology, Jaramogi Oginga Odinga University, Kenya

2002-2005: MSc in Plant Ecology, University of Nairobi, Kenya

1995-1999: BSc in Chemistry & Biology, University of Nairobi, Kenya

### **2.2 Key Competencies**

Restoration Ecology, Biodiversity Conservation, Phytoremediation, Climate Resilience

### **2.3 Professional courses**

**Jan – Feb 2019:** Senior Management Course, Kenya School of Government

**Sept 2019:** Bamboo and Rattan technology innovation for green economy development, International Centre for Bamboo and Rattan, China

**Nov – Dec 2009:** Landscape restoration technologies, JICA, Yokohama, Japan

**Nov – Dec 2007:** Environmental and social impact assessment, Kenya School of Government

**Oct 2006:** Medicinal plants conservation models, FRIHT, Bangalore, India

## **3. EMPLOYMENT HISTORY**

**3.1 Sept 2004 to date:** Research Scientist, Kenya Forestry Research Institute, Kenya

**3.2 Nov 2002 – Sept 2004:** Graduate Fellow, International Livestock Research Institute, Kenya

## **4. MANAGERIAL EXPERIENCE**

**4.1 Oct 2020 to date:** Regional Director, Lake Victoria Basin Eco-region Research Programme, Kenya Forestry Research Institute

**4.2 May 2019 to Oct 2020:** Deputy Regional Director, Lake Victoria Basin Eco-region Research Programme, Kenya Forestry Research Institute

**4.3 Oct 2015 – May 2019:** Assistant Regional Director, Migori Sub-Centre, Kenya Forestry Research Institute

## 5. MEMBERSHIP TO PROFESSIONAL BODIES

- 5.1 Forest Society of Kenya (FSK) – FSK / F / 0932)
- 5.2 Agro-Ecology Network, Kenya
- 5.3 Forestry Network for Sub-Saharan Africa
- 5.4 Nature Kenya

## 6. RESEARCH GRANTS

- 2021 – KES 2.2 million – Rufford Foundation
- 2019 – KES 4.8 million - UNDP Small Grants
- 2018 - KES 15 million - AGRA/GEF/UNEP/KALRO
- 2017 - KES 2.1 million - INBAR

## 7. PUBLICATIONS

### 7.1 Peer-reviewed journal papers

**Otuoma J**, Nyongesah JM, Owino J, Onyango AA and Okello VS (2020). Ecological manipulation of *Psidium guajava* to facilitate secondary forest succession in tropical forests. *Journal of Ecological Engineering* 21, 210-221.

Owino JO, Angaine PM, Onyango AA, Ojunga SO and **Otuoma J** (2020). Evaluating variation in seed quality attributes in *Pinus patula* clonal orchards using cone cluster analysis. *Journal of Forests* 7, 1-8.

Kituyi B, **Otuoma J**, Wabuyele E and Musila W (2018). Interactions and Effects of *Bischofia javanica* on Species Diversity and Structural Composition of Secondary and Plantation Forests in a Kenya Rainforest. *Journal of Tropical Forest Science* 30 (3), 393-401.

Zhao Y, Feng, D, Jayaraman, D, Belay, D, Sebrala, H, Ngugi J, Maina E, Akombo R, **Otuoma J**, Mutyaba J, Kissa S, Qi S, Assefa F, Oduor NM, Ndawula AK, Li Y, Gong P (2018). Bamboo mapping of Ethiopia, Kenya and Uganda using multi-temporal Landsat imagery. *International Journal of Applied Earth Observation Geoinformation* 66, 116–125.

**Otuoma J.**, Anyango B., Ouma G., Okeyo D., Muturi G. M. and Oindo B. (2016) Determinants of aboveground carbon offset additionality in plantation forests in a moist tropical forest in western Kenya. *Forest Ecology and Management* 365, 61–68.

**Otuoma J.**, Ouma G., Okeyo D. and Anyango B. (2014) Species composition and stand structure of secondary and plantation forests in a Kenyan rainforest. *Journal of Horticulture and Forestry* 6(4), 38-49.

**Otuoma J.**, Odera J., Bodo E, Ongugo P, Oeba V, and Kamondo B. (2011) Annual allowable cut for merchantable woody species in a community managed forest in western Kenya. *Forest Ecology and Management* 262, 2281–2286.

**Otuoma J.**, Kinyamario J., Ekaya W., Kshatriya M. and Nyabenge, M. (2009) Effects of human–livestock–wildlife interactions on habitat in an eastern Kenya rangeland. *African Journal of Ecology* 47, 567–573.

### 7.2 Book chapters

Wekesa C, **Otuoma J**, Ongugo P, Muturi G and Ochieng D (2017). Introduction to Biodiversity Status of Arabuko Sokoke Forest, Kenya, P 1-7. In: eds, D Ochieng', A Luvanda, C Wekesa, MTE Mbuvi and L Ndalilo, Biodiversity Status of Arabuko Sokoke Forest, Kenya. Kenya Forestry Research Institute, Nairobi.

Wekesa C, **Otuoma J**, Ngugi J and Muturi G (2017). Floristic composition and structure of Arabuko Sokoke Forest, P 8-13. In: eds, D Ochieng', A Luvanda, C Wekesa, MTE Mbuvi and L Ndalilo, Biodiversity Status of Arabuko Sokoke Forest, Kenya. Kenya Forestry Research Institute, Nairobi.

### 7.3 Technical notes / guidelines

**Otuoma J** and Wokiri E (2020). The application of FMNR as a forest restoration technology to enhance tree cover on-farm in Siaya County. Kenya Forestry Research Institute, Nairobi, Kenya.

Nellie Oduor, Emily Kitheka, Joseph Githiomi, Nathan Nyamai, Shadrak Odhiambo, George Etindi and **John Otuoma** (2020). Economic Benefits from Brick Making May not justify its Ecological Impacts. Kenya Forestry Research Institute, Nairobi, Kenya.

**Otuoma J**, Owuor B and Opiyo J (2019). Mine closure and rehabilitation guide. Kenya Forestry Research Institute, Nairobi, Kenya.

**Otuoma J**, Etindi G, Mutsami A and Lubanga P (2019). Bamboo propagation and management: A Guide for Farmers and Extension Agents. Kenya Forestry Research Institute, Nairobi, Kenya

**Otuoma J** & Mullah JA (2018) Training Manual for Forest Managers, Community-Based Organizations and Other Stakeholders on Natural Forest Rehabilitation Techniques. Kenya's Water Towers Protection and Climate Change Mitigation and Adaptation (WaTER) Programme, Kenya Forestry Research Institute, Nairobi.

Mullah JA and **Otuoma J** (2017) Guidelines for Rehabilitating Degraded Water Tower Ecosystems in Kenya. Kenya's Water Towers Protection and Climate Change Mitigation and Adaptation (WaTER) Programme, Kenya Forestry Research Institute, Nairobi.

Langat D., **Otuoma J.**, Kagombe J. and Cheboiwo J. (2015). Guidelines for payment for ecosystem services. Kenya Forestry Research Institute, Nairobi.

Mbuvi M. T. E., Wekesa C., Leley N., **Otuoma J.**, Mwadalu R., Ndalilo L., Ogwoka B., Njeri L., Andanje S., Nyamache J., Malonza P. K., Mulwa R. K., Mutunga J. and Amur A. (2015). Biodiversity Status of Arabuko Sokoke Forest, Kenya. Kenya Forestry Research Institute, Nairobi.

Mullah J., **Otuoma J.** and Kigomo B. (2013) Guidelines for forest rehabilitation in Kenya. Kenya Forestry Research Institute, Nairobi.

**Otuoma J.** (2004). LUCID's Land Use Change Analysis as an Approach for Investigating Biodiversity Loss and Land Degradation Project in the Meru Conservation Area, Kenya. Working Series no. 39. [www.lucideastafrica.org](http://www.lucideastafrica.org)

### 7.4 Conference papers

**Otuoma J**, Shena R, Okemwa B, Macharia E and Sewe B (2018). Variation in Floral and Structural Composition of Vegetation under Controlled Resource Use and Exclusive Resource Conservation in Mt. Elgon Forest Ecosystem. Paper presented at the 5<sup>th</sup> KEFRI Scientific Conference, 17<sup>th</sup> – 19<sup>th</sup> April 2018, KEFRI Muguga, Nairobi.

**Otuoma J**, Amollo F and Oreta J (2018). Linking different levels of forest degradation to suitable forest restoration techniques in selected forests in western Kenya. Paper presented at the 5<sup>th</sup> KEFRI Scientific Conference, 17<sup>th</sup> – 19<sup>th</sup> April 2018, KEFRI Muguga, Nairobi.

**Otuoma J.**, Ongugo P., Kemboi D., Mairura F. and Akinyi F. (2013) To plant or protect: Evaluating forest recovery dynamics under natural and aided regeneration in western Kenya.

Paper Presented at Mt Kenya University Scientific Conference, 28th-31st August 2013, Safari Park Hotel, Nairobi.

**Otuoma J.**, Langat D., Maina J., Maina G., Maina J. M. and Mwanje P. (2012) Effect of Watershed Degradation on Hydrological Functions in the Sondu River Catchment. Paper Presented at IUFRO – FORNESSA International Congress, 25th – 30th June 2012, World Agroforestry Centre, Nairobi.

**Otuoma J.**, Kinyamario J. and Ekaya W. (2010) Regeneration dynamics of woody species in degraded natural forests in western Kenya. Proceedings of 2nd Regional Universities Forum Biennial Meeting 20-24 September 2010, Entebbe, Uganda.

**Otuoma, J.** and Odera, J. (2008). Reconciling Conservation and Livelihood Needs in Got Ramogi Forest. Paper Presented at 4<sup>th</sup> KEFRI Scientific Conference, 6th – 9th October 2008. Kenya Forestry Research Institute, Nairobi, Kenya.

**Otuoma, J.** and Muchiri M. N. (2006). Evaluation of Blue Gum Chalcid Infestation in Eucalyptus Woodlots in Western Kenya. Paper Presented at 3<sup>rd</sup> KEFRI Scientific Conference, 6th – 9th, November 2006. Kenya Forestry Research Institute, Nairobi, Kenya.

## **8. UNIVERSITY STUDENTS SUPERVISED**

**2019 to date:** Pauline Muigai (MSc candidate) – On-farm tree diversity and carbon stocks in the margins of the kakamega-nandi forest ecosystem - Masinde Muliro University of Science and Technology.

**2016 – 2018:** Brimas Kituyi (MSc) Interactions and effects of *Bischofia javanica* (bishop wood) on stand structure and species diversity in natural and plantation forests of Kakamega Rainforest, Kenya – Kenyatta University.

## **9. KEY ACHIEVEMENTS IN RESEARCH**

9.1 Successful development of technologies for rehabilitation of degraded forests, woodlands and hilltops

9.2 Pioneer in phytoremediation of heavy metal polluted mine lands

## **10. AWARDS AND RECOGNITION**

10.1 MSc Scholarship by University of Nairobi based on academic excellence in BSc Class of 1999

10.2 Best Scientist in 2014 in KEFRI Lake Victoria Basin Eco-region Research Programme