



ORCHID: 0000-0003-2611-9790

Position: *Senior Research Scientist, (Biomass energy, wood preservation)*

1. PERSONAL INFORMATION

1. NAME Nellie Caroline Mugure Oduor
2. ADDRESS PO Box 51830, 00200, Nairobi, Kenya
3. PHONE +254722 241036; +254733 241036
4. EMAIL ADDRESS nelliecoduor@gmail.com, noduor@kefri.org
5. NATIONALITY Kenyan
6. GENDER Female

2. QUALIFICATIONS

1. Academic Qualifications

- 1992 –1994: Master of Science Wood Science, The University of Melbourne, Australia
1987 –1990: BSc. Wood Science & Technology, Moi University, Eldoret, Kenya

2. Key Competencies

- My work experience is largely within forests products research with emphasis on promoting sustainable biomass energy, bamboo utilisation, and wood treatment/protection
- An EIA lead expert auditor
- An EMS and QMS internal auditor

3. Other Courses

- 4-22 August 2014: Diploma in Designing Sustainable Forest Landscapes: Ecosystem Services in the Future, University of Helsinki, Finland
- Aug-Sep 2013: Bamboo International Workshop on Sustainable Industrialisation and commercialisation of Non-Timber-Forest-Products (NTFPs) and sustainable bamboo development, Ministry of Science and Technology - MOST (China); International Network of Bamboo and Rattan - INBAR (China)
- Sep-Oct 2012: Commonwealth Professional Fellowship, Institute of Energy Systems, University of Edinburgh
- 2012: Communicating Forest Research – making Science work for policy and management, International Union of Forest Research Organisations (IUFRO)

- Feb-Mar 2012: Balanced Scorecard training
- 2010: ISO 14001 Internal Environmental Auditing, Sheer Quality Partners Ltd
- 2009: Effective Scientific communication and Publishing
- November 2008: Leadership Development, The Australian Agency for International Development (AusAID); delivered by the Curtin University of Technology Business School, Western Australia
- 2007: Environmental Impact Assessment and Environmental Audit, The Institute of Energy and Environmental Technology, Jomo Kenyatta University of Agriculture and Technology
- 2006: Energy and Environment, Institute of Science and Technology Policy Analysis and Training, African Centre for Technology Studies (ACTS)

3. EMPLOYMENT HISTORY

December 2007 – to date: Senior Research Scientist, National Forest Products Research Programme (NFPRP), Kenya Forestry Research Institute (KEFRI), PO Box 64636, 00620, Nairobi, Kenya

July 1998 to November 2007: Research Officer I, National Forest Products Research Programme (NFPRP), Kenya Forestry Research Institute (KEFRI), PO Box 64636, 00620, Nairobi, Kenya

July 1994 – June 1998: Research Officer II, National Forest Products Research Programme (NFPRP), Kenya Forestry Research Institute (KEFRI), PO Box 64636, 00620, Nairobi, Kenya

August 1990 – June 1994 Assistant Research Officer, National Forest Products Research Programme (NFPRP), Kenya Forestry Research Institute (KEFRI), PO Box 64636, 00620, Nairobi, Kenya

4. ADMINSTRATIVE RESPONSIBILITY

February 2019 – To date: Programme Director, National Forest Products Research Programme (NFPRP), Kenya Forestry Research Institute (KEFRI), PO Box 64636, 00620, Nairobi, Kenya

December 2010 – February 2019: Deputy Programme Director, National Forest Products Research Programme (NFPRP), Kenya Forestry Research Institute (KEFRI), PO Box 64636, 00620, Nairobi, Kenya

December 2016 – to date: National Project Coordinator, Dutch-Sino East Africa Bamboo Development Programme

5. PUBLICATIONS

1. Journal papers

Luvanda A.M., **N. Oduor**, E. Kitheka, E.M. Kyalo, J. Githiomi and J. Kimwemwe. (2020). The Socio-Economic Impact of Charcoal Production on The Livelihood of Local Producers in Kitui County, Kenya. Octa Journal of Environmental Research. Oct. Jour. Env. Res. Vol. 8(2): 054-062

Emily Kitheka, Jacinta Kimiti, **Nellie Oduor**, Jane Wanza. Mutinda, Celestine Ingutia and Joseph Githiomi. (2019). Factors Influencing Adoption of Biomass Energy Conservation Technologies in Selected Areas of Kitui County, Kenya. Journal of Environmental Science and Engineering A 8 (2019) pg 70-81. [Doi:10.17265/2162-5298/2019.02.003](https://doi.org/10.17265/2162-5298/2019.02.003)

Nellie Oduor, Emily Kitheka, Celestine Ingutia, Nathan Nyamai, James Kimwemwe and Kevin Juma. (2019). Quality and Emission Analysis of Charcoal from Various Species of Wood Using improved carbonization Technologies in Kenya. Journal of Environmental Science and Engineering A 8(2019) pg 16-25. [Doi:10.17265/2162-5298/2019.01.002](https://doi.org/10.17265/2162-5298/2019.01.002)

P.C. Ogutu, M.O. Muga, R. Pretorius, C. Obonyo, V. Yegon, V. Oriwo, E. Kitheka, **N. Oduor**, J. Githiomi and J. Kimondo. (2018). Piloting Commercial Production of Charcoal Briquettes from Sugarcane Bagasse in Homa-Bay County. Journal of Applied Sciences, Engineering and Technology for Development (JASETD) <https://stieconference.dkut.ac.ke/wp-content/uploads/2018/08/Conference%20Proceedings%208%20Latest.pdf> pg 355-369

Yuanyuan Zhao, Duole Feng, Durai Jayaraman, Daniel Belay, Heiru Sebrala, John Ngugi, Eunice Maina, Rose Akombo, John Otuoma, Joseph Mutyaba, Sam Kissa, Shuhua Qi, Fiker Assefa, **Nellie Mugure Oduor**, Andrew Kalema Ndawula, Yanxia Li, Peng Gong. (2017). Bamboo mapping of Ethiopia, Kenya and Uganda for the year 2016 using multi-temporal Landsat imagery. International Journal Applied Earth Observation and Geoinformation. Volume 66, April 2018, Pages 116-125. <https://doi.org/10.1016/j.jag.2017.11.008>

Kitheka E. M, J. M. Kimiti, **N. Oduor**, and W. J Mutinda. (2017). Adoption of biomass Energy Conservation Technologies in Selected Areas of Kitui County, Kenya. A paper presented at the 3rd STI&E Conference of Dedan Kimathi University of Technology. Proceedings of the 3rd DeKUT International Conference on STI&E 1st – 3rd November, 2017; Pg 403- 413

Rotich Godfrey, Robert W. Nyukuri and **Nellie C. Oduor**. (2017). Comparative Magnitude of *Eucalyptus Grandis* and *Grevillia Robusta* (Untreated Woodblocks) Attack by Subterranean Termites. IJSET - International Journal of Innovative Science, Engineering & Technology, Vol. 4 Issue 2, February 2017. ISSN (Online) 2348 – 7968

Rotich Godfrey, **Nellie C. Oduor**, Robert W. Nyukuri, Ngurwe Jared., and Bii Benard K. (2016). Comparative Efficacy of Varied Concentrations Fipronyl in Termites control on treated sand. *IJSET - International Journal of Innovative Science, Engineering & Technology*, Vol. 3 Issue 10, October 2016. ISSN (Online) 2348 – 7968

Luvanda A. M. , Kithika, E., **Oduor, N.**, Kyalo, E. M. and Githiomi, J. (2016). Impact And Assessment Of Charcoal Marketing System Through Community Associations In Kitui County, Kenya. *Octa Journal of Environmental Research Vol. 4(2): 086-091* ISSN 2321 3655

Rotich Godfrey, Robert W. Nyukuri, Fredrick M. Wanjala., **Nellie C. Oduor** and J. J. Kiptoo. (2015). Comparative Efficacy of Varied Concentrations of Fipronyl in the Laboratory Management of Termites. *American Chemical Science Journal 10(4): 1-7, 2016, Article no.ACSJ.21725* ISSN: 2249-0205

Rotich Godfrey, Robert W. Nyukuri, **Nellie C. Oduor**, Sylvia Mmbone, J.J. Cheboi and J. J. Kiptoo. (2015). Comparative Efficacy of Varied Concentrations of Fipronyl 200 g/l in the Graveyard (Field Trial Test) Control of Termites. *American Chemical Science Journal 11(1): 1-6, 2016, Article no.ACSJ.22327* ISSN: 2249-0205

Oduor N. and Githiomi, J.K. (2013). Fuel-wood energy properties of *Prosopis juliflora* and *Prosopis pallida* grown in Baringo District, Kenya. *African Journal of Agricultural Research* Vol. 8(21), pp 2476-2481

Oduor N., Vinden P. And Kho P. (2013) Dimensional Stability of Particle Board and Radiata Pine Wood (*Pinus radiata* D.Don) Treated with Different Resins. *International Journal of Applied Science and Technology* Vol. 3 No. 3; March 2013, pp 153-159

Githiomi J.K and **N. Oduor**, (2012). Strategies for Sustainable Wood fuel Production in Kenya. *International Journal of Applied Science and Technology* Vol. 2 No. 10; December 2012

Onchieku, J., **N. Oduor** and J. Githiomi, (2005). *Wood properties of Grevillea robusta from farmlands in Runyenjes, Embu District, Kenya*. Discovery and Innovations. Academy Science Publishers -AAS

2. Books

Kalyan Gauli, Jayaraman Durai and Nellie Oduor (2018). Value Chain Analysis and Market Assessment of Bamboo Products in Kenya. International Bamboo and Rattan Organisation - INBAR Working Paper. Pp 68

Kimondo J.M., **Oduor N. M.**, Kamondo B.M. and Ochieng D.O. (2016). (eds). Commercialization of Non-Wood Forest Products through linking to SMEs and Community Groups. KEFRI, Kenya. Pp 30

Oduor, N (2012). Sustainable feedstock management for charcoal production in Kenya. A production of Practical Action Consulting. Printed by Practical Action Consulting UK Pp 65

Oduor N., W. Ngugi and T. wa Gathui. (2012). Sustainable Tree Management for Charcoal Production - Acacia Species in Kenya. An Acacia pocketbook prepared for PISCES by Practical Action Consulting East Africa. Printed by Practical Action Consulting UK. Pp 23

Kiruki H., **Oduor N.**, Murangiri S., Kea F., Wachira P., Micheni M., Witte R. and Makanya Z. (Eds). 2009. Hidden Resources: Non Timber Forest Products for livelihood improvement and biodiversity conservation: documenting Kenyan experiences. Agro Special no. 8 printed by Agromisa. Pp 63. ISBN 978-90-8573-118-4

3. Book Chapter

Sustainability of sugarcane Bagasse briquettes and charcoal Value chains in Kenya:-
Results and Recommendations from implementation of the Global Bioenergy Partnership Indicators

4. Technical Notes /Protocols/Guidelines

Oduor, N., Kitheka, E., Kimwemwe, J. and Githiomi, J. (2015). Sustainable Charcoal Production Guideline: A manual for charcoal producers and extension officers. Published by the Miti Mingi Maisha Bora Programme of the Kenya Forest Service, Nairobi. Pp 43

Oduor N. and Githiomi, J.K. (2013). Guideline for wood preservation using dip diffusion method: A low cost method for small scale wood treatment. KEFRI Guideline No. 10. Nairobi. Pp14

Oduor, N, Kitheka, E, Kimwemwe, J, Muga, M and Noor, H. 2013. Technical fact sheet on Charcoal. Published by the Miti Mingi Maisha Bora Programme of the Kenya Forest Service, Nairobi. Pp 8

Mukonyi K.W., Oduor N., Wachira N. and Njuguna J., (2008). Guidelines for growing Aloes. KEFRI Guideline Series: No. 8. Kenya Forestry Research Institute; Nairobi, Kenya. Print Maxim Printers

Oduor N. and J. Githiomi. (2007). Guidelines for Wood Preservation Using Sap Displacement Method. A KEFRI Timber Information Bulletin No.4.

Oduor N., J. Githiomi, B. Chikamai and J. Kimwemwe. (2006). Charcoal Production using improved earth, portable metal, drum and the Casamance kilns – A manual produced by KEFRI. Downtown Publishers, Nairobi Kenya. pp28

KEFRI Timber information bulletin No 1. (2005). Strength groups of Kenyan grown major commercial timbers

KEFRI Timber information bulletin No 2 (2005). Kenyan timber grading for structural use

KEFRI Timber information bulletin No 3 (2005). Classification of wood carvings species using macroscopic properties

Chikamai, B.N., Kabii, T., and N.M. Ndegwa, (1996). A guide to production of laminated (fancy) products - Theory and Practice. KEFRI occasional paper 1 -1996

5. Policy Briefs

Draft Bamboo policy

6. RESEARCH

1. Completed

- i. Sustainability of Sugarcane Bagasse Briquettes and Charcoal Value Chains in Kenya:- Results and recommendations from implementation of the Global Bioenergy Partnership Indicators (GBEP) by UN Environment and FAO. (June 2018 - Dec 2019)
- ii. Quality and emission analysis of charcoal from various species of wood and bamboo converted using improved carbonization technologies in Kenya funded by The Nature Conservancy (TNC) (2018)
- iii. Support to Counties in improving charcoal governance architecture and sustainable technologies adoption Funded by UNDP (2016-2017)
- iv. Part of the implementation team implementing an Integrated Programme to build resilience to climate change & adaptive capacity of vulnerable communities in Kenya (2016-2018)
- v. Part of the implementation team implementing the Kenya Water Towers Project seeking to promote alternative biomass energy sources to reduce forest degradation using bamboo (2016-2018)

- vi. Contractual research work on testing new wood preservatives for Dudu East Africa as requested by Pest Control Products Board (PCPB) (2015 – 2018)
- vii. Contractual research work on testing new wood preservatives for Agrichem as requested by Pest Control Products Board (PCPB) (2014 – 2017)
- viii. Contractual research work on testing new wood preservatives for Highchem as requested by Pest Control Products Board (PCPB) (2014 – 2017)
- ix. A study to determine the variations in top diameters of eucalyptus species poles for power transmission (2012-2015)
- x. Carried out contractual work on determining sustainable tree management for charcoal production (2012)
- xi. Part of the implementation team looking at efficient charcoal production technologies and initiatives of establishing sustainable resources for charcoal and charcoal briquettes under a joint project Miti Mingi Maisha Bora of the Kenya Forest Service (2010-2015)
- xii. Part of a multi-disciplinary team (ISAAA, JKUAT, KEFRI & TBPT) working on a project funded by NCST on Regeneration of Bamboo to Diversify the Food-base and Help Stem the Tide of Deforestation in Kenya (2010 -2013)
- xiii. Contractual research work on testing new wood preservatives for Marlowlink Timber Ltd as requested by Pest Control Products Board (PCPB) (2010 – 2011)
- xiv. A study in assessing performance of two Acacia species grown in Rareida District grown for charcoal (2008 – 2012)
- xv. Contractual research work on testing insecticides against termites for Insecta (K) Ltd (2008 - 2012)
- xvi. A study to determine the wood properties of *Melia volkensii* (a high value tree from the drylands in Kenya) at various ages (2008-15)
- xvii. Contractual research work on testing insecticides against termites for Twiga Chemicals (2007 - 2012)
- xviii. A regional project between Ethiopia and Kenya on preservation (treatment) of bamboo resources funded by the African Forestry Research Network -AFORNET (2007 - 2012)
- xix. Development of wood biomass energy in the country (2005 – current)
- xx. Characterisation of the Prosopis wood (2004 – 2007)
- xxi. Contractual research work on charcoal, sponsored by the Belgium Government – (2001-2003)
- xxii. Development of low-cost wood preservative techniques for poles and posts on farm/rural areas of Kenya – (2001-2003)
- xxiii. Supervised two students from the London School of Economics attached at RELMA –ICRAF who were working on charcoal characterisation.
- xxiv. Contributed to the FAO Forestry Outlook Study for Africa (FOSA) paper in looking at the status of non-wood forest products in Kenya - (2002)

- xxv. The status of Non-Wood Forest Products in Kenya – (2001)
- xxvi. Undertook a study to appraise the sawmill industry in Kenya (1999)
- xxvii. Evaluation of Kakuzi Ltd.’s pole treatment/preservation plant (An agricultural company) – (1998)
- xxviii. The status of furniture industry in Kenya – a survey (1996)
- xxix. Documentation of report on suitable species for peeler logs (1996)
- xxx. Undertook a study on timber defects in Kenya: the causes and prevalence from forest plantations (1995)

2. Ongoing research

- i. Dutch-Sino East Africa Bamboo Development Programme – Phase II (2020-2023)
- ii. Strength and treatability properties of various Eucalyptus species for electricity transmission poles in Kenya funded by the National Research Fund (NRF) (2018-2021)
- iii. Biofuel4Kenya Project: Improving Framework Conditions for Private Sector Development in Biofuel Value Chain in Kenya (NORAD) (October 2018 – September 2022)
- iv. To improve livelihoods of smallholder farming and pastoral communities in Kenya by increasing their access to modern biomass energy, enhancing environmental health and resilience to climate change (KCSAP) (2020-2022)
- v. To enhance sustainable utilization of wood resources through development of glulams from bamboo and timber species not used in construction industry (FPD) (2019-2021)

3. Mentorship and supervision

- i. Rotich Godfrey (SC/PGB/002/13 – University of Eldoret) “Efficacy of Fipronyl 200 G/L in Controlling Termites. A Laboratory and Graveyard Trial Test”
- ii. Emily Kitheka – mentoring in biomass energy activities

7. INNOVATIONS AND PATENTS (Intellectual Property)

- i. Contributed to improving the quality of laminated wood products at the Prisons Industries and the Christian Industrial Training Centres among others. This was through the KEFRI Occasional Paper # 1 -1996 on “A guide to the production of laminated (fancy) items

8. CONFERENCES/SEMINARS/WORKSHOPS

1. Presentation of Papers at Academic and Professional Conferences

- i. Oduor N. (2020). Sustaining Kenya's Energy using Bamboo. A paper presented on The Bamboo Association of Kenya Webinar held on 17 September 2020 to celebrate the World Bamboo Day
- ii. Oduor N. (2020). The need to keep a good and clean environment. A paper presented on The Green Anglicans Webinar held on 19 September 2020 to celebrate the World Clean Up Day
- iii. Oduor N. (2020). Bamboo Enterprise and Environmental Management in Kenya. A paper presented on an International Webinar on Bamboo Bioengineering towards developing entrepreneurship and conserving natural resources held on 24 September 2020
- iv. Oduor N. (2019). Application of GBEP Indicators to sugarcane bagasse briquettes used by tea industries. A paper presented at the Presentation of The Final Results of the Project "Building Capacity For Enhancing Bioenergy Sustainability Through The Use Of Global Bioenergy Partnership Indicators – 5 November 2019 at Crown Plaza Hotel
- v. **Oduor N.,** E. Kithaka, N. Nyamai, J. Kimwemwe and K. Juma. (2019). Quality analysis of charcoal from various species of bamboo converted using improved carbonization technologies in Kenya. A paper presented at the IUFRO Congress 2019 in Curitiba, Brazil; 29th September – 5th October 2019.
- vi. Oduor N. (2019). The Charcoal Regulations in Kenya: Implementation Experience. A paper presented at The Rethinking Sustainable Development from Northern Uganda International Conference held in Gulu, Uganda on 11 April 2019
- vii. **Oduor N.,** E. Kithaka, N. Nyamai, J. Kimwemwe and K. Juma. (2018). Quality and emission analysis of charcoal from various species of wood converted using improved carbonization technologies in Kenya. A paper presented at the 2018 Scientific Foresters Conference of the Forest Society of Kenya held at KEFRI Kitui from 26th-28th September, 2018.
- viii. **Oduor N. ,** J. Musyoki, J. Maua, J. Wainaina, J. Mwanzia, G. Sigu, P. Ongugo, M. Muga, and M. Gitonga (2018). Status of Bamboo Development in Kenya. A paper presented at the 5th KEFRI Scientific Conference held at KEFRI Hqs; 17th – 19th April 2018.
- ix. **Oduor, N.,** E. Kithaka, J. Kimondo J., Kimwemwe, N. Hussein, and G. Omedo (2018). Improved Earth and Casamance kilns for enhanced efficiency and environmental conservation A paper presented at the 5th KEFRI Scientific Conference held at KEFRI Hqs; 17th – 19th April 2018.

- x. Oduor N. (2018). Bamboo an overlooked biomass. A poster presented at the International Workshop on Sustainable Rural Bioenergy Solutions. Held at ICRAF Nairobi on 19 January 2018
- xi. Oduor N and H. Miyashita (2017). Variation of wood properties in *Melia volkensii*. A paper presented at the International Conference on the "Project on Development of Drought Tolerant Trees for Adaptation to Climate Change in Drylands of Kenya" held at KEFRI Hqs, Muguga from 13-16th February 2017
- xii. **Oduor N.** and E. Kithaka (2016). Salt-tolerant Tree Species: Potential Species for Reafforestation Programme in Turkana. A presentation at the utilization of ground water for Agriculture, Pastoralism and Forestry: achieving Turkana's potential held at KEFRI Turkana, Lodwar, Turkana County; 1st – 4th August 2016
- xiii. **Oduor N.,** E. Kithaka and J. Onchieku (2016). Biomass Technology Overview in Counties. A presentation at The Biomass Agenda Forum: Practical Avenues for Seizing the Low Carbon Opportunity in Kenya held at the Lake Naivasha Sopa Resort; 21st - 24th June 2016
- xiv. **Oduor N.** and E. Kithaka (2016). Charcoal Conversion technologies: Options for emission reduction. A presentation at The Biomass Agenda Forum: Practical Avenues for Seizing the Low Carbon Opportunity in Kenya held at the Lake Naivasha Sopa Resort; 21st - 24th June 2016
- xv. Gitehi Giathi, Emily Kithaka, Stephen Kiama, Mohamed Sheikh, Pauline Bala, Joseph Githiomi, **Nellie Oduor**, Mary Mwangi and Eliud Macharia (2016). Tree species composition and diversity in areas of high charcoal production in Kitui County: a case in Ikutha and Mwingi sub-Counties. A presentation at the National Conference on Sustainable Land Management held in Nakuru County; 1-4th June 2016.
- xvi. Oduor N. (2016). Charcoal industry in Kenya - Available Charcoal Production Technologies for sustainable management and production of charcoal. A paper presented at a sensitization workshop on sustainable charcoal production in Narok County; 4-5 May 2016
- xvii. **Oduor N.** and J. Kimwemwe. (2015). Charcoaling of *Prosopis*. A paper presented at the 2nd National *Prosopis* Conference held at the Soi Safari Club, Baringo; 18th - 21st May 2015

- xviii. Oduor N. (2015). Sustainable harvesting, preservation and processing bamboo. A paper presented at the training of Kenya Forest Society members on bamboo propagation, management and utilisation at KEFRI , Muguga 9th – 10th April 2015
- xix. **Oduor N.** And Miyashita H. (2015). Basic density of *Melia volkensii* from drylands in Kenya. A poster presented at the International Symposium on Wood Science and Technology; 15-17th March 2015, Tokyo, Japan
- xx. **Oduor N.**, Maingi D., Githiomi J., Anapapa A., and Gachanja M. (2014). Sustainable biomass-energy development in Kenya. A poster presented at IUFRO 2014 World Congress; 5-11th October 2014, Salt Lake City, Utah, USA
- xxi. Oduor N. (2013). Production of innovative products from bamboo. A paper presented at the Bamboo value chain stakeholders forum at KEFRI , Muguga; 6 December 2013
- xxii. **Oduor N.** and Githiomi, J.K. (2012). Feasibility of Charcoal Production from *Commiphora* and *Terminalia orbicularis* Species from Kenyan Woodland Resources. A poster presented at IUFRO-FORNESSA Congress; 23-29th June 2012 Nairobi
- xxiii. Oduor N. (2011). Eco-resource Product Development, Value Addition and Marketing. A paper presented at the 7th Participatory Natural Resources Management Course on 16th September 2011
- xxiv. **Oduor N.**, J. Maua, S. Mogire, J. Kimwemwe and M. Lukibisi. (2011) Promoting commercial growing of *Acacia xanthophloea* and *Acacia polyacantha* for charcoal – Bondo case study. A paper presented at KEFRI Colloquium held at KEFRI Karura on 25th August 2011
- xxv. Oduor N. (2010). Drying of sawn timber as value addition for further processing of wood. A paper presented at the sensitization workshop to sensitize SME saw millers to the Miti Mingi Maisha Bora program 29th November - 3rd December 2010
- xxvi. Oduor N. (2010). Entrepreneurship Development of Timber and Non-Timber Forest Products. A paper presented at the 2nd Regional Training Course on Mitigating Climate Change in Africa through social forestry from 18th October – 19th November 2010
- xxvii. Oduor N. (2010). Forest Products Development, Value Addition and Marketing. A paper presented at the 3rd Participatory Natural Resources Management Course on 21st May 2010

- xxviii. Oduor N. (2010). Research experiences in sustainable charcoal production, questions, outcomes and gaps. A Paper presented at a seminar on charcoal at World Agroforestry Centre 15th March 2010
- xxix. Oduor N. (2010). Entrepreneurship Development of Timber and Non-Timber Forest Products. A paper presented at the 1st Regional Training Course on Mitigating Climate Change in Africa through social forestry from 8th February – 12th March 2010
- xxx. Oduor N. (2009). The role of KEFRI in addressing Food Security and Environmental Conservation Issues. A paper presented at the 1st KEPAWAE Symposium held at KARI Mtwapa on 4th - 5th November 2009
- xxxi. **Oduor N.** and J. Githiomi. (2009). Forest energy for livelihoods. A paper presented at the 4th Forestry Society of Kenya Scientific Conference and AGM held at Izaak Walton Hotel Embu on 26th – 27th November 2009
- xxxii. **Oduor N.** and J. Githiomi. (2008). Wood Characteristics and properties of *Cocos nucifera* (the coconut tree) grown in Kwale District. A paper presented at the 4th Annual Moi University Conference, Eldoret 29th July – 1st August 2008
- xxxiii. **Oduor N.** and J. Mbaabu (2007). Bamboo production and utilisation in Kenya. A paper presented at The Seminar on Sustainable Development of Bamboo and Rattan Sector for Developing Countries, Beijing, China from 24th October – 7th November 2007
- xxxiv. Oduor N. (2006). Entrepreneurship development of timber and non-timber forest products. A paper presented at the 1st Special Ghana Counterpart Social Forestry Training Course in Kenya from 11th to 21st September 2006
- xxxv. Oduor N. (2006). Commercialisation of Non Wood Forest Products in Kenya. A paper presented at the 1st Kenya Forestry Society Scientific Conference and AGM. Held from 10th – 11th August 2006 at Hotel Waterbuck, Nakuru, Kenya
- xxxvi. Oduor N.M. (2006). Wood fuel production, utilisation, marketing and conservation strategies in Social Forestry. A paper presented at a Regional Training course on enhancing adoption of Social Forestry in Africa. Held at KEFRI Headquarters, Muguga on 1st February 2006.
- xxxvii. **Oduor N.M.** and J. Githiomi (2004). Appropriate charcoal processing technologies in Kenya. A paper presented at an International Workshop on Dryland Agroforestry

INRMU-Kenya held at Cottage Hotel, Mwingi from 29th November – 3rd December 2004.

- xxxviii. **Oduor N.M.** and J. Githiomi (2003). Utilisation potential of *Prosopis juliflora* grown in Kenya dryland areas. A paper presented at a National workshop on integrated management of *Prosopis* species held at Soi Safari Club, Baringo from 1st – 2nd October 2003
- xxxix. **Oduor, N.,** J. Githiomi and B. Chikamai, (2002). Improved charcoal production techniques for low-value tree species in dryland areas. Paper presented at a Regional Seminar on Dryland Agroforestry in East Africa 20-23 May 2002, Mwingi, Kenya
- xl. Chikamai, B.N. and **N. Ndegwa,** (1997). Wood wastes and residues in particleboards: opportunities for efficient and economical use of forest resources in developing countries. Paper presented at an International Workshop on composite materials and waste utilisation 4-8 August 1997, Dar es Salaam, Tanzania
- xli. Ndegwa, N.M., (1994). Durability of chemically modified particleboard placed in three different types of soils of two moisture contents. Paper presented at the first Biennial Research and Extension Seminar of the Department of Wood Science and Technology, at Moi University, Eldoret. Held on the 29th September to 1st October 1994.
- xlii. Ndegwa, N.M., (1993). Dimensional stability of particleboard and *Pinus radiata* treated with different resins. Paper presented at the 24th Forest Products Research Conference, at the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Division of Forest Products, Melbourne, Australia. Held on 15th - 18th November 1993

2. Participation in Workshops/Conferences

- i. Sectoral Workshop Integrated MRV System Programme, Held at Simba Lodge, Naivasha, 23rd - 27th November 2020
- ii. The Clean Cooking Forum 2019 held at Radisson Blu Hotel in Nairobi, Kenya from 5th – 7th November 2019
- iii. Forestry and Landscape Investment Forum (FLIF) conference held in Kigali Rwanda from 15-18 May 2017
- iv. International Workshop on Sustainable Rural Bioenergy Solutions. Held at ICRAF Nairobi on 19 January 2018
- v. UN Environment Assembly 2019. Held at UNEP from 8 - 15 March 2019 Nairobi, Kenya

3. Convening/Coordinating Conferences

- i. Kenya Commercial Forestry Investment Conference – postponed to April 2021
- ii. KEFRI's 5th Scientific Conference which was held from 17th to 19th April 2018
- iii. Second National Prosopis Workshop 18th - 21st May 2015, Soi Safari Club, Baringo

9. PROFESSIONAL ENGAGEMENT

1. Training

- i. I have been a part-time lecturer at the Wood Science Department, Moi University, Eldoret, Kenya, from 1997 to 1999
- ii. I have trained staff of 10 Energy Centres of the Ministry of Energy and Petroleum on efficient charcoal technologies and charcoal briquette making. This training has seen over 100 people trained in and around those Centres country wide
- iii. I have trained community groups on efficient charcoal production technologies
- iv. Training communities on sustainable bamboo harvesting and management

2. Consultancies

- i. Sustainability of Sugarcane Bagasse Briquettes and Charcoal Value Chains in Kenya:- Results and recommendations from implementation of the Global Bioenergy Partnership Indicators (GBEP) by UN Environment and FAO. (June 2018 - Dec 2019)
- ii. Capacity building on sustainable bioenergy in Baringo, funded by ICRAF (October – November 2019)
- iii. Feasibility Study On Biomass Energy Production And Management In The Kirisia Forest Ecosystem–Samburu, County; A study contracted by FAO in 2018
- iv. Quality and emission analysis of charcoal from various species of wood and bamboo converted using improved carbonization technologies in Kenya funded by The Nature Conservancy (TNC) (2018)
- v. Oduor N. and S. Mogire. 2018. Efficacy trials for wood samples treated with 'Terminil 5 SC.' consultancy study for HighChem Marketing Ltd.
- vi. Oduor N. and S. Mogire. 2018. Efficacy trials for wood samples treated with 'Sword 200 SC.' consultancy study for Agrichem and Tools Ltd.
- vii. Oduor N. and S. Mogire. 2018. Efficacy trials for wood samples treated with 'Buildor 5 TC.' consultancy study for Dudu East Africa Ltd.
- viii. A baseline study on Business Incubation for forest and farm enterprises in Kenya; A study contracted by FAO in 2017

- ix. 'Analysis of demand and supply of wood products in Kenya'; Contracted by Wanleys Consultancy Services for the Ministry of Environment, Water and Natural Resources (2013)
- x. Oduor N. and S. Mogire. 2012; Efficacy trials for wood samples treated with 'Mchwatox.' consultancy study for Twiga Chemicals Ltd./Rotam East Africa
- xi. Oduor N. M. Lukibisi, S. Mogire, E. Oduori and P. Sirmah. 2011; Efficacy trials for wood samples treated with Osmose CCA C60. Consultancy study for Marlow Link Timber Products Ltd
- xii. Oduor N. M. Lukibisi, S. Mogire, E. Oduori and P. Sirmah. 2011; Efficacy trials for wood samples treated with Protecta C60. Consultancy study for Beat (E.A.) Ltd
- xiii. Oduor N. M. Lukibisi, S. Mogire, E. Oduori and P. Sirmah. 2011; Efficacy trials for wood samples treated with Permawood ACQ 1900. Consultancy study for Beat (E.A.) Ltd
- xiv. Oduor N. and S. Mogire. 2011; Efficacy trials for wood samples treated with 'Imaxi.' consultancy study for Twiga Chemicals Ltd./Rotam East Africa
- xv. Oduor N., S. Mogire., S. N. Wakaba, E. Oduori and G. Sign. 2010; AFORNET funded project on accelerated decay tests of preservative treated bamboo species against wood rot fungi
- xvi. Oduor, N.M; Wekesa, L. and Githiomi, J.K. 2003; Marketing of the Commiphora species and Terminalia orbicularis charcoal and the Economic Analysis of the Charcoaling Conversion Methodologies. A report on the Study on feasibility of charcoal production out of Commiphora species contracted study by DFDP/INRMU

3. Collaboration with external organizations

- i. The International Bamboo and Rattan Organisation (INBAR) – National Coordinator for the Dutch-Sino East Africa Bamboo Development Programme
- ii. Collaboration with Norwegian Institute of Bio-economy Research (NIBIO) and The Royal Norwegian Society for Development (NV) in implementation of Biofuel4Kenya project based in Homabay
- iii. Stockholm Environment Institute (SEI) – collaborated in undertaking the GBEP project
- iv. World Agroforestry Centre/ICRAF (undertake capacity building in charcoal production in Baringo, and determining energy values of the charcoal produced

- v. Kenya Agricultural and Livestock Research Organisation (KALRO) – implementing the Kenya Climate Smart Agriculture Programme (KCSAP)
- vi. The Nature Conservancy – Undertook a study on emissions from charcoal kilns
- vii. The Clean Cooking Association of Kenya – in the development of the KEBS standard for charcoal briquettes
- viii. The Kenya Bureau of Standards – a committee member for various Technical Committees – Bamboo and Rattan, Wood and Timber Products
- ix. United Nations Development Programme (UNDP) – collaborated in implementing a charcoal production study in 5 Counties
- x. Kenya Forest Service – collaborated in implementing the Miti Mingi Maisha Bora (MMMB) Programme

10. EXTERNAL AND INTERNAL RESEARCH GRANTS

- i. To improve livelihoods of smallholder farming and pastoral communities in Kenya by increasing their access to modern biomass energy, enhancing environmental health and resilience to climate change (KCSAP)
- ii. Investigating treatability and strength properties of various sizes of electricity transmission poles for compliance to KEBS standard (KS 516: 2008) – Funded by NRF
- iii. Quality and emission analysis of charcoal from various species of wood and bamboo converted using improved carbonization technologies in Kenya – funded by TNC
- iv. Support to Counties in improving charcoal governance architecture and sustainable technologies adoption - UNDP
- v. Regeneration of Bamboo to Diversify the Food-base and Help Stem the Tide of Deforestation in Kenya – A multi-disciplinary team (ISAAA, JKUAT, KEFRI & TBPT) project funded by NCST (2010 -2013)

11. LOCAL, REGIONAL & INTERNATIONAL APPOINTMENTS

1. Local

- i. National Project Coordinator – Dutch-Sino East Africa Bamboo Development Programme Regional
- ii. A member of the Kenya Professional Association of Women in Agriculture and Environment (KEPAWAE). Held the post of:-
 - National Chairperson from 2006 - 2009,
 - National Treasurer from 2003 – 2006 and
 - National Vice Treasurer from 1999 - 2003

2. International

- i. Deputy Coordinator – IUFRO Division 5 Research Group/ Working Party: 5.07.00 Biorefinery Research Group / 5.07.04 Small conventional power systems working party (2014 – 2017)

12. AWARDS AND RECOGNITION

- i. 1992: Awarded an Equity and Merit Scholarship for my MSc studies in Australia
- ii. 2012: Awarded a Commonwealth Professional Fellowship – undertaken at the Institute of Energy Systems, University of Edinburgh, Scotland
- iii. 2013: Awarded a certificate in recognition of contribution towards KEFRI winning the 1st trophy at Nairobi International Trade Fair – as the Chairperson of Nairobi ASK Show

13. CONTRIBUTION TO KEFRI'S ADVANCEMENT

- i. Chair of the KEFRI Staff Medical Scheme Committee for the past 10 years. Under my tenure KEFRI was able to outsource the service to a medical insurance scheme service provider in 2012.
- ii. As the lead expert in biomass energy – KEFRI known for promoting efficient charcoal production technologies
- iii. Contributed to improving the quality of laminated wood products (fancy items) at the Prisons Industries and the Christian Industrial Training Centres among others
- iv. Part of the team promoting bamboo domestication and value addition through capacity building of entrepreneurs on bamboo products
- v. Part of the team that is promoting tree growing for charcoal production in Madiany Division, Siaya County

14. MEMBERSHIP TO PROFESSIONAL BODIES

- Member of the Forestry Society of Kenya
- Member of the Kenya Professional Association of Women in Agriculture and Environment (KEPAWAE).
- Member of the Clean Cooking Association of Kenya

15. REFEREES

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