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Position: Chief Research Scientist (*Soil Health, Natural Resource Management, Climate Change, Agroforestry Systems, Forest Landscape Restoration, Biodiversity Conservation, Biological Science*)

1. PERSONAL INFORMATION

- 1.1. NAME** James K. Ndufa
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1.5. NATIONALITY Kenyan
1.6. GENDER Male

2. QUALIFICATIONS

2.1. Academic Qualifications

- 1998 -2001: Doctor of Philosophy (PhD) in Biological Science, University of London, UK
1997 -1998: Master of Philosophy (M.Phil.) in Biological Sciences, University of London, UK
1986 -1989: Bachelor of Science (BSc.) in Forestry (Second Class Honors, Upper Division) Moi University, Kenya
1983 -1984: Advanced Certificate of Education (K.A.C.E), 2 Principals (Biology & Geography), 2 Subsidiaries (Chemistry and Maths), Friends School Kamusinga, Bungoma District, Kenya
1979 -1982: Kenya Certificate of Secondary Education (K.C.S.E) Division one. Friends School Kamusinga, Bungoma District, Kenya
1972 -1978: Certificate of Primary Education (C.P.E) 29 out of 36 points.

2.2. Key Competencies

2.3. Other Courses

1. 2017: Certificate of participation in Knowledge Co-Creation Program (Group and Region Focus) on 'Combating Desertification to Strengthen Resilience to Climate Change in Sub-Saharan Africa' at JICA, Japan
2. 2014: Certificate of participation in a Workshop on Climate Change, Rapid Forest Carbon Stock Appraisal and Development of PIN and PDD for Carbon Financing;
3. 2014: Certificate of participation in the 2nd Hands-on Soil Infrared Spectroscopy techniques organized by ICRAF and Soil-Plant Spectral Diagnostic Lab;
4. 2013: Certificate of completion of 'Country-Focused Training Course on Breeding Theory at Forestry and Forest Products Research Institute and other related organization' at JICA, Japan
5. June 2007: Management Course on "Effective implementation of the Public Procurement and Disposal Act 2005 and Regulation 2007 for Senior Non-Finance Managers" held at KEFRI Headquarters, Muguga, Nairobi;
6. May - June 2007: Senior Management Course on "Strategic Leadership Development Program (SLDP)" - Kenya Institute of Administration (KIA), Nairobi, Kenya;
7. October 2002: Certificate of facilitation on 'On-farm Research: Principles and Practices' of Vi-Agroforestry participants at KEFRI RRC, Maseno Kenya, sponsored by VI and ICRAF;
8. June 1998: 3-week Workshop on CENTURY and Water, Nutrient and Light Capture in Agroforestry Systems (WaNuLCAS) in Agroforestry Modeling funded by DFID;
9. May 1996: Certificate of participation in a training course on "Experiment Design and Analysis for Agroforestry Research. ICRAF, Nairobi, Kenya sponsored by SIDA, ODA, RSCU, ICRISAT;
10. June 1995: Certificate of participation for attending a workshop on "Design of on-farm experiments for Agroforestry Research" ICRAF, Nairobi, Kenya, KARI/ODA crop protection Project;
11. October 1991: Certificate of attendance of the NFTA/HPI short course on the use of nitrogen fixing trees for animal production in the tropics". Mukono, Uganda;

3. EMPLOYMENT HISTORY

2020 – Present	Ag. Deputy Director, Forest Biodiversity and Environment Management, Forestry Research Institute (KEFRI), P.O. Box 20412 – 00200, Nairobi, Kenya
2014 – 2019	Chief Research Scientist, Kenya Forestry Research Institute (KEFRI), P.O. Box 20412 – 00200, Nairobi, Kenya
2009 – 2014	Principal Research Scientist, Kenya Forestry Research Institute (KEFRI), P.O. Box 20412 – 00200, Nairobi, Kenya
2004 – 2009	Senior Research Scientist, Kenya Forestry Research Institute (KEFRI), P.O. Box 20412 – 00200, Nairobi, Kenya
2002 – 2004	Research Officer I, Kenya Forestry Research Institute (KEFRI), P.O. Box 20412 – 00200, Nairobi, Kenya
1994 – 2002	Research Officer II, Kenya Forestry Research Institute (KEFRI), P.O. Box 20412 – 00200, Nairobi, Kenya
1989 – 1994	Assistant Research Officer, Kenya Forestry Research Institute (KEFRI), P.O. Box 20412 – 00200, Nairobi, Kenya

4. ADMINSTRATIVE RESPONSIBILITY

- 2020 - To date: Acting Deputy Director, Forest Biodiversity and Environment Management (FBEM)
- 2009 - 2018 Regional Director, KEFRI Dryland Eco-Region Research Programme - Kitui
- 2008 - 2009 Officer- in- Charge, Nyeri Forestry Research Station, KEFRI Central Highlands Eco-Region Research Programme - Nyeri
- 2006 - 2008 Acting Regional Director, KEFRI Lake Victoria Basin Eco-Region Research Programme - Kisumu
- 1995 - 1997 Acting Centre Director, KEFRI Lake Victoria Basin, Eco-Region Research Programme - Kisumu

5. PUBLICATIONS

5.1. Journal Papers

1. UNEP (2019). Summary of SUSTAINABILITY OF SUGARCANE BAGASSE BRIQUETTES AND CHARCOAL VALUE CHAINS IN KENYA: Results and recommendations from implementation of the Global Bioenergy Partnership Indicators. <https://www.dw.com/en/tv/global-3000/s-11487>
2. UNEP (2019). TECHNICAL REPORT of SUSTAINABILITY OF SUGARCANE BAGASSE BRIQUETTES AND CHARCOAL VALUE CHAINS IN KENYA: Results and recommendations from implementation of the Global Bioenergy Partnership Indicators. <https://www.dw.com/en/tv/global-3000/s-11487>
3. Miyashita, Hisaya and Ndufa, K. James. (2019). Improvement of Seed Orchards with Progeny Tests and Nondestructive Wood Property Testing in a Tree Breeding Project in Kenya. Proceedings 21st International nondestructive Testing and Evaluation of Wood Symposium, Freiburg, Germany 2019
4. Ndufa, J.K, Miyashita, H., Bernard Kigwa, B.K., Auka, S. and Muturi, G (2018). Estimating biomass and carbon stocks of *Melia volkensii* plantation in dryland landscapes of Kenya. In: Ochieng D, Kamondo B and Muturi G (eds) Proceedings of international conference on 'Project on development of drought tolerant trees for adaptation to climate change in drylands of Kenya' held at KEFRI headquarters Muguga from 13th-16th February 2017. KEFRI, Kenya.

5. Ndufa, J.K, Miyashita, H. (2018). Preliminary results on *Melia volkensii* clonal variation in growth and wood properties in the drylands of Kenya. In: Ochieng D, Kamondo B and Muturi G (eds) Proceedings of international conference on 'Project on development of drought tolerant trees for adaptation to climate change in drylands of Kenya' held at KEFRI headquarters Muguga from 13th-16th February 2017. KEFRI, Kenya.
6. Kigwa B.K., Ndufa, J.K., David K. Muchiri, D.K. and Muturi, G.M (2018). Results of ongoing *Melia volkensii* spacing and pruning trial in selected drylands sites in Kenya. In: Ochieng D, Kamondo B and Muturi G (eds) Proceedings of international conference on 'Project on development of drought tolerant trees for adaptation to climate change in drylands of Kenya' held at KEFRI headquarters Muguga from 13th-16th February 2017. KEFRI, Kenya.
7. Ndufa, J.K. and Hisaya Miyashita (2017). Clonal variation in growth and wood properties of *Melia volkensii* in the drylands of Kenya. *A Paper Presented at International Conference on Project on Development of drought tolerant trees in the drylands of Kenya on 13-16 February 2017, at Muguga Nairobi, Kenya.*
8. Nakamura, R., Takashi Oyabu, James K. Ndufa, Bernard K. Kigwa, Ken Yoshikawa (2017). Midday transpiration rates and daily pan evaporation from a *Melia volkensii* plantation during the rainy season in a semi-arid area in Kenya. *Tropics Vol. 26(1) 17-25.*
9. Okeyo, M., J. Nicholus, J , A. Luvanda, A. Mwamburi, J. K. Ndufa, N. Bor, and D. Munyao (2016) Extension Approaches In The Promotion Of *Melia Volkensii* In Lower Eastern, Kenya. *International Journal of Applied and Pure Science and Agriculture (IJAPSA). Vol 2. Issue No 6: 2394-823X.*
10. Maobe S.N, Mburu M.W.K, Akundabweni L. S, Ndufa J. K, Mureithi J. G, Gachene C. K. K, Okello J. J, Makini F (2011). Economic Analysis of Mucuna Green Manure Nitrogen Application in Maize Production: I. with Green Manure Incorporation Cost.". In: J. of Sustainable Development in Agriculture & Environment Vol. 6(1): xx-xx: June. 2011.
11. Walela, C , Ndufa J.K Balozi K,,Oeba V, Welimo M., Paul K.,and Heiko,D. (2010) Biomass carbon: litter quality and implications for carbon sequestration by agroforestry in coastal Kenya World Congress of Soil Science, Soil Solutions for a Changing World 1 - 6 August 2010, Brisbane, Australia. Published on DVD (digital).
12. Maobe, SN., Mburu, MWK, Akundabweni, LS, Ndufa, JK, Mureithi, JG, Gachene, CKK, Okello, JJ, Makini, F. (2010). Effect of Mucuna Green Manure Rate Applied on Maize Grain Yield During the Application Season. *J. of Sustainable Development in Agriculture & Environment Vol. 5(1):54-64 March. 2010 ISSN 0794-8867.*
13. Maobe, SN., Mburu, MWK, Ndufa, JK, Akundabweni, LS, Mureithi, JG., Gachene,CKK, Makini, F and Okello, JJ. (2010). Potential Effect of Mucuna Green Manure Application Rates

on the Decomposition and Availability of Nitrogen in Varying Soil Moisture Levels under Greenhouse Conditions. *J. of Sustainable Development in Agriculture & Environment* Vol. 5(1):75-86 March. 2010 ISSN 0794-8867.

14. Ndufa, J.K., Gathumbi, S.M., Mwaura, H.M. Giller, K.E., Buresh, R.J and Cadisch, G (2009). Are mixed species fallows providing positive long-term maize yield interaction? *Agronomy Journal* 101, 1352-1362. **(Peer Reviewed Journal)**
15. Chebii, J, Imo, M. Koech, E. and J.K. Ndufa (2009). Effects of tillage on greenhouse gas emission and nitrogen mineralization under *Tephrosia* fallows in Nyabeda, Western Kenya. *Journal of Agriculture, Pure and Applied Science and Technology (JAPAST)*. Vol. 2, 76-92.
16. Poulton, C., Ndufa, J.K and Gitau, M. 2006. The viability of seasonal agricultural lending in Africa: Experiences from SCOBICS in Western Kenya. Submitted to *Journal of Development Studies*. *To be resubmitted*.
17. Baggs EM, Chebii J, Ndufa JK (2006) A short-term investigation of trace gas emissions following tillage and no-tillage of agroforestry residues in western Kenya. *Soil and Tillage Research* 90, 69-76. **(Peer Reviewed Journal)**
18. Millar N, Ndufa JK, Cadisch G, Baggs EM (2004) Nitrous oxide emissions following incorporation of improved-fallow residues in the humid tropics. *Global Biogeochemical Cycles* 18, GB 1032, doi: 10.1029/2003GB002114. **(Peer Reviewed Journal)**
19. Ndufa, J.K., Cadisch, G. and Albrecht, A. (2003). Quantifying the contribution of legumes above- and belowground N to soil N pools and subsequent crop in improved fallow system using *in situ* ¹⁵N labeling techniques in Western Kenya. A paper presented to the 3RCM on "The Use of Nuclear Techniques For Developing Integrated Nutrient and Water Management Practices for Agroforestry Systems" (D1-20.07), 2 - 6 June, Colombo, Sri Lanka.
20. Cadisch, G., Ndufa, J.K., Yasmin, K., Mutuo, P., Baggs, E.M., Keerthisinghe, G. and Albrecht, A. (2002). Use of stable isotopes in assessing belowground contributions to N and soil organic matter dynamics. In 17th World Congress of Soil Science Conference 'Soil Science: Confronting New Realities in the 21st Century'. ISSS, Bangkok, Thailand.
21. Baggs, E.M., Cadisch, G., Verchot, L.V., Millar, N. and Ndufa, J.K. (2002). Environmental impacts of tropical agricultural systems: N₂O emissions and organic matter management. In 17th World Congress of Soil Science Conference 'Soil Science: Confronting New Realities in the 21st Century'. ISSS, Bangkok, Thailand.
22. Ndufa, J.K. (2001). Nitrogen and soil organic matter benefits to maize by fast-growing pure and mixed species legume fallows in Western Kenya. Ph.D. Thesis, Imperial College at Wye, University of London. pp. 323.
23. Ndufa J.K., Cadisch, G., Giller, K.E. and Albrecht, A. (2001). Short-term effects of pure and mixed species fallows on ¹⁵N availability and N distribution in soil particle size fraction in

- western Kenya. In "11th Nitrogen Workshop, Book of Abstracts". INRA, Reims, France. pp. 161 -162.
24. Millar, N, Baggs, E.M., Ndufa, J.K., and Cadisch G. (2001). Emissions of nitrous oxides from an improved fallow system in Kenya. In "11th Nitrogen Workshop, Book of Abstracts". INRA, Reims, France. pp. 149 – 150.
 25. Ndufa, J.K., Cadisch, G. and Albrecht, A. (2001). Quantifying the contribution of legumes root N to soil N pools and subsequent crop in improved fallow system using *in situ* ¹⁵N labeling techniques in Western Kenya. A paper presented to the 2nd RCM on "The Use of Nuclear Techniques For Developing Integrated Nutrient and Water Management Practices for Agroforestry Systems" (D1-20.07), 7-11 May, Kuala Lumpur, Malaysia.
 26. Gathumbi, S. M., J. K. Ndufa, K. E. Giller, and G. Cadisch. (2001). Do species mixtures increase above- and below-ground resource capture in woody and herbaceous legumes? *Agronomy Journal* 94:518 - 526. **(Peer Reviewed Journal)**
 27. Gathumbi, S. M., Ndufa, J. K., Giller, K. E., Buresh, R. J., and Cadisch, G., (2000). Mixed species fallows: complementarity or competition in growth resource utilization In "ASA-CSSA-SSSA 92st Annual Meeting Abstracts" pp. 60. ASA-CSSA-SSSA, Madison, Wisconsin, U.S.A.
 28. Gathumbi, S. M., Ndufa, J. K., Cadisch, G., Buresh, R. J., and Giller, K. E. (1999). Above- and below-ground resource utilization by legume mixtures in western Kenya. In "ASA-CSSA-SSSA 91st Annual Meeting Abstracts". ASA-CSSA-SSSA, Madison, Wisconsin, U.S.A. pp. 229.
 29. Ndufa, J. K., Shepherd, K.D., Buresh, R.J. and Jama, B. (1999). Nutrient uptake and growth of young trees in a P-deficient soil: tree species and phosphorus effects. *Forest Ecology and Management* 122:231-241. **(Peer Reviewed Journal)**
 30. Jama, B., Buresh, R.J., Ndufa, J.K. and Shepherd, K.D. (1998). Vertical distribution of tree roots and nitrate at two soil phosphorous levels. *Soil Science Society of America journal* 62: 280-286. **(Peer Reviewed Journal)**
 31. Swinkels, R. A , and Franzel S, Shepherd, K.D., Ohlsson, E. and Ndufa, J.K. (1997). The economics of short rotation improved fallows: evidence from areas of high population density in western Kenya. *Agricultural Systems*. 55:99-121. **(Peer Reviewed Journal)**
 32. Shepherd, K.D., Ndufa, J.K., Ohlsson, E., Sjogren, H and Swinkels R.A. (1997). Adoption potential of Hedgerow intercropping in the maize based cropping systems in the highland of western Kenya. I. Background and agronomic evaluation. *Experimental Agriculture*. 33:197–209. **(Peer Reviewed Journal)**
 33. Buresh, R.J., Jama, B and Ndufa, J.K (1996). Agroforestry trees for nutrient cycling and sustainable management. *East African Agricultural and Forestry Journal*. 62: 115 – 127.

34. Shepherd, K.D, Ohlsson E., Okalebo, J.R. and Ndufa J.K. (1996). Potential impact of agroforestry on soil nutrient balances at the farm scale in the East African highland. *Fertilizer Research*. 44:87-99. *(Peer Reviewed Journal)*
35. Shepherd, K.D., Jefwa, J., Wilson, J., Ndufa, J.K., Ingleby, K and Mbuthia, K.W. (1996). Infection potential of farm soils as mycorrhizal inocula for *Leucaena leucocephala*. *Biology and Fertility of soils*. 22:16-21. *(Peer Reviewed Journal)*
36. Jama, B., Buresh, R.J., Ndufa, J.K. and Shepherd, K.D. (1996). Vertical distribution of tree roots and nitrate at two soil phosphorous levels. Poster presented to the American Society of Agronomy Meeting, November 3-8 1996, Indianapolis, Indiana. *Agronomy Abstract 1997*.
37. Shepherd K.D., Ohlsson E., Okalebo J.R., Ndufa J.K. and David S (1995). A static model of nutrient flow on mixed farms in the highlands of western Kenya to explore the possible impact of improved management. In: Powell JM, Fernandez-Rivera S, Williams TO, Renard C (eds) *Livestock and sustainable nutrient cycling in mixed farming systems of sub-Saharan Africa*. Vol II. Technical Papers. Proceedings of the International Conference held 22-26 November 1993, Addis Ababa, Ethiopia. International Livestock Centre for Africa, Addis Ababa, pp. 523-538.
38. Ndufa J.K., Ohlsson E. and Shepherd K.D. (1992). Participatory research methods for agroforestry technology development in western Kenya. *Towards a new paradigm for farming system research extension. Working Paper set for the 12th Annual Farming Systems Symposium. The association of Farming Systems Research/Extension*, Michigan State University, pp. 111-125.

5.2. Books Chapter

1. Muturi, G.M. Ndufa, J.K. and Takeda, Y. (2016). Introduction. In Kamondo, B.M., Kariuki, J.G., Luvanda, A.M., Muturi, G.M. and Ochieng, D (2016) (eds). *Guideline on Production, Distribution, and Use of Improved Melia Seed and Seedlings in the Drylands of Kenya*. KEFRI, 38pp.
2. Luvanda, A.M., Ogawa, S., Ndufa, J.K., and Musyoki, J (2016). Demonstration of improved melia seed and seedlings. In Kamondo, B.M., Kariuki, J.G., Luvanda, A.M., Muturi, G.M. and Ochieng, D (2016) (eds). *Guideline on Production, Distribution, and Use of Improved Melia Seed and Seedlings in the Drylands of Kenya*. KEFRI, 38pp.
3. Wilson, J and Ndufa, J.K (2013). Soil moisture. In *Benefits from the ecosystem services provided by trees: Treesilience: An assessment of the resilience provided by trees in the drylands of Eastern Africa*. ICRAF/UKaid. 112pp.
4. Nyamai, D and Ndufa, J.K (2013). Domesticating *Melia volkensii*; improving livelihood in Kenya drylands. In *Resilience at livelihood and ecosystem level: building the case. Treesilience: An assessment of the resilience provided by trees in the drylands of Eastern Africa*. ICRAF/UKaid. 112pp.

5. Walela C., Ndufa J., Balozzi K., Oeba O., Welimo M. (2011) Evaluation of Establishment, Biomass Productivity and Quality of Improved Fallow Species in a Ferralic Arenosol at Coastal Region in Kenya. In: Bationo A., Waswa B., Okeyo J., Maina F., Kihara J. (eds) *Innovations as Key to the Green Revolution in Africa*. Springer, Dordrecht
6. Ndufa, J.K., Albrecht, A., G. Keerthisinghe, G. and Cadisch, G. 2008. Quantifying the contribution of legumes above- and belowground N to soil N pools and subsequent crop in improved fallow system using *in situ* ¹⁵N labelling techniques in western Kenya. *In Management of Agroforestry Systems for enhancing Resource use Efficiency and Crop Productivity*. IAEA-TECDOC-160. Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture.
7. Maobe, S. N., Mburu, M.W.K., Ndufa, J.K. Akundabweni L. S.M., 2008. Legume biomass quantity requirement for maize production with reference to mucuna green manure in Kenya, In: Proceedings of the XXI International Grassland Congress and VIII International Rangeland Congress: Multifunctional Grasslands in a Changing World. Volume II. 29th June - 5th July, Hohhot, China. pp. 239.
8. Ndufa J.K, G.Cadisch, C. Poulton, Q. Noordin and B. Vanlauwe (2007). Integrated Soil Fertility Management and Poverty Traps in Western Kenya. In *Advances in Integrated Soil Fertility Management in sub-Saharan Africa: Challenges and Opportunities* Bationo, A.; Waswa, B.; Kihara, J.; Kimetu, J., Eds.). Springer, Dordrecht, The Netherlands. pp. 1061 - 1076.
9. Mafongoya, P.L., Giller, K.E, Odee, D., Bala, A. Ndufa, J.K., Gathumbi, S. and Sitompul. (2003). Benefiting from N₂-fixation and managing rhizobia; Belowground transfer and contribution to subsequent crops. In Cadisch *et al.* eds. CAB International, Wallingford, UK. pp. 143 - 154.
10. Cadisch, G., S. M. Gathumbi, J. K. Ndufa, and K. E. Giller. (2002). Resource acquisition of mixed species fallows-competition or complementarity? *In "Balanced Nutrient Management Systems for the Moist Savanna and Humid Forest Zones of Africa"* (B. Vanlauwe, J. Diel, N. Sanginga, and R. Merckx, eds). CAB International, Wallingford, UK. pp. 143 - 154.
11. Swinkels, R.A., S. Franzel, K. D. Shepherd, E. Ohlsson, J. K. Ndufa. (2002). The Adoption Potential of Short Rotation Improved Tree Fallows: Evidence from Western Kenya. *In "Trees on the Farm: Assessing the Adoption Potential of Agroforestry Practices in Africa"*. (S. Franzel and .S. J. Scherr, eds). CAB International, Wallingford, UK. pp. 65 - 88.
12. Swinkels, R.A., K. D. Shepherd, S. Franzel, J. K. Ndufa, E. Ohlsson, H. Sjogren. (2002). Assessing the Adoption Potential Of Hedgerow Intercropping For Improving Soil Fertility, Western Kenya. *In "Trees on the Farm: Assessing the Adoption Potential of Agroforestry Practices in Africa"*. (S. Franzel and .S. J. Scherr, eds). CAB International, Wallingford, UK. pp. 89 - 110.
13. Franzel, S., J. K. Ndufa, O. C. Obonyo, T.E. Bekele, and R.Coe. (2002). Farmer-Designed Agroforestry Trials: Farmers' Experiences in Western Kenya. *In "Trees on the Farm:*

Assessing the Adoption Potential of Agroforestry Practices in Africa". (S. Franzel and .S. J. Scherr, eds). CAB International, Wallingford, UK. pp. 111 - 124.

14. Baggs, EM, Millar, N, Ndufa, JK and Cadisch, G. (2000). Effect of residue quality on N₂O emissions from tropical soils. *In "Sustainable Management of Soil Organic Matter"* (R.M. Rees, B.C. Ball, C.D. Campbel and C.A. Watson, eds). CAB International, Wallingford, UK. pp. 120 - 125.

5.3. Technical Notes /Protocols/Guidelines

1. UN Environment Programme (2019). Building capacity for enhancing bioenergy sustainability through the use of the global bioenergy partnership indicators. Overview of the project. *GOK, SEI, ICRAF, KEFRI, Strathmore University and GBEP. Supported by Germany Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.*
2. UN Environment Programme (2019). Sustainability of sugarcane bagasse briquettes and charcoal value chains in Kenya. Results and recommendations from implementation of the global bioenergy partnership indicators. Technical report. *GOK, SEI, ICRAF, KEFRI, Strathmore University and GBEP. Supported by Germany Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.*
3. UN Environment Programme (2019). Sustainability of sugarcane bagasse briquettes and charcoal value chains in Kenya. Results and recommendations from implementation of the global bioenergy partnership indicators. Summary. *GOK, SEI, ICRAF, KEFRI, Strathmore University and GBEP. Supported by Germany Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.*
4. KEFRI/JIFPRO (2014). Tree planting and management techniques under limited water availability: Guideline for Framers and Extension Agents. 13pp (Contributors: Gabriel M. Muturi, James K. Ndufa, Josephine Musyoki, David K. Muchiri, Bernard K. Kigwa and Damaris Munyao).
5. KEFRI/JIFPRO (2014). Re-afforestation and water conservation in drylands: Guideline for Students and Researchers. 82 pp (Contributors: Gabriel M. Muturi, James K. Ndufa, Josephine Musyoki, David K. Muchiri, Bernard K. Kigwa and Damaris Munyao).
6. Ndufa, J.K., Wasonga, D., Maina, P., Poulton, C. and Cadisch, G. 2005. Biophysical survey. Annex C of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 35pp. <http://www.nrsp.org/database>.
7. Poulton, C., Ndufa, J.K., Ogolla, G. and Maina, P. 2005. Impact survey. Annex B of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 76pp. [http://www.nrsp.org/ database](http://www.nrsp.org/database).
8. Poulton C, and Ndufa J.K. 2005. Linking soil fertility and improved cropping strategies to development. Scientific report. Annex A of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 62pp. <http://www.nrsp.org/database>.

9. Ndufa, J.K., Wasonga, D., Maina, P., Poulton, C. and Cadisch, G. 2005. Biophysical survey. Annex C of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 35pp. <http://www.nrsp.org/database>.
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12. Ndufa, J.K. 2005. Advancing the use of the products of NRSP's past and current research projects in Eastern Africa. Final Technical Report of project R8400. Kisumu, Kenya: KEFRI. 29pp.<http://www.nrsp.org/database>.
13. Ndufa, J.K., Semalulu, O., Sanginga, P., Noordin, Q., Kayanda, S., Obaga, S., Kasule, J., Lwasa, J. and Nyagot, C. 2005. Advancing the use of the products of NRSP's past and current research projects in Eastern Africa. Scientific report. Annex A of the Final Technical Report of project R8400. Kisumu, Kenya: KEFRI. 42pp.[http://www.nrsp.org/ database](http://www.nrsp.org/database).
14. Ndufa, J.K, Sanginga, P.C., Kayanga, S. and Noordin, Q. 2005. Tracking the use, uptake and conditions for sustainability of communication products. Annex C of the Final Technical Report of project R8400. Kisumu, Kenya: KEFRI. 34pp. <http://www.nrsp.org/database>

5.4. Policy Briefs

Not Applicable

5.5. Project Technical reports

1. UN Environment Programme (2019). Building capacity for enhancing bioenergy sustainability through the use of the global bioenergy partnership indicators. Overview of the project. *GOK, SEI, ICRAF, KEFRI, Strathmore University and GBEP. Supported by Germany Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.*
2. UN Environment Programme (2019). Sustainability of sugarcane bagasse briquettes and charcoal value chains in Kenya. Results and recommendations from implementation of the global bioenergy partnership indicators. Technical report. *GOK, SEI, ICRAF, KEFRI, Strathmore University and GBEP. Supported by Germany Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.*
3. UN Environment Programme (2019). Sustainability of sugarcane bagasse briquettes and charcoal value chains in Kenya. Results and recommendations from implementation of the global bioenergy partnership indicators. Summary. *GOK, SEI, ICRAF, KEFRI, Strathmore University and GBEP. Supported by Germany Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.*

4. KEFRI/JIFPRO (2014). Tree planting and management techniques under limited water availability: Guideline for Farmers and Extension Agents. 13pp (Contributors: Gabriel M. Muturi, James K. Ndufa, Josephine Musyoki, David K. Muchiri, Bernard K. Kigwa and Damaris Munyao).
5. KEFRI/JIFPRO (2014). Re-forestation and water conservation in drylands: Guideline for Students and Researchers. 82pp (Contributors: Gabriel M. Muturi, James K. Ndufa, Josephine Musyoki, David K. Muchiri, Bernard K. Kigwa and Damaris Munyao).
6. Ndufa, J.K., Wasonga, D., Maina, P., Poulton, C. and Cadisch, G. 2005. Biophysical survey. Annex C of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 35pp. <http://www.nrsp.org/database>.
7. Poulton, C., Ndufa, J.K., Ogolla, G. and Maina, P. 2005. Impact survey. Annex B of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 76pp. <http://www.nrsp.org/database>.
8. Poulton C, and Ndufa J.K. 2005. Linking soil fertility and improved cropping strategies to development. Scientific report. Annex A of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 62pp. <http://www.nrsp.org/database>.
9. Ndufa, J.K., Wasonga, D., Maina, P., Poulton, C. and Cadisch, G. 2005. Biophysical survey. Annex C of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 35pp. <http://www.nrsp.org/database>.
10. Poulton, C., Ndufa, J.K., Ogolla, G. and Maina, P. 2005. Impact survey. Annex B of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 76pp. <http://www.nrsp.org/database>.
11. Poulton C, and Ndufa J.K. 2005. Linking soil fertility and improved cropping strategies to development. Scientific report. Annex A of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 62pp. <http://www.nrsp.org/database>.
12. Ndufa, J.K. 2005. Advancing the use of the products of NRSP's past and current research projects in Eastern Africa. Final Technical Report of project R8400. Kisumu, Kenya: KEFRI. 29pp. <http://www.nrsp.org/database>.
13. Ndufa, J.K., Semalulu, O., Sanginga, P., Noordin, Q., Kayanda, S., Obaga, S., Kasule, J., Lwasa, J. and Nyagot, C. 2005. Advancing the use of the products of NRSP's past and current research projects in Eastern Africa. Scientific report. Annex A of the Final Technical Report of project R8400. Kisumu, Kenya: KEFRI. 42pp. <http://www.nrsp.org/database>.
14. Ndufa, J.K., Sanginga, P.C., Kayanga, S. and Noordin, Q. 2005. Tracking the use, uptake and conditions for sustainability of communication products. Annex C of the Final Technical Report of project R8400. Kisumu, Kenya: KEFRI. 34pp. <http://www.nrsp.org/database>

5.6. Extension and dissemination publications

1. Ndufa J.K (2010). Comparing long-term maize yield of mixed species legume fallows with monoculture legume fallows. CSA News Volume 55 No. 01 January 2010.
2. SCOBICS (2003). Decision support system for integrated nutrient deficiency diagnosis and corrective measures.
3. SCOBICS (2003). Decision support system for integrated striga management and control.
4. SCOBICS (2003). Decision support system for integrated and better land management.
5. Ndufa J.K. (2005). Integrated striga control strategies for increased crop yield and Food. NRSP/COSOFAF/Rockefeller
6. Ndufa, J.K and Cadisch, G (2005) One-Stop Shop: Coordinating Agricultural Services, Technical Information, Inputs Supplies, Credit and Marketing. 2002 - 2003 Research Highlights. Natural Resources Systems Programme
7. Ndufa, J.K, Gathumbi, S, Cadisch, G and Giller, K. (2005). Mixed species improved fallows for Western Kenya. These recommendations derived from a DFID (Natural Resources Systems Programme, project No. R7056)/EU (Pilot project) funded project
8. Ndufa J. K *et al* (2002). Mixed species fallows for western Kenya (Project R7056)/EU. DFID Extension Material. In On-line Extension Material: Cover Crops/Green Manures/Fallows for small-scale farming in tropics. CIEPCA with CIIFAD/MOIST Technical Support.
9. Cadisch, G. and Ndufa, J.K. (2001). Improving fallows? Natural Resources Systems Programme Research Highlights 1999-2000. NRSP pp. 18-20.
10. Franzel, S., Holding, C., Ndufa, J.K., Obonyo, O.C. and Weru, S.M. 1999. Agricultores yarboles: Ligando la investigacion con la extension. Agroforesteria en las Americas Extension Agroforestal CATIE/ICRAF 6:21: 18 - 20.
11. Anyonge, C.H., Franzel, S., Ndufa, J.K. 1997. A methodology for three-way Dialogue between Farmer, Researcher and Extensionist. Proceedings of IUFRO working Party S6.06-03 Extension Symposium 1997 in Kenya-Forestry Extension: Science and Practice for 21st Century.
12. Franzel, S., Holding, C., Ndufa, J.K., Obonyo, O.C. and Weru, S.M. 1996. Farmers and trees-linking research and extension. Agroforestry Today 8:3:19-21.
13. Anyonge, C.H., Franzel, S., Ndufa, J.K. and Weru, S.M. 1996. Farmer-designed trials in agroforestry- a methodology for 3 way dialogue between farmers, researchers and extensioners. A paper submitted to ODI Agricultural Administration Networks Series.

6. RESEARCH GRANTS

a. Completed

1. 2017: NRF funding for the project: Development of Moringa oleifera for improved health, nutrition and household water purification. A collaborative project between SEKU University and KEFRI; Budget Total Ksh. 15M, NRF: *Multidisciplinary Research Grant Programme*

2. 2015: NAS-PEER PROJECT: Using integrated modeling framework to evaluate the impact of human-induced land use/land cover change on carbon dynamics in Upper Ewaso Ngiro River Basin, Kenya;
3. 2015: Capacity Development Project for Sustainable Forest Management in the Republic of Kenya. A collaborative project between Japan International Cooperation Agency (JICA), MENR, KFS, and KEFRI;
4. 2013: Indigenous fruit tree field Genebank management at Tiva, in collaboration with ICRAF: Seed fund for Development of Research proposal; Budget Total Ksh. 600,000;
5. 2013-2015: Mainstreaming Sustainable Land Management in Agropastoral Production Systems of Kenya: A GEF Project by Executed and Implemented by the Ministry of Livestock Production in collaboration with KEFRI. Budget Total Ksh. 4,000,000/Year;
6. 2012-2017: Development of drought tolerant trees for adaptation to climate change in drylands of Kenya. A collaborative project between Japan International Cooperation Agency (JICA) and KEFRI;
7. 2010 - 2013: A project on relationship between forestry and water in drylands. A collaborative project between Japan International Promotion and Cooperation Centre (JIFPRO) and KEFRI. Budget Total US\$ 26000/Year;
8. 2009 - 2012: Mount Kenya East Pilot Project for Natural Resources Management- Global Environment Facility (MKEPP-GEF) at Kenya Wildlife Service training Institute; Quantification of carbon sequestration potential in Mt Kenya Eco-region in collaboration with KWS, ICRAF and KFS. Budget Total US\$ 20000/Year;
9. 1997 - 2001: European Union through the Eastern and Central Africa AFRENA and DFID grant to conduct agroforestry research at KEFRI Maseno, and a fellowship to pursue PhD studies at the Imperial College at Wye, University of London.;
10. 2002 - 2006: European Union: Agroforestry Research Networking for Increased Diversification and Intensification of Trees on Farm for sustainable Land Productivity and Rural Development in Western Kenya;
11. 2004 - 2007: DFID: Leadership in 'NRSP Uptake Promotion in East Africa project' in Collaboration with Kawanda Agricultural Research Institute (R8400). Budget Total £ 80,448;
12. 2004 - 2005: The Inter-University Council for East Africa: The lake Victoria Research (VicRes) Initiative, a programme funded by Sida/SAREC of the Swedish Government on Evaluation of Potential Land use/cover types as Sediment Filter on the Lake Victoria Shoreline. The Project is executed in collaboration with Kawanda Agricultural Research Institute and Sokoine University of Agricultural. Budget Total US \$ 149, 452;
13. 2001 - 2005: DFID: Leadership in 'Linking Soil Fertility and Improved Cropping Strategies to Development Interventions project' in collaboration with Imperial College at Wye and ICRAF (NRSP R7056). Budget Total £ 290,000;
14. 1997 - 2001: DFID: Leadership in 'Nutrient Sourcing and Soil Organic Matter Dynamics in Mixed-species Fallows of Fast-growing Legume Trees project' in collaboration with Imperial College at Wye and ICRAF (NRSP R7056). Budget Total £ 200,000;

15. 2000 – 2005: IAEA: Leadership in ‘New Co-ordinated Research Project on Agroforestry. The project is funded by International Atomic Energy Agency (IAEA) on the use of nuclear techniques for developing integrated nutrient and water management practices in agroforestry systems for sustained food production. Budget Total US \$ 42,000 (US\$ 7000/year);
16. 1999 – 2003: European Commission project: Improved fallow by legume plants (Trees, shrub and grasses) in Eastern and Southern Africa: Impact of soil biota improvement on beans and maize yield, SOM dynamics and soil conservation. Collaborative Research project between ICRAF, KEFRI, Imperial College at Wye, University of Zimbabwe, IRD/ORSTOM (France) and Katholieke Universiteit Leuven (Belgium);
17. 1993 – 1999: European Union Project 7 ACP KE 076: Agroforestry Network for East Africa Highland AFRENA – Kenya (NIP COMPONENT); and
18. 1989 – 1995: Rockefeller Foundation: Adoptability and Sustainability Assessment of Agroforestry Systems project. The project was funded by Rockefeller Foundation through ICRAF’s Adoptability and Sustainability Assessment of Agroforestry Systems project. The objectives of the project were to evaluate the adoption potential of improved Agroforestry technologies under farmer’s conditions and map out recommendation domains.

b. Ongoing research

1. 2015 - 2021: Capacity Development Project for Sustainable Forest Management in the Republic of Kenya. A collaborative project between Japan International Cooperation Agency (JICA), MENR, KFS, and KEFRI: **JICA Technical Cooperation Project**
2. 2020 – 2021: Validation and Promotion of Mixed Trees-Shrubs Legume-Fallows for Improved Livelihood and Provision of Resilience against Climate Change KCSAP Project Ref Number: FP04-8/3. Ksh . 19,373,600; **Climate Smart Agriculture/World Bank funded**
3. 2020 – 2021: Integrated Land and Water Management Strategies for Restoration and Protection of Water Resources in Agro-Pastoral Systems -Kenya (IMWAR). KCSAP Project Ref Number: FP04-3/1. Ksh. 1, 572,000; **Climate Smart Agriculture/World Bank funded**
4. 2020 - 2021: Climate Smart Technologies for Restoration of Degraded ASALs and Enhancement of Communities Resilience in South Eastern Kenya. KCSAP Project Ref Number: FP04-1/3. Ksh. 2,278,100: **Climate Smart Agriculture/World Bank funded**
5. 2020 - 2021: Upscaling Sustainable Land Management Technologies for Enhanced Carbon Sequestration and Improved Smallholder Farmer’s Livelihoods. KCSAP Project Ref Number: FP04-4/1. Ksh. 7,993,600: **Climate Smart Agriculture/World Bank funded**
6. 2020 – 2023: Restoration of arid and semi-arid lands (ASAL) of Kenya through bio-enterprise development and other incentives under The Restoration Initiative: GCP/KEN/090/GFF-GEF/FAO funded (**Overseeing the Implementation**) and **Kenyan Focal Point**
7. 2019 – 2023: Integrated Programme to Build Resilience to Climate Change of Vulnerable Communities in Kenya: Kenya Climate Change Adaptation Programme (KCCAP) (**Overseeing the Implementation**) and **KEFRI Focal Point**

c. Mentorship and supervision (PhD and MSc. theses supervised)

1. Millar, N, (2004). Emissions of nitrous oxides from an improved fallow system in Kenya. Ph.D. Thesis, Imperial College at Wye, University of London. pp. 250
2. Joyce Chebii (2005): Greenhouse Gas Emissions from Improved Fallows in Western Kenya. Masters (2002-2005). Department of Forestry, Faculty of Forestry Resource and wildlife management, Moi University, Kenya
3. Simon Maobe (2008): Determination of the optimum *Mucuna pruriens* green manure application rate for improvement of soil fertility and maize (*Zea mays* L) production, PhD (2003-2008). Department of Crop Science, University of Nairobi, Kenya.
4. Maina Lorna Wambui (2017). Effects of fungicides on arbuscular mycorrhizae infecting *Melia volkensii* seedlings. A thesis submitted in partial fulfillment of the degree of master of science in biotechnology of Kenyatta University (**In Progress**)

7. CONFERENCES/SEMINARS/WORKSHOPS

7.1. Presentation of Papers at Academic and Professional Conferences

1. Ndufa, J.K, Hisaya Miyashita, Bernard Kigwa, Samuel Auka Gabriel M. Muturi (2015). Estimating biomass and carbon sequestration potential of *Melia volkensii* species planted in arid and semi-arid drylands of Kenya. Paper presented during the proceedings of the Mid-Term Project Workshop on Development of Drought Tolerant Trees for Adaptation to Climate Change in Drylands of Kenya held at the Drylands Eco-Region Research Programme-Kitui. 17- 18 February 2015
2. Miyashita, H and James K. Ndufa (2015). Variation of wood density in the plus tree clones of *Melia volkensii* selected from drylands of Kenya. A paper presented at to the *international Symposium on Wood Science and Technology at Tower Hall Funabori, Tokyo, Japan March 15-17, 2015. Book Abstract: 65th Annual Meeting of Japan Wood Research Society*
3. Maobe, S.N, M. W. K. Mburu, L. S. Akundabweni, J. K. Ndufa, J. G. Mureithi, F. Makini and J. J. Okello (2010). Decomposition, Mineralization And Nitrogen Loss Following Application Of Different Rates Of *Mucuna* Green Biomass Under Field Conditions In Kenya BALWOIS 2010 - Ohrid, Republic of Macedonia - 25, 29 May 2010
4. Ndufa, J.K. (2008). Aboveground biomass productivity and interaction in mixed legume species fallows on two sites in western Kenya. A paper presented at *4rd KEFRI Scientific Conference on Forestry Research in Environmental Conservation, Improved Livelihoods and Economic development 6-9 October 2008, Muguga, Nairobi Kenya*

5. Chebii, J.J., Imo, M., Koech, E.K and Ndufa, J.K. (2008). Effects of tillage on greenhouse gas emission and nitrogen mineralization under Tephrosia fallows in Nyabeda, western Kenya A paper presented to School of Natural Resource Management Conference, Moi Univesity . 28 July to 3 August 2008, Eldoret, Kenya
6. Maobe SN, Mburu MWK, Ndufa JK and Akundabweni LS (2007). Prospects of mucuna use for improvement of maize production during application season in Kenya: Paper presented in the 24th Soil Science Society of East Africa Conference held at Embu (26th - 30th November 2007), Kenya.
7. Kiraithe, C, Ndufa, J.K., Kirongo, B., Oeba, V.O. and Welimo, M (2007). Establishment, biomass productivity and quality of improved fallow species at the coastal region of Kenya. A paper submitted to an international symposium on "Innovations as key to the green revolution in Africa: Exploring the scientific facts" from 17th to 21 September 2007, ". Arusha Tanzania.
8. Ndufa J.K and G. Cadisch (2007). Short-term effects of pure and mixed species fallows on soil organic matter build-up in the soil of western Kenya. *In Muchiri, M.N., Kamondo, B., Ochieng, D., Tuwei, P., and Wanjiku, J. Proceedings of the 3rd KEFRI Scientific Conference on Forestry Research in Enviromental Conservation, Improved Livelihoods and Economic development 6-9 November 2006, Muguga, Nairobi Kenya*
9. Ndufa, J.K and C. Poulton (2007). Linking soil fertility and improved fallow technologies to development interventions in western Kenya. *In Muchiri, M.N., Kamondo, B., Ochieng, D., Tuwei, P., and Wanjiku, J. Proceedings of the 3rd KEFRI Scientific Conference on Forestry Research in Enviromental Conservation, Improved Livelihoods and Economic development 6-9 November 2006, Muguga, Nairobi Kenya*
10. Ndufa, J.K., Gathumbi, S.M. and Cadisch, G (2005). Biomass productivity and long-term maize yield residual benefits in pure and mixed legume fallow systems. *In Muchiri, M.N., Kamondo, B., Ochieng, D., Tuwei, P., and Wanjiku, J. Proceedings of the 2nd KEFRI Scientific Conference on Forestry Research in Enviromental Conservation, Improved Livelihoods and Economic development 1-4 November 2004, Muguga, Nairobi Kenya*
11. Buresh, R.J., Jama, B and Ndufa, J.K 1996. Agroforestry trees for nutrient cycling and sustainable management. *In EJ Carter, D Nyamai and TH Thomas, Proceedings of the First National Agroforestry Conference on people and institutional participation in agroforestry for sustainable development. An executive summary. Nairobi: Kenya Forestry Research Institute, Muguga, Nairobi, Kenya*
12. Ndufa, J.K., Ohlsson, E., Swinkels, R Shepherd, K.D. and. 1995. Participatory research methods for agroforestry technology development in western Kenya. *In Design Implementation and analysis of on-farm trials: an assessment of field experience; June 28-July 2, 1993, Arusha, Tanzania, Workshop proceedings. Royal Tropical Institute, Amsterdam, pp. 187-204*

13. Ndufa, J.K. and Franzel S, 1993. Farmer's assessment of promising upperstorey MPTs in the food-crop based landuse system in western Kenya. On-farm research Project, Maseno: *An abstract presented to the annual evaluation and planning workshop of the East and Central Africa AFRENA*, 22-26 June. Kabale, Uganda.
14. Swinkels, R. and Ndufa, J.K. 1993. Biological, Economic and Farmers' assessment of hedgerow intercropping in western Kenya. On-farm research project, Maseno: *An abstract presented to the annual evaluation and planning workshop of the East and Centre Africa AFRENA*, 22-26 June, Kabale, Uganda
15. Bruin, E., Ndufa, J.K. and Franzel, S. 1993. Farmer's evaluation of trees in the food crop based land use system of western Kenya. On-farm research project, Maseno: *An abstract presented to the annual evaluation and planning workshop of the East and Central Africa AFRENA*, 22-26 June, Kabale, Uganda.
16. Ndufa, J.K. and Franzel S., 1992. Farmer-designed tree planting trials: Maseno. *An abstract presented to the annual evaluation and planning workshop of the East and Central Africa AFRENA*, 22-26 June. Kigali, Rwanda.
17. Ndufa, J.K. and Muturi, W.M. 1992. On-farm testing of boundary planting with upperstorey trees in western kenya. On-farm research project, Maseno: *An abstract presented to the annual evaluation and planning workshop the East and Central Africa AFRENA*, 22-26 June. Kigali, Rwanda. AFRENA report no. 58. Summary of proceedings. pp. 57-58.
18. Ohlsson, E., Ndufa, J.K. Swinkels, R.A., Franzel, S and Shepherd, K.D. 1992. On-farm evaluation of hedgerow intercropping in Western Kenya. On-farm research project, Maseno: *An abstract presented to the annual evaluation and planning workshop of the East and Central Africa AFRENA* 22-26 June. Kigali, Rwanda. AFRENA report no. 58. Summary of proceedings pp. 81-84.
19. Shepherd, K.D., Ndufa, J.K. and Ohlsson , E., 1992. A survey of soil fertility status of farmers' fields in Western Kenya. On-farm research project Maseno: *An abstract presented to the annual evaluation and planning workshop of the East and Central Africa AFRENA*, 22-26 June. Kigali, Rwanda. AFRENA report no. 58 Summary of proceedings pp. 64-65.
20. Franzel, S and Ndufa J.K. 1992. Farmer designed multipurpose trees (MPTs) Trials. A paper presented at a socio-economic course, September 1992, ICRAF, Nairobi, Kenya.
21. Shepherd, K.D., Swinkles, R, Muturi W.M., Ohlsson, E and Ndufa J.K. 1992. Evaluation of hedgerow intercropping on farms in western Kenya 1: Diagnosis of technology potential and farmers' interest. Pages 1-29 in On-farm research project, Maseno: papers presented to a zonal conference of the Eastern and Central Africa AFRENA, Nairobi 6-10 July 1991. AFRENA report no. 50. Nairobi: International Centre for Research in Agroforestry.
22. Shepherd, K.D., Ohlsson, E., Muturi, W.M. and Swinkels, R. and Ndufa, J.K. 1992. The D&D planning stage: lessons from experience in western Kenya. Pages 118-131 in on-farm

research project, Maseno: Papers presented to a zonal conference of the Eastern and Central Africa AFRENA, Nairobi 6-10 July 1991. AFRENA report no. 50. Nairobi: International Centre for Research in Agroforestry.

23. Ohlsson E., Ndufa, J.K. Swinkels, R.A. Muturi W.M. and Shepherd K.D., 1992. Evaluation of hedgerow intercropping on farms in Western Kenya III. Participatory technology testing trials. Pages 52-81 in on-farm research project, Maseno: Papers presented to a zonal conference of the Eastern and Central Africa AFRENA, Nairobi 6-10 July 1991. AFRENA report No. 50. Nairobi: International Centre for Research in Agroforestry.
24. Muturi, W.M. Ndufa, J.K. and Ohlsson E., 1991. Results of an informal survey of land use constraints in Kakamega district. KEFRI/KARI/ICRAF Agroforestry Research Centre, Maseno, Kenya. Nairobi: International Centre for Research in Agroforestry.
25. Ndufa, J.K. and Ohsson E., 1991. Introduction and management of multipurpose trees on farmers' fields. A paper presented to the DSO course held in ICRAF, Nairobi, Kenya.
26. Ndufa, J.K. and Muturi, W.M. 1990. Results of an informal survey of farmers in Kisumu district. KEFRI/KARI/ICRAF Agroforestry Research Centre, Maseno, Kenya. Nairobi: International Centre for Research in Agroforestry.
27. Ohlsson, E., Ndufa, J.K. and Shepherd, K.D. 1990. Results of an informal survey of farmers in Siaya district. KEFRI/KARI/ICRAF Agroforestry Research Centre, Maseno, Kenya. Nairobi: International Centre for Research in Agroforestry.

7.2. Participation in Workshops/ Coordinating Conferences

1. November 2009: Attended organized a training program for TOTS on production, processing and marketing of dryland wood and non-wood products at Kitui Regional Research Centre.
2. Organized and trained members of Consortium for Scaling up Options for Increased Farm Productivity in western Kenya (COSOFAP) on agroforestry options, Kisumu Kenya.
3. Organized and trained TSBF-CIAT students on soil conservation concepts in Kisumu, Kenya.
4. Organized, hosted and trained various KEFRI – JICA Regional training course participants in Maseno, Kenya.
5. Organized a workshop for policy makers on 'Linking soil fertility and improved cropping strategies to development' at Silver Spring Hotel, Nairobi.
6. September 2009: Participated in Mount Kenya Biodiversity workshop funded by Mount Kenya East Pilot Project for Natural Resources Management- Global Environment Facility (MKEPP-GEF) at Isaac Walton Hotel, EMBU
7. June 2009: A certificate of attendance in a training programme on forest Biodiversity conservation funded by Mount Kenya East Pilot Project for Natural Resources Management- Global Environment Facility (MKEPP-GEF) at Kenya Wildlife Service training Institute, Naivasha
8. March 2009: Participated in writing up Mt Kenya Ecosystem Management Plan – Ecology Working Group at Isaac Walton Hotel, EMBU
9. March 2008. Attended and Intellectual Property Right (IPR) Course held at KEFRI Muguga, Nairobi.

10. June 2007: Management Course on “Effective implementation of the Public Procurement and Disposal Act 2005 and Regulation 2007 for Senior Non Finance Managers” held at KEFRI Headquarters, Muguga, Nairobi.
11. May - June 2007: Senior Management Course on “Strategic Leadership Development Program (SLDP)” Held at Kenya Institute of Administration (KIA), Nairobi, Kenya.
12. July 2007: Facilitated a course for Training of Trainers (TOT) on Conservation Agriculture Practices. “Promoting conservation agriculture amongst HIV affected and infected households in selected sites of western Kenya through capacity building” funded by CIAT-TSBF and AMPATH Soybean Projects.
13. October 2002: Certificate of facilitation on ‘On-farm Research: Principles and Practices’ of Vi-Agroforestry participants at KEFRI RRC, Maseno Kenya, sponsored by VI and ICRAF.
14. June 1998: 3-week Workshop on CENTURY and Water, Nutrient and Light Capture in Agroforestry Systems (WaNuLCAS) in Agroforestry Modeling funded by DFID.
15. May 1996: Certificate of participation in training course on “Experiment Design and Analysis for Agroforestry Research. ICRAF, Nairobi, Kenya sponsored by SIDA, ODA, RSCU, ICRISAT.
16. June 1995: Certificate of participation for attending a workshop on “Design of on-farm experiments for Agroforestry Research” ICRAF, Nairobi, Kenya, KARI/ODA crop protection Project.
17. October 1991: Certificate of attendance of the NFTA/HPI short course on the use of nitrogen fixing trees for animal production in the tropics”. Mukono, Uganda
18. August 1986: Certificate of attendance of basic training for pre-university program at the National Youth Service College, Naivasha, Kenya. May to August 1986 courses included personal fitness, foot-drill, first aids, camp-craft, firefighting, lectures on national development

8. PROFESSIONAL ENGAGEMENT

8.1. Training

1. 2011 to date: External Examiner for PhD and MSc Theses at the School of Graduate Studies, Moi University;
2. 2012 to date: External Examiner for PhD and MSc thesis at the School of Graduate Studies, Egerton University;
3. Nominated as a member of Board of Examiners by the School of Graduate Studies, Egerton University for public defense of PhD theses.
4. Appointed by the Crop Sciences Department, University of Nairobi to supervise PhD students;
5. Appointed by the Forestry Department, Moi University to supervise MSc students;
6. Part-time lecturer for M.Sc. course ALM 604: Nutrient Cycling, Modeling and management, Department of Economic and Agribusiness, South Eastern University College (SEUCO);
7. Part-time lecturer for M.Sc. course SBT 809: Plant Mineral Nutrition at the Department of Botany, Maseno University in 2001/2002 and 2002/2003 Academic year;
8. Part-time lecturer for M.Sc. course FOR 843R: Agroforestry Diagnosis and Design: School of Natural Resources Management; Department of Forestry and Wood Science; Moi University;
9. Part-time lecturer for M.Sc. course FOR 844R: Agroforestry Research Techniques School of Natural Resources Management; Department of Forestry and Wood Science; Moi University; and

10. Part-time lecturer for MSc. course FOR 840R: Concept and Practices of Agroforestry:-School of Natural Resources Management; Department of Forestry and Wood Science; Moi University.

9. LOCAL, REGIONAL & INTERNATIONAL APPOINTMENTS

9.1. International

1. Kenya Focal Point for The Forest and Landscape Restoration Mechanism whose objective is to improved resilience, productivity and socio-economic value from restored forests and landscapes benefiting human well-being, local livelihoods and the environment. It aims to seek a balance between restoring ecosystem services (e.g. biodiversity, soil and water conservation) and productive functions of land for agriculture and related uses that provide food, energy and other products and services for sustainable livelihoods. <http://www.fao.org/in-action/forest-landscape-restoration-mechanism/background/from-the-field/en/>
2. The Restoration Initiative (TRI) addresses one of the defining challenges of our time: land degradation and the realisation that transformational changes, including restoration of degraded and deforested lands, are urgently needed to safeguard the well-being of people and nature. <https://www.iucn.org/restoration-initiative/about>

10. AWARDS AND RECOGNITION

European Union fellowship and DFID grant to pursue MPhil/PhD studies at the Imperial College at Wye, University of London.

11. CONTRIBUTION TO KEFRI's ADVANCEMENT

1. KEFRI Executive committee Member
2. KEFRI Research Technical Committee Member
3. KEFRI Anti-corruption prevention committee Member
4. KEFRI/KFS Technical Liaison Committee Member
5. KEFRI/KFS Policy Liaison Committee Member
6. KEFRI Consultative Committee Member

12. MEMBERSHIP TO PROFESSIONAL BODIES

1. Soil Science Society of East Africa
2. The African Network for Soil Biology and Fertility (AfNet)
3. Kenya Forestry Society (FSK)
4. Nature Kenya
5. COSOFAP
6. Africa Forest Forum (AFF)
7. Kenya Focal Point for The Forest and Landscape Restoration Mechanism
8. A member of The Restoration Initiative (TRI)
9. KEFRI Focal Point for Adaptation Fund

13. REFEREES

1. Prof. Dr. Georg Cadisch,
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2. Dr. K.D. Shepherd,
Senior Soil Scientist, World Agroforestry Centre (ICRAF)
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Email: K.shepherd@cgiar.org
Telephone: +254 20 7224000 (Pilot line)

3. Dr. Joshua Cheboiwo
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