



CURRICULUM VITAE: JOSEPHINE KAVITI MUSANGO

Institution : Stellenbosch University
 Profession : Resource Economist, Technology Analyst, System Dynamicist
 Specialization : System Dynamics Modelling for Sustainable Development
 Position in Institution : Senior Lecturer
 Year appointed : 2013
 Nationality : Kenyan (with South Africa Permanent Residence)
 Language Proficiency : English, Swahili

EDUCATION AND PROFESSIONAL STATUS

Qualification	Institution	Year
PhD (Sustainable Development)	Stellenbosch University, South Africa	2012
MSc (Agricultural Economics)	Stellenbosch University, South Africa	2005
Bsc Hons (Agribusiness Management)	Egerton University, Kenya	2002

Memberships: System Dynamics Society Since 2009
 South Africa System Dynamics Chapter Since 2014

EMPLOYMENT AND EXPERIENCE OVERVIEW

Josephine K Musango is a Senior Lecturer with the School of Public Leadership (SPL), Stellenbosch University. She previously worked for Gauteng City-Region Observatory as Senior Researcher, Department of Energy as Deputy-Director, and Council for Scientific and Industrial Research (CSIR) as Resource Economist. She holds a Transdisciplinary Doctoral in Sustainable Development and Masters Degree in Agricultural Economics, both from Stellenbosch University. Her research interest is undertaking transdisciplinary research focused on integrating economics into sustainable resource management and solving complex social and policy related problems through application of economic analysis and system dynamics modelling. Her particular interests are on social, resource management and policy challenges including energy, green economy, water, land use, transport and waste management at an urban and country scale. She also has expertise in other modelling approaches including material flow analysis, agent based modelling, discrete event modelling, Bayesian networks and econometrics. In 2014, Josephine was one of the Founding Members of South Africa System Dynamics Chapter and currently she is the Organizing Secretary of the Chapter.



PUBLICATIONS

Author and co-author of 27 articles in scientific journals and chapters in books. Co-Editor of a Forthcoming book. Author and co-author of 11 technical reports for external contract clients. Presented 21 papers at local and international conferences.

A full publications list is available on request, but those key to the energy sector are as follows:

Musango JK (2014). Household electricity access and consumption behaviour in an urban environment: the case of Gauteng in South Africa. *Energy for Sustainable Development* (2014): 305-316

Musango JK, Brent AC, Tshagela M (2014). Green economy transitioning of the South African power sector: A system dynamics analysis approach. *Development Southern Africa*
<http://www.tandfonline.com/doi/full/10.1080/0376835X.2014.930792>

Musango JK, Brent AC, Bassi AM (2014). Modelling the transition towards green economy in South Africa. *Technology Forecasting and Social Change* 87:257-273.

Ncube M, Zikhali P, Musango JK (2013). The impact of climate variability on water and energy demand: the case of South African local governments. *Water and Environment Journal* 27: 29-41

Musango JK, Brent AC, Amigun B, Pretorius L, Müller H (2012). A system dynamics approach to technology sustainability assessment: the case of biodiesel development in South Africa. *Technovation* 32: 639-651.

Musango JK, Brent AC, Amigun B, Pretorius L and Müller H (2011). Technology sustainability assessment of biodiesel development in South Africa: a system dynamics approach. *Energy* 36: 6992-6940

Amigun B and Musango JK (2011). An analysis of potential feedstock and location for biodiesel production in Southern Africa. *International Journal of Sustainable Energy* 30: S35-S58

Musango JK and Brent AC (2011). Assessing the sustainability of energy technological systems in Southern Africa: A review and way forward. *Technology in Society* 33: 145-155

Amigun B, Musango JK and Brent AC (2011). Community perspectives on the introduction of biodiesel production in the Eastern Cape province of South Africa: questionnaire survey results. *Energy* 36: 2502-2508

Musango JK and Brent AC (2011). A conceptual framework for energy technology sustainability assessment. *Energy for Sustainable Development* 15: 84-91

Amigun B, Musango JK and Stafford W (2011). Biofuels and sustainability in Africa. *Renewable and Sustainable Energy Reviews* 15:1360-1372

Musango JK, Amigun B and Brent AC (2011). Sustainable electricity generation technologies in South Africa: Initiatives, challenges and policy implications. *Energy and Environment Research* 1:124-138

Peter C, De Lange W, Musango JK, April K and potgieter A (2009). Applying Bayesian modelling to assess climate change effects on biofuel production. *Climate Research* 40:429-260

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