**ELIAS MULUGETA, Ph.D.**

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**Email address:**

**elias.mulugeta@afbini.gov.uk**

Tel:+447955099254

**PROFILE**

Elias Mulugeta is an Environmental Economist and has more than 15 years of experience in economic research and modelling projects in food, agriculture, environment and their relationship. Elias joined AFBI in August 2014 as an Agricultural Economist. He is responsible for the development of economic research programmes and modelling in the area of agriculture and public good economics. He has worked previously at the International Livestock Research Institute (ILRI) as livestock researcher and at Queen’s University Belfast as research fellow to value ecosystem services provided by peat habitats.

His research interests include non-market valuation methods such as choice modelling and contingent valuation applied to woodland, biodiversity and recreation. He has applied econometrics and quantitative techniques on diverse disciplines such as biodiversity related environmental efficiency analysis, productivity analysis and welfare economics.

1. **Education background**

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| * Ph. D. in Environmental Economics from National University of Ireland, Galway (NUIG), 2013 |  |
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* Master’s degree in Economics Policy at AAU

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| * Bachelor’s degree in Statistics at AAU |  |

**II. Work experience**

Environmental Economist at the Agri-Food and Biosciences Institute in Belfast, UK

From August 2014 to date

Research Project 1 – Non-market benefits of ecosystem services delivered by new woodland

This project will explore the non-market benefits of creating new woodlands through the conversion of agricultural land

* To identify the benefits deriving from the creation of new woodlands and to illustrate the trade-offs ecosystem services based on literature review
* Survey deign using contingent valuation
* Undertake applied research to determine the value of carbon sequestration and landscape amenity

Research Project 2 – Economic valuation of NI agri-environmental schemes

* Determine how the implementation of the agri-environmental scheme has changed biodiversity and carbon sequestration
* Develop survey questionnaire with which to value the biodiversity resulting from the existing agri-environmental schemes
* Consider the spatial aspects of biodiversity
* Analysis of the data from the survey
* Estimate the value of biodiversity derived from the agri-environmental schemes using choice modelling techniques
* Estimate the value of carbon sequestrated within agri-environmental schemes using carbon prices
* Explore the spatial impacts on ecosystem services to assist in the future development of agri-environmental schemes

Research Project 3: Analysis of the demand for broadband in rural areas

* Review literature on demand for broadband in rural areas
* Undertake a survey of willing to pay for broadband
* Estimate the value of rural broadband using choice modelling
* Report writing

Research Project 4: Sustainability of the North Ireland Fishing Fleet- an analysis of the balance between fishing capacity and fishing opportunities.

* Undertake literature review of the policy situation and associated current and future challenges faced by the fishing industry in NI
* Analysis of the data to produce measures on the economic variability of fishing fleet, technical capacity of the fishing fleet and biological indicators of fishing opportunities.
* Undertake a survey using questionnaires of member of the fishing fleets
* Explore the development of an efficiency measures to determine the level and rage of efficiencies of individual vessels within the fleet
* Estimate fishing capacity utilisation using DEA
* Report writing

Research Fellow as a Postdoc at the Queen’s University Belfast,

Gibson Institute for Land, Food and the Environment,

From April 2013 - August 2014

Major duties

* To value ecosystem services provided by different peat habitats.
* Both market and non-market valuation. The ecosystem services include: raw materials for fuel energy, carbon sequestration, biodiversity, tourism/ recreation, water filtering, ground water storage, and research.
* Study focuses on the impact of climate change
* Using habitat coverage data, estimate the marginal value of biodiversity.
* Prepare materials for publication in international journal and presentation at international conference.
* To model efficient and optimal use of habitats and landscapes, and developing models to estimate robust values of natural resources.
* To contribute the design of a non-market valuation survey, using techniques such as contingent valuation, choice experiment, and travel cost to value the monetary benefit of different conservation status.
* To value the services in favourable and unfavourable status to advice on the relevant value of designation versus enhancement thus informing the future management strategy.
* To carry out cost benefit analysis
* Read academic paper, journals, and textbooks to keep abreast of developments in related discipline.
* To organize seminar on the value of ecosystem provided different habitats.

A PhD student at National University of Ireland, Galway

Department of Economics

From Oct 2008 – March 2013

Researcher, International Livestock Research Institute (IRLI), Ethiopia, Sep 2004 - Sep 2008

* Participate in market research/project to enhance markets, processing and value-addition of food products
* Explore markets for dairy and meat products’ quality and safety.
* Assessed the demand for animal products with particular emphasis on demand for safety and quality attributes.
* Develop a framework for analysis of food quality and food safety and its application.
* Participate in the research/project to improve efficiency of production.

Senior Research Assistant, Livestock Policy analysis program, Sustainable land management project, International Livestock Research Institute,

Jan 2000 - Sep 2004

* Participated in research projects related to Policies for Sustainable Land Management in the highlands of East Africa region (Ethiopia, Uganda and Kenya).
* Undertake literature review.
* Assisted in developing proposals on how to tackle research problems.
* Collection of data, preparation and data analysis
* Performed statistical and economic analysis using SPSS and STATA.

**Team Leader, Project section at the Ministry of Trade and Industry, Addis Ababa, Ethiopia, May 1996 - Dec 1999**

* Promotion of Small and Medium Scale enterprises and export industries
* Led the team in undertaking a pre-feasibility, feasibility, and opportunity studies for trade and industrial projects.
* Performed project reviews and appraisals for trade and industrial projects

Studied by foreign consultants and identified possible means of financing them.

* Monitored and evaluated projects that were implemented

by the Ministry of Trade and Industry.

* Prepared annual project reports that involved analysis of data for submission to top management.

**Achievement in the industrial sector**

* Participating in the study of export processing zone in Ethiopia.
* Feasibility study of pasteurized milk and dairy farm (with 200 lactating cows)
* Fattening farm for 390 calves, poultry farm (5000 layers)

**Participating in industrial projects**

* Feasibility study of Dire Dawa food factory complex project
* Socio economic study of Dire Dawa master plan project
* Feasibility study of Aluminium sulphate factory project

III. **Teaching experience**

Thought Economics and Statistics courses at Addis Ababa University, from 1997-1999 as a part-time lecturer.

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| Environmental Economics courses attended at NUIG   * Introduction to sustainability Environmental & energy policy: command and control polices, e.g. subsidy on electric car, subsidy for wind power. Market solution under polluters pay principle. Carbon tax and additional tax on price of oil (UK) * Renewable Energy: Hydropower, biomass, wind and solar power. * The past, current and future Global energy sources: Energy economy for Transportation, Agriculture and Residential sectors. * Climate change * Advanced Microeconomics I and II: market analysis, Demand and supply Estimation. * Advanced Econometrics I and II * Cost Benefit Analysis: estimation of social cost and social benefit * Externality and market failure * Sustainable land management * Monitoring, evaluation, & impact assessment of agricultural projects, |

**IV. Publications**

van Rensburg, Thomas M. and Mulugeta, Elias 2016. Profit efficiency and habitat biodiversity: The case of upland livestock farmers in Ireland. Land Use Policy 54 (2016) 1–12.

Diane, B., Samuel A. And Mulugeta E. 2015. The demand for rural Broadband in Northern Ireland: Choice experiment approach. Agric Food and BioScience Institute (AFBI), Belfast, UK.

Diane, B., Samuel A. And Mulugeta E. 2015. Non-market benefits of ecosystem services delivered by new woodland. Agric Food and BioScience Institute (AFBI), Belfast, UK.

Diane, B., And Mulugeta E. 2015. Determine the impact n the NICMS on Biodiversity and Carbon sequestration. Agric Food and BioScience Institute (AFBI), Belfast, UK.

Mulugeta, E. Diane, B., Samuel A. 2015. The impacts of protest and invalid responses on respondent uncertainty and the willingness-to pay, AFBI, unpublished.

Mulugeta, E., Reid, N., Beori, M., Hutchinson, G. & Longo, A. 2014. Determining the value of peatland in Northern Ireland.Report prepared by the Natural Heritage Research Partnership (NHRP) between *Quercus*, Queen’s University Belfast and the Northern Ireland Environment Agency (NIEA) for the Research and Development Series No. 14/XX.

Mulugeta, Elias., Rensburg, Tom Van, and Di Falco, Salvatore, 2013. The impact of fertilizer use, habitat fragmentation and livestock production on biodiversity and in Ireland. A PhD thesis. National university of Ireland, Galway.

Mulugeta, Elias, Van Rensburg, T. M. and Di Falco, S., 2013. Off – farm labour participation and land abandonment: Evidence from Ireland. *Journal of Environmental Management (in press).*

Kassie, Menale; Pender, John; Yesuf, Mahmud; Köhlin, Gunnar and Mulugeta, Elias 2009.The role of soil conservation on mean crop yield and variance of yield: Evidence from the Ethiopian highlands. *Environment for Development*. Discussion Paper Series March 2008 EfD DP 08-08, University of Gothenburg, School of Business and Economics and Law.

Kassie, Menale; Pender, John; Yesuf, Mahmud; Kohlin, Gunnar; Bluffstone, Randy; Mulugeta, Elias 2008. Estimating returns to soil conservation adoption in the northern Ethiopian highlands. *Agricultural Eonomics*, 38: 213-232.

Kassie, Menale; Pender, John; Kohlin, Gunnar; Bluffstone, Randy; Mulugeta, Elias 2008. Impact of soil conservation on crop production in the northern Ethiopian highlands. IFPRI Discussion Paper 00733, December 2007. The International Food Policy Research Institute (IFPRI), Environment and Production Technology Division. Washington, DC 20006-1002 USA.

Menale Kassie, J. Ender, M. Yesuf, G. Köhlin, R. Bluffstone, P. Zikhali and Elias Mulugeta, 2008. Sustainable land management Practices improve agricultural productivity: Evidence on using reduced tillage, stone bunds and chemical fertilizer in the Ethiopian highlands, Environment for development (EfD) Policy Brief.

Mulugeta, E, Gebremedhin, Berhanu; Hoekstra, Dirk and Jabbar, Mohammad 2007. Analysis of Ethio-Sudan cross border cattle trade. International Livestock Research Institute (ILRI)- Improving Productivity and Market Success (IMPS) of Ethiopian farmers a project implemented by ILRI: Working paper No 4.

Mulugeta, E., 2006. The demand for kerosene in Ethiopia. *Ethiopian Economic Journal*, Vol 13: 35-59.

Mulugeta, E., and Jabbar, M., 2005. Deforestation, population pressure and the demand for fuel wood in Ethiopia.

Mulugeta, E., 2004. The impact of agricultural extension on crop production: the case of Amhara region: A probit model analysis. *Ethiopian Journal* of *Natural Resources, 12:1-15.*

Gezahegn, A., Jabbar, M., and Mulugeta, E., 2006. Seasonal and inter-market differences in prices of small ruminates in Ethiopia. *Journal of Food Products Marketing*, Vol 12, (4) : 59-77.

Mulugeta, E., 1996. Exchange rate and asset market modelling in Ethiopia. M. Sc. Thesis. Department of Economics, Addis Ababa University.

###### V. Skill

**Computer skill**

Advanced IT skills (word processing, spreadsheets, presentation software, databases and communications)

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| * SPSS - Statistical Package for Social Science |
| * STATA - Econometrics analysis software * Matlab and R |

* Word, access, and Excel and internet.

**Languages**

Fluent in English: speak, read, and write;

Fluent in Amharic: speak, read, and write;

VI. **Reference:**

1. Dr. Thomas Van Rensburg

National University of Ireland, Galway

PhD Research Director

Department of Economics

[thomas.vanrensburg@nuigalway.ie](mailto:thomas.vanrensburg@nuigalway.ie)

Ireland

Phone:35391493858

1. Dr. Garth John Holloway

University of Reading

Programme coordinator

Agriculture and Food Economics

[garth.holloway@reading.ac.uk](mailto:garth.holloway@reading.ac.uk)

Reading

Phone:447749493649

1. Dr Alberto Longo

Queen’s university Belfast

Gibson Institute for Land, Food and the Environment

School of Biological Sciences

MBC, Room 01.415A

Belfast  
BT9 7BL  
United Kingdom

a.longo@qub.ac.uk  
Tel: [+44 (0)28 9097 2063](tel:%2B44%20%280%2928%209097%202063)

1. Pro Salvatore DiFalco

University of Geneva

Salvatore.DiFalco@unige.ch