

**THE ECONOMIC IMPORTANCE OF BEACH RECREATION SERVICES IN
UGANDA: A CASE STUDY OF LAKE VICTORIA SHORES AROUND
KAMPALA CITY**

BY

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DECLARATION

I, **AKAMPUMUZA AGGREY** do hereby declare that this work is truly mine and has been carried out practically with a high degree of authenticity and it has not been submitted to any institution of higher learning for the award of a degree or any other academic qualification.



..... Date 25.06.2014

AKAMPUMUZA AGGREY

APPROVAL

This is to certify that AKAMPUMUZA AGGREG did research and this report is a true representation of the findings. I am therefore recommending that this report be submitted to the Faculty of Natural Resources and Environmental Sciences of Busitema University.

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Date 24.06.2014

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DEDICATION

I dedicate this work to my Mum (R.I.P). You were such a blessing to us. God did not make it possible for you to see the road of success we have trodden

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To the Almighty GOD who has lifted me up to this far. Thank you for the abundant grace, unending love, unfailing faithfulness, and the constant fullness. Without You I would not have gone through the tough and tempting times of my journey. I adore YOU Abba LORD.

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LIST OF ABBREVIATIONS

TCM- Travel Cost Method

CVM- Contingent Valuation Method

NEMA-National Environment Management Authority

ESRC- The Economic and Social Research Council

GLM- Generalized Linear Models

GDP- Gross Domestic Product

ABSTRACT

The study aimed at identifying the economic importance of beach recreation services in Uganda. The case study of the study was the Lake Victoria shores around Kampala city. The overall objective was to contribute to the knowledge of the economic importance of beach recreation activities on Lake Victoria shore activities in Central Uganda. The study was cross sectional and used both qualitative and quantitative approaches to collect data, analyze and present it. The methods of data collection used were interviews, questionnaires and field observations. The data was collected from a sample of 131 (one hundred thirty one) respondents. These were from Anderita beach, KK beach and Lido beach. Data was collected by means of a questionnaire and by field observations. The study used a combination of the Travel Cost Method and the Contingent Valuation Method of valuation to estimate the total economic value of beach recreation in Uganda and from the findings, it was established that beach recreation activities are of a significant economic importance. The consumer surplus was estimated at USD 0.63 and the total economic cost was estimated at USD 4788 per year for a visitor at Lido beach, USD 4572 per annum for a visitor to KK beach and USD 3816 per annum for a visitor to Anderita beach. Basing on the findings, it is recommended that more resources should be invested in beaches so as to comb the lucrative economic venture given its inelastic demand. More so, further research should be done to enhance the findings of this study

Key words: *Lake Victoria, Kampala, Travel cost method, Contingent valuation method, Beach Recreation, Total Economic value*

CHAPTER ONE: GENERAL INTRODUCTION

1.1. Introduction

This chapter includes a description of the study and an analysis of the research problem. It includes problem identification, description, and justification. It includes the research objectives and the hypotheses, the conceptual framework, the scope of the study and the anticipated limitations to the study.

1.2. Background and rational to the study

Ecosystem services such as recreational services at beaches have always provided the haven for recreational activities where more demand is currently being pressed. Recreation is one of the ecosystem's secondary values of a well conserved natural ecosystem (Constanza et al. 1997), given the direct use individuals make of natural assets supporting the service. People move from distant and near places to visit places to which they attach psychological values (places they believe if visited, they will gain something in their mind and health).

These days, in many developing countries most recreational sites have been protected and access to them is by a fee or completely restricted. Many entrepreneurs have found it opportunity lucrative business to manage these resources because of the recreational demand on these sites.

Lake Victoria beaches are generally recognized as the most important recreation amenity in the region by residents around Uganda's capital, and by tourists and expatriate living in Uganda. However, there is very little data to support policy for the improvement of these beaches given the role that this amenity plays in the lives of thousands of revelers that flock these beaches regularly.

From the past, many health advocates and human rights activists have been stressing to employers and governments the need for leisure by workers as part of their daily

REFERENCES

- Bowker JM, Donald EBK, Donavan JA (1996). Toward a Value for Guided Rafting on Southern Rivers. *Journal of Agricultural and Applied Economics* 28 (2): 423-432.
- Christopher M F, Averil C (2007) The Recreational Value of Lake McKenzie: An Application of the Travel Cost Method; School of Economics, University of Queensland, St Lucia 4072, Australia
- Costanza R. et al. (1997) The value of the world's ecosystem services and natural capital. *Nature*. 387: 253-260.
- English, Donald BK, Bowker JM (1996) "Sensitivity of Whitewater Rafting Consumers Surplus to Pecuniary Travel Cost Specifications." *Journal of Environmental Management* 47:79-9
- English, Donald BK, Bowker JM (1996) Economic Impacts of Guided Whitewater Rafting: A Study of Five Rivers. *Water Resources Bulletin* 32(6):1319-1328.
- George R. P, Ami K. K, Christopher G. L, Kevin J. B (2009) Valuing Beach Closures on the Padre Island, National Seashore, Texas, USA. *Marine Resource Economics*. 24, pp. 213-235
- Isabel M and Isabel P (2005) Estimating the Recreation Value of Ecosystems by using a Travel Cost Method Approach. Technical University of Lisbon, Lisbon, Portugal
- Jérôme Massiani (2013), How to Value the Benefits of a Recreational Area: A Cost-Benefit Analysis of the Conversion of a Brownfield to a Public Beach in Muggia (Italy), *Review of Economic Analysis*. 5, 86-102
- John Loomis (2013) Economic Methods & Empirical Estimates of use & Passive Use Values of in-stream Flow for Recreation And Fisheries, Dept. of Agricultural & Resource Economics, Colorado State University, Fort Collins,
- John P. H, Theodore T, Frank L, Heng ZC (1996) An Economic Model for Valuing Recreational Angling Resources in Michigan, Department of Agricultural Economics, Michigan State University, pp 13-14
- John R. M and Taylor R G (2000) Outdoor Recreation Use and Value: Snake River Basin of Central Idaho, University of Idaho, Department of Agricultural Economics and Rural Sociology Idaho, Moscow, pp 1-35
- Jonathan D Q, Nana GY (2013) Ghana's Elmina Beach and Economic Welfare Improvement, Department of Economics, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. *Journal of Economics and Sustainable Development*. 4(13), 89-96

- Mario DP, Deborah EL, Stephen GH (2011) The recreational value of beaches in the Nelson Mandela Bay area, South Africa. Department of Economics, Nelson Mandela Metropolitan University, University Way, Port Elizabeth, 6001, South Africa
- Mike R, Neil L (2009) Economic and social values of beach recreation on the Gold Coast. Queensland, Australia, Cooperative Research Centre for Sustainable Tourism. Australia, 5-15
- Mike R, Neil L, David A, Dan W, Boyd D B (2011) A Travel Cost Model of Local Resident's Beach Recreation Values on the Gold Coast. Bond University, Queensland, Australia
- National Oceanic and Atmospheric Administration, Beach Nourishment: A Guide for Local Government Officials. (Available on <http://www.noaa.gov>)
- Nik MRA (1995) Estimating the Benefits of Beach Recreation: An Application of the Contingent Valuation Method, Universiti Pertanian Malaysia, Department of Natural Resource Economics, Selangor DarulEhsan, Malaysia. *Pertanika J. Soc. Sci. & Hum.* 3(2): 155-162.
- Pearce D, Whittington D, Georgiou S, Moran D (1994) Economic Values and The Environment In The Developing World: A Report To The United Nations Environment Programme, Nairobi. Environmental Economics Series Paper No. 14. United Nations Environment Programme Environment and Economics Unit.
- Prabha P, John R and Natalie S (2010) Estimating the value of beach recreation in the Great Barrier Reef Marine Park, Australia: A pooled revealed preference and contingent behavior model. pp 2-14
- Robert M and Sheila O (2009) The Economic Valuation of Environmental Amenities and Dis amenities: Methods and Applications School of Forestry and Environmental Studies, Yale University, New Haven.
- Rosenthal DH (1987) "The Necessity for Substitute Prices in Recreation Demand Analyses". *American Journal of Agricultural Economics* 69:828-37.
- Sergio A, Sherry LL (2010) Valuing Ecological Restoration and Recreational Benefits in a Mountain Protected Area: The Case of Los Nevados National Park, Colombia, Department of Food and Resource Economics, University of Florida Gainesville, FL, USA. *Journal of Sustainable Development.* 3(4); 3-16
- Wade WW, McColister GM, McCann RJ, Johns GM (1988) Estimating Recreation Benefits for Instream and Diverted Users of Waterflows of the Sacramento-San Joaquin Rivers Watershed. Presented at the W-133 Meeting. Monterey, California.