EVALUATION OF SUSTAINABILITY OF USE OF TIMBER AS TEMPORARY SUPPORTS IN THE HOUSING CONSTRUCTION INDUSTRY.
(CASE OF MBARARA MUNIPALITY)

BY

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A RESEARCH REPORT SUBMITTED TO THE FACULTY OF NATURAL RESOURCE AND ENVIRONMENTAL SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A BACHELOR OF SCIENCE IN NATURAL RESOURCE ECONOMICS OF BUSITEMA UNIVERSITY.

JUNE, 2012

DECLARATION

I, **ASASIRA JOSEPH,** hereby declare that this report is my original work and to the best of my knowledge, it has never been submitted for any award in any University or institution of higher learning.

Signature..... Date..1/7/2013.....

ASASIRA JOSEPH

(Student)

APPROVAL

This is to certify that this research report titled **"Evaluation of sustainability of use of timber as temporary supports in the housing construction industry (case of Mbarara Municipality)"** has been done under my supervision and it is ready for submission with my approval to the Faculty of Natural Resources and Environmental Sciences as the supervisor

Signature.....

MR. KIFUMBA DAVID NSAJJU

(SUPERVISOR)

Date.....1/7/2013.....

DEDICATION

This report is dedicated to my parents Mr. and Mrs. Fidel Kanyindo, my dearest elder sisters Justine, Caroline, my brother Nicholas, my in law Eng. Denis, Allan, all my nephews & nieces and in a special way my girlfriend Assy, for all your support to where I am today.

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God bless you all.

LIST OF ACRONYMS

NEMA	National Environmental Management Authority
SPSS	Statistical Package for Social Scientists
UBOS	Uganda Bureau of Statistics
UNCHBP	United Nations Centre for Housing, Building and Planning

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ABSTRACT

The housing industry is growing at a fast rate meaning that more timber will be required to support this sector. It is visibly clear that the demand for timber in form of bush poles, bolts and planks is already growing and exceeds the supply which will also affect the environment.

The study sought to evaluate the sustainability of using timber as temporary supports in the housing construction industry in Mbarara Municipality. The objectives of the study were to establish the temporary supports used, quantity consumed and reasons for selection of preferred temporary supports used for construction at different housing construction sites in Mbarara Municipality, to evaluate the economic costs of using named preferred temporary supports compared to the alternatives temporary supports in housing construction at different sites and determine housing contractors' and other stakeholders' in housing construction industry willingness to engage in tree growing practices for poles production. The sample size of 60 construction sites and respondents was used in the study.

It was found out that the housing construction industry was currently relying on wood temporary structures as they were flexible to use and easily found. In utilizing the wood temporary supports, it was discovered some challenges that included inadequate length, sizes and quality of bush poles and sawn timber because these are cut when they are young; escalating prices due to scarcity of the timber coupled with increasing demand and the long distances as the timber is obtained from deeper villages far away from the Municipality, were being faced. It also was found out that metal temporary supports even though they have high initial costs, are the best possible alternatives to wood temporary supports, as they would provide a lasting solution given that they are very strong and durable which enables their re-use many times unlike wood temporary supports that are re-used only once with support from fresh wood supports as they lose their strength due to hitting, climatic factors, and getting sticky with the concrete that requires a lot of strength to pull them off after it has dried and splitting. Stake holders in the housing construction industry were also found to have the willingness to participate in the tree conservation activities of their preferred species such as planting woodlots, raising tree and many others.

In conclusion, a combination of metal and wood temporary supports should be taken on board for this growing industry. Any storied housings can use metal temporary supports most especially storied housings exceeding 2 storeys while bungalows and small storied housing of 2 storeys would use wood temporary supports.

CHAPTER ONE

1.0. INTRODUCTION

1.1. Background to the study.

1.1.1. Temporary structures fashioned by temporary supports in the housing construction industry.

A temporary support structure is a structure erected to aid in the construction of a permanent project. Temporary structures are used to facilitate the construction of buildings, bridges, tunnels, and other above- and below-ground facilities by providing access, support, and protection for the facility under construction, as well as assuring the safety of the workers and the public. Temporary structures either are dismantled or removed when the permanent works become self-supporting or completed, or are incorporated into the finished work. Temporary structures are also used in inspection, repair, and maintenance work (www.designingbuildings.co.uk/wiki/Temporary_Works, 20/5/2013). Kamran (2007) observes that these temporary works have a primary influence on the quality, safety, speed, and profitability of all construction projects.

More failures occur during construction than during the lifetimes of structures, and most of those construction failures involve temporary structures. However, codes and standards do not provide the same scrutiny as they do for permanent structures (Kamran, 2007). Typical design and construction techniques and some industry practices are well established, but responsibilities and liabilities remain complex and present many contractual and legal pitfalls.
The many types of temporary structures include cofferdams; earth-retaining structures; tunneling supports; underpinning; diaphragm/slurry walls; roadway decking; construction ramps, runways, and platforms; scaffolding; shoring; false work; concrete formwork; bracing and guying; site protection structures such as sidewalk bridges, boards, and nets for protection against falling objects, barricades and fences, and signs; and unique structures that are specially conceived, designed, and erected to aid in a specific construction operation (Kamran, 2007). False work involves a temporary structure used to support other permanent structures until they can support themselves.

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