

**IMPACTS OF SUBSISTENCE ARABLE FARMING ON THE BIOPHYSICAL
ENVIRONMENT IN KACHUMBALA SUB-COUNTY
IN BUKEDEA DISTRICT**

BY

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DECLARATION

I, **ELUNGAT MARTIN** do hereby declare that this is my own original work and has never been presented to any University or Institution for the award of a Diploma or Degree.

Student's signature.....EL.....Date 06th / 03 / 2023.....

ELUNGAT MARTIN

APPROVAL

This is certified that this research work is for ELUNGAT MARTIN, entitled the Impact of subsistence arable farming on biophysical environment in kachumbala sub-county, Bukedea district' has been under my supervision and is now ready for submission to the department with my approval

Supervisor's Signature.....



Date.....

6th / 05 / 2023

DR MWANGA MOSEHASSAN

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LIST OF ACRONYMS

SARC -Serere Agricultural Research Centre.

SSACP-Sub-Saharan Africa Challenge Program

NEMA- National Environmental Management Authority

NAAD- National Agricultural Advisory Services.

PMA- Plan for Modernization of Agriculture.

NARO- National Agricultural Research Organization.

UNDP- United Nations Development Programmed.

TEP- Total Factors Productivity

ASSP- Agriculture Sector Strategic Plan.

GDP- Gross Domestic Product.

UN -United Nation.

EU-European Union.

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ABSTRACT

The study examines the impacts of subsistence arable farming on biophysical environment in kachumbala sub-county in Bukedea district. 104 households were selected from the 8 villages in

4 parishes, 13 households from each village in different parishes of Kachumbala sub-county namely; Kakira, Mukura, Station, Kapang, Kachumbala, the households were selected using simple random sampling procedure, structured questionnaires, interviews, observation, recording and camera were tools employed to collect data from the respondents. Data analysis was done statistically basing on the objectives and results were tabulated using frequency, degree and percentages and further presented on graphs and pie chart for simplification. The major objective of the study was to find out effect of subsistence arable farming on soil. The result of the survey showed the following soil nutrient depletion and infertility, poor tillage practices, land degradation, poor farming methods, increased crop pests and diseases, food insecurity, use of infected planting material, increased rural urban migration, soil erosion as it is revealed from the study. The influence of subsistence farming on vegetation includes land fragmentation, encroachment of forested areas, bush burning, loss of biodiversity, deforestation over grazing. The impact of subsistence farming on water resource they include; reduced water catchment, invasion of marginal and wetland, salination, water contamination, reduced water table. The strategies laid to streamlining subsistence farming were as follows; Use of modern agricultural technologies, agroforestry, use of the agricultural biotechnology, raising productivity of the women in agriculture, improved basic infrastructure, affordable irrigation techniques, support from the government on environmental awareness, promoting improved livelihood and household food security, promoting tree planting and afforestation, agricultural research and information generation, crop rotation, mix farming, mulching. The researcher recommended the planting of trees, mass education of the farmers, training of farmers on the new ways of adopting new method of farming should be a priority.

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CHAPTER ONE: INTRODUCTION

The chapter covers the introductory elements of this research the background of the study, problem statement, the location of the study area, the purpose of the study, research objectives, research questions, the scope of the study, significance of the study, limitations and delimitations

Subsistence arable farming is a form of agriculture in which nearly all the crops or livestock are raised to sustain the farm family (Clifton 1970). although good weather occasionally allows the farmers have enough surplus to sell for cash or store for later use. The farmers therefore use primitive farming tools and applies minimal or no inputs to increase crop [yield and productivity

Intensive subsistence arable farming, the subject of this review is mainly practiced in the developed countries of Africa, Latin America, central and eastern Europe and south eastern Asia (Devendra and Thomas 2002; Matthijs and Noves 2004, World Bank 2005). although this type of farming occupies less than 10% of the world land area, it supports over half of the world's population and contributes substantially to these countries' economies (Kosovo and Lingard 2004).

Intensive subsistence rice farming, for example supports nearly three billion people mostly in south east Asia, southeast China and east India (Dawe and Dobermann 2000). In sub-Saharan Africa, subsistence farming contributes to 8-50% of the gross domestic products (GDP) and employs 40-85% of the rural population (Orkin and Niobe 2000; Kosovo and Lingard 2004).

Historical trends suggest that small-scale farms will continue to dominate the agricultural landscape in the developing world, especially in Asia and Africa, at least for the coming two to three decades (Nagayets, 2005). The absolute number of small farms is still increasing in a number of countries on these continents, due to further subdivision of landholdings and expansion of agricultural land. This is also reflected in the labor force differences between countries

1.1 BACKGROUND

GLOBALLY, Despite the crucial role that agriculture has for rural populations in transition and developing countries, agriculture-based livelihoods and rural communities are endangered by poverty worldwide. Based on FAO census data, it has been estimated that about 525 million farms exist worldwide, providing a livelihood for about 40% of the world's population. Nearly 90% of these are small farms defined as having less than two hectares of land (see e.g., Nagayets,2005). Small farms occupy about 60% of the arable land worldwide and

5.6 RECOMMENDATION

From the findings of the study, it is recommended that the district agricultural officer encouraged people in saving to their income store food as community work as it is the way of raising livelihood of women

Mass education should be conducted through environmental programs at the radio station publications through newspaper journals written in both English and local languages of the people in order to create awareness household about impacts of subsistence arable farming.

The government and non-government organization should get involved to facilitate the programs to train local farmers on how to streamlining the subsistence arable farming to commercial farming in order to improve on food production in kachumbala sub-county

The district agricultural and environmental officer in conjunction with the ministry of agriculture, fisheries, animal industry should conduct training of farmer to enable them engage in planting trees

5.7 Area for further research

Further studies should be carried out carefully to monitor and assess how households streamline subsistence arable farming to adopt commercial farming systems, other should carry out research on the following area

- i) An assessment of socio-economic impact of subsistence arable farming.
- ii) Examining the causes and effect which makes people involve in subsistence arable farming

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