

ASSESSING THE RELEVANCE OF TRADITIONAL FISHING GEARS ON FISHERIES PRODUCTION, CASE STUDY OF RIVER NILE IN NAMASAGALI, UGANDA

BY

SENTONGO OSCAR

REG NO. BU/UP/2018/3301

A RESEARCH REPORT SUBMITTED TO THE FACULTY OF NATURAL RESOURCES AND ENVIRONMENTAL SCIENCES, DEPARTMENT OF GEO-INFORMATION, EARTH OBSERVATION AND PHYSICAL LAND RESOURCES IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR AWARD OF BACHELORS DEGREE IN FISHERIES AND WATER RESOURCES MANAGEMENT OF BUSITEMA UNIVERSITY

2021

DECLARATION

I SENTONGO OSCAR, declare that this research thesis titled "Assessing the relevance of traditional fishing gears on fisheries production, case study of River Nile in Namasagali Sub-County Kamuli District" has been through my own efforts and never has it been submitted to Busitema University or any other institution of higher learning for the award of a degree or any other qualification.

Signature

date.....

APPROVAL

This is to certify that this research report titled "assessing the relevance of traditional fishing gears on fisheries production on River Nile in Namasagali Sub- County. `` By **Sentongo Oscar** has been successfully completed under my supervision and recommend it for submission to the Faculty of Natural Resources and Environmental Science of Busitema University with my approval.

Signature

.....

BASSA SAMUEL (PhD), Fisheries and Riverine Ecologist/Lecturer Busitema University, Namasagali campus.

SUPERVISOR

Date

.....

DEDICATION

I dedicate this dissertation to all the students of Busitema University Namasagali Campus; especially Pauline, Josephine, Rose, Derrick, Daisy, Agatha, Hellen and the entire FWR Class of 2018 as a special encouragement to sum-up their efforts towards accomplishment of their degrees amidst the challenging Covid-19 Pandemic that has frustrated Education.

I would also like to dedicate this report to my dearly loved parents Mr. & Ms. Antero Ben Hellen Ogwal, brothers; Innocent, Joshua and Sebastian and sisters; Esther, Rebecca and Jovita for their entire less support towards my studies. Lastly, I would like to appreciate my comrades Mr. Oguta Job Francis and Mr. Oteka Ronald Louis for always being with me in the academic struggles.

ACKNOWLEDGEMENT

Firstly, I convey my sincere gratitude to the Almighty God who has brought me all this far, blessed me with the gift of life, knowledge and courage to go through my studies besides all the hardships. Secondly, I want to appreciate the support my family has always been extending to me in different forms like finance, guidance, courage and advice despite their constrained income and resources. They have been always there for me throughout the entire learning process most especially my parents.

I recognize the tremendous support and guidance from my research supervisor Dr. Bassa Samuel who has been always there for me at all times regardless of his tight schedules. He never hesitated when it comes to replying to any of my questions. He empowered me with several skills regarding research studies. I really appreciate his effort towards my success.

Finally, I appreciate the company of my fellow colleagues with whom I have been with since we started on this journey in 2018. I cannot mention all of them but I really appreciate their contributions towards my success, most especially my course mates and others.

GOOD LUCK!

TABLE OF CONTENTS

Contents
DECLARATION
APPROVAL
DEDICATION
ACKNOWLEDGEMENT
TABLE OF CONTENTS
FIGURES 10
TABLES
ACRONYMS AND ABBREVIATIONS 12
ABSTRACT13
CHAPTER ONE: INTRODUCTION14
1.0 Introduction
1.1 Background of the study14
1.2 Statement of the problem
1.3 Objectives of the study
1.3.1 Main objective of the study15
1.3.2 Specific Objectives
1.3.3 Research questions
1.4 Conceptual framework
1.5 Significance of the study
1.6 Scope of the study 17
1.6.1 Geographical scope17
1.7 Concept scope 17

1.8 Time scope	17
1.9 Limitation of the study	17
CHAPTER TWO: LITERATURE REVIEW	19
2.1 Introduction	19
2.2 Traditional fishing gears used in Uganda	19
2.2.1 Gillnet Fishery	19
2.2.3 Fishery by Angling Gear	20
2.2.4 Fishery by Fish-traps, Baskets and Weirs	20
2.2.5 Fishing Gear for Rastrineobola argentea Fishery	20
2.2.6 Fishery by Perforated Plastic Basins	21
2.3 The impacts of traditional fishing gears on the fishery in Uganda	21
2.4 Sustainability	22
2.5 Overfishing	23
2.5.1 Destructive fishing practices	23
2.5.2 Illegal, unreported and unregulated (IUU) fishing	24
2.5.3 Acceptable level of impact	25
CHAPTER THREE: MATERIALS AND METHODS	26
3.0 Introduction	
3.1 Sampling design	26
3.2 Study population	26
3.3 Sample size, sampling techniques and procedure	27
3.3.1 Sample size	27
3.3.2 Sampling techniques and procedure	27
3.4 Data types and collection methods	27
3.4.1 Data types	27

	3.4.2 Data collection methods and tools	27
	3.4.3 Validity and reliability of data collection instruments	27
	3.4.4 Ethical considerations	28
	3.4.5 Data processing and analysis	28
	3.4.6 Expected outcomes	28
C	HAPTER FOUR: RESULTS AND DISCUSSIONS	29
	4.1 Introduction	29
	4.2 Background information of the respondents.	29
	4.2.1 Gender of the respondent	29
	4.2.2 Age group (AG)	29
	4.2.3 Education level	30
	4.2.4 Marital status	31
	4.2.5 Persons involved in Fishing sector	31
	4.2.6 Number of days involved in fishing	31
	4.2.7 What is done with the fish harvested from the river	32
	4.2.8 Different traditional fishing gears used	33
	4.2.9 The average catch of each of the gears each time you go fishing	33
	4.2.10 Average income in shillings at Namasagali	34
	4.2.11 How fishing has helped the people of Namasagali	34
	4.2.13 Fish species caught at Namasagali	35
	4.2.14 Fish gears used by these species at Namasagali	36
	4.2.15 Methods used for capturing fish at Namasagali	37
	4.2.15 Impacts from the traditional gears used at Namasagali	37
	4.2.16: If yes, what are those impacts of traditional fishing gears on fisheries production	37
	4.2.17: Has there been a reduction in harvest since you started fishing	38

4.2.18: What do you think has caused reduction in harvest?	38
4.2.19: What do you think can be done to solve the problem of reduction in harvest?	39
CHARPTER FIVE	40
5.0 CONCLUSIONS AND RECOMMENDATIONS	40
5.1 INTRODUCTION	40
5.2 SUMMARY OF THE RESULTS	40
5.3 CONCLUSION	41
5.4 RECOMMENDATION	41
5.5 AREAS OF FURTHER RESEARCH	42
REFERENCE	43
APPENDCIES	45
Questionnaire used during the data collection	45

FIGURES

Figure 1:Map showing the study area of Namasagali sub county, Kamuli District	
Figure 2: Age group of the persons involved in fish handling at Namasagali	30
Figure 3: Education level of the persons involved in fish handling at Namasagali	30
Figure 4: Marital status of the persons involved in fish handling at Namasagali	31
Figure 5: Days of fishing of the persons involved in fish handling at Namasagali	32
Figure 6: Fish use at Namasagali	32
Figure 7: Fish use at Namasagali	33
Figure 8: Number of fish harvested at Namasagali	34
Figure 9: Average income in shillings	35
Figure 10: Benefits from fishing	35
Figure 11: Fish species caught	36
Figure 12: Types of gears used to capture fish species	36
Figure 12: Fishing methods used to capture fish species	37
Figure 14: impacts of on traditional fishing gears.	38
Figure 15: causes of fish reduction	38
Figure 16: causes of fish reduction	39

TABLES

Table 1: Sex of the respondents 29

ACRONYMS AND ABBREVIATIONS

- FAO Food and Agriculture Organisation
- CBD Convention on Biology Diversity
- IUU Illegal, unreported and unregulated fishing
- MYS Maximum Sustainable Yield
- MEY Maximum Economic Yield
- RFMOs Relevant regional fisheries management organization
- UNLOSC United Nations Convention on the Law of the Sea
- REG NO. Registration number

ABSTRACT

This study was conducted on three landing sites on communities surrounding River Nile in Namasagali sub-county Kamuli district. The purpose of the study was to assess the relevance of traditional fishing gears on fisheries production on the water of River Nile. The specific objectives were to determine the different traditional fishing gears used in Namasagali and its impacts on the fisheries, to determine the fisheries production levels in relation to the fishing gears on the fishery of Namasagali and finally to assess the impacts of traditional fishing gears on fishery in Namasagali. The data was collected from three landing sites that are Nsagabirye, Kabeto, and Kalama on the upper Victoria stretch using interview method with the help of questionnaire as a tool. The data was analysed using Excel software mainly and data was presented by use of descriptive means like tables, pie charts, and column bar graphs. The results revealed that the biggest percentages of people involved in fishing were male (85%) who were involved majorly in the use of traditional fishing gears. Most of the fishermen are aged between 19 to 25 years (41.67%) and most stopped in secondary level (53.33%) and the marital status showed that most respondents were married (56.67%). The study revealed that fishing was on a daily basis (59.01%), majorly for sale (86.36%). There are majorly three types of gears used in the landing sites of Namasagali that is gill nets (64%), baskets (21%), and hooks (15%). The average catch was always between 11 to 20 fish (32.79%). The average income of the respondent was majorly between 41,000 to 60,000 shillings (38.48%), the benefits that have been gained from fishing included buying land (46.74%), livestock purchase (15.21%).the study revealed that, fish species caught included Nile tilapia (50.46%), Nile perch (34.86%), cat fish (10.09%) and mud fish (4.59%), and the gears used are gill nets (57.47%), hooks (24.14%), and baskets (18.39%), 75% of the fishermen said traditional fishing gears have no impact on the fisheries production but for those who said it have impacts, they said traditional fishing gears majorly injure fish (50%). 63.33% said that there has been a reduction in a reduction in fish harvest they gave the following reasons; too many fishermen/over fishing/poor fishing methods are the main cause of reduction in harvest (56.52%), increase in the water level (41.3%) and weeds (2.17%). The study revealed that, reducing the number of fishermen/ avoid over fishing (34.21), control of siltation/erosion (31.58%) and use of legal gears (26.32%) can reduce on low harvest. The study recommended that future research should address the willingness of fishermen to adjust to the use of legally recommended fishing gears. Another area should address how fishermen are willing to change from capture fishery to aquaculture as a source of income.