PROJECT DYNAMICS AND PERFORMANCE OF FISHING PROJECT FUNDED BY INTERNATIONAL COMMITTEE OF RED CROSS, LAMU COUNTY KENYA

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ABSTRACT

Employment, economic growth, food for the populace, and foreign and domestic money all share a great deal to the industry of fishing. Performance of fishing projects is key in the growth of Kenya's agricultural sector and by extension the entire economy. Countries with more developed economies, such as Spain and China, have conducted the vast majority of the research on the dynamics and performance of fishing projects. Previous research findings in Kenya reveal that although the fishers claimed to be experiencing low fish catches due to changes in climate, lack of advanced fishing gears and vessels, fishing remained a major livelihood source. Evidence of studies showing the linkage between project sustainability and performance of fishing remains scanty, it is against this backdrop that the goal of this project was founded to provide strategies for improving the livelihoods of Lamu fishermen such that they not only benefit local residents but also significantly contribute to Kenya's economic development. This research aimed to analyze project dynamics and performance of fishing project funded by international committee of Red Cross Lamu County, Kenya. Three variables were identified, fisher men training, monitoring and evaluation and fisheries management. The study was anchored on the following theories; Diffusion of innovation theory, Classical fisheries management theory and theory of change. An explanatory research approach was harnessed. The study population was the Fishing project funded by International Committee of Red Cross. Observation unit included 344 individuals from Lamu and International committee of the Red Cross. This research used stratified sampling technique to sample selected Lamu fishermen and management level employees at Red Cross in Mombasa. Sample size comprised of 185 respondents. Data from the study was collected using questionnaires and data from journals, books, published and unpublished thesis.18 questionnaires were used for the pilot testing that formed 10 percent of the total sample size. Reliability and validity was tested. The results of Pearson correlation revealed that fisher men training, monitoring and evaluation and fisheries management had a positive and statistical significant effect on performance of fishing project. The results support the conclusions of prior research on the topic, while also adding to our understanding of the relationship between project dynamics and fishing project performance. Organizations should think about project dynamics to boost the efficiency of their fishing projects. Thus, long-term studies are needed in the future to investigate the correlation between project dynamics and costs of performance.

Key words: Project Dynamics, Project Performance, Fishermen Training, Monitoring and Evaluation and Fisheries Management.

INTRODUCTION

Government places a high priority on fish farming as part of its efforts to encourage the growth of agricultural and rural development, particularly in highly populated regions located in close proximity to water. The dynamics of fish farming are necessary for future expansion of the agricultural industry and the creation of local jobs. It's a method of making money and maximizing the economic benefits of fishing as a whole (Hecht 2019). Millions of people all over the world rely on marine fishery resources for their survival, therefore, aquaculture is becoming increasingly significant in the United States and worldwide for its role in food production, economic growth, and food security. The majority of aquaculture operations have been located in the developing nations, particularly in Asian nations. The majority, or 87%, of the world's aquaculture output occurs in Asia, with China alone accounting for over 68% of this total. About 15% of 1997's output comes from India and Southeast Asia. (Delgado, 2013). Nearly half of fish consumed in Israel are produced by aquaculture, 25% China, 11% India and United States with 10% in Japan. In undeveloped nations, fish farming has several socioeconomic benefits, including increased food security, increased income for subsistence farmers, and increased rural job opportunities (Mwamuye *et al.*, 2019).

FAO (2018) notes that African countries have the lowest per capita consumption of fish in the world. In 1998, three nations on Africa's Mediterranean coast accounted for 57% of the continent's total fish and shellfish output of 79,500 metric tons. Egypt was the continent's largest producer, with output of 43,000 tons. The remaining 34,000 metric tons were generated across 33 countries in sub-Saharan Africa, with 6 nations accounting for 93% of that total: Zambia (4,100 tons), Kenya (1,100 tons), Nigeria (16,700 tons), Zimbabwe (3,800 tons), Namibia (1,300 metric tons), and South Africa (4,500 tons). Farming of fish in Kenya debuted with the tilapia species in the 1920s and later expanded to include common carp and African catfish. Kenya's government promoted rural fish farming through the "Eat More Fish" campaign during the 1960s leading to a surge in tilapia farming and building of numerous tiny ponds, more so in Central and Western parts of Kenya (Ngugi, Bowman, and Omolo, 2017). Lack of training for extension workers, a lack of high-quality fingerlings, and inadequate extension services all contributed to a fall in numerous productive ponds in the 1970s. Fish aquaculture in Kenya, like that in many other African nations up until the mid-1990s, was typified by tiny ponds, subsistence-level management, and extremely poor productivity (Ngugi *et al.*, 2019).

According to research conducted by Mwangi (2018), fish farming businesses in Kenya encounter several difficulties. These include the government, research institutions, universities, non-governmental organizations (NGOs), and regional authorities all working separately to promote fish farming. Additionally, fish farming policies are fragmented, and legislation is insufficient. The main barrier to Kenya's fish farming industry development is the inadequate supply of extension services. This is due to the absence of adequate funding and skilled personnel. The paucity of resources and the farmers' lack of business abilities only make the situation worse. Fish farming in Kenya's agricultural rural zones has huge potential, although this has not been measured properly. Captured fisheries in Kenya are seeing decreased output. With little hope in sight, fish productivity in Lake Victoria has dropped from almost 200,000 metric tons in 1999 to around 130,000 metric tons in

2007. While the sector only accounts for 2.5% of Kenya's fishery output at present, has the potential to account for almost to 50% of the country's fishing catch with only a moderate investment and some relatively simple technology. (GOK 2016).

For hundreds of years, and over several generations, fishermen have provided the majority of Lamu's income. Seventy percent to seventy-five percent of the local population relies on fishing business for a living either directly or indirectly. Lamu people have a longstanding reputation for their expertise in the marine industry. (Athman, 2016). Twenty-five percent or more of their income also comes from tourists. However, foreign investors control the Lamu tourism industry and provide no meaningful benefits to the local economy. Sixty percent of Lamu County's population lives below the poverty scale, and 40% rely on fishing. That's according to a (2016) study by Odhiambo. Lamu's fishing sector is highly reliant on the South East and North East monsoons, two cyclical wind and weather patterns.

The inhabitants of Lamu, who are primarily Boni sanye Aweer and Bajun, are one of the most disadvantaged groups along the coast of Kenya. Lamu relies heavily on fishing and collection of aquatic resources for its subsistence. Subsistence and semi-commercial fishing is practiced by the local populations in the region. They fish in mangroves and lagoons as well as the open sea, though they seldom venture beyond the fore-reef. Motorized boats, equipment, and modern gear are out of reach for most fisherman, so they make do fishing with canoes, dhows pulled by the wind, and other traditional tools. Mvundeni is a community where fishermen must use their feet since they lack access to fishing vessels, which limits their access to deeper seas and fishing time. Coral reef fishes including parrot fishes, wrasses, emperors, snappers, and even pelagic fish like kingfish, dorado, and tuna are essential to the subsistence fisheries. "(Ochiewo, 2014)".

Mwathi (2014) claims that inshore marine production is falling in the Lamu region. The daily catch of fish has decreased from an average of 40 kilograms per fisherman per day to 10 kilos per day, and in some years, there has been no catch at all, according to data from the fishing industry. In spite of the growing number of fishermen, locals corroborate the industry's deteriorating productivity. This has contributed to the further depletion of coastal ecosystems and economies. The problem is further complicated by the fact that offshore marine resources are both plentiful and largely untapped. The abundant offshore coastal marine resources have been mostly underused; nevertheless, local fishermen lack the resources and capacity to exploit them. They lack the resources necessary to successfully market their catch on national or worldwide markets, including boats, motors, and nets, as well as the means to preserve and process their products.

Statement of the Problem

Employment, economic growth, food for the populace, and foreign and domestic money all share a great deal to the industry of fishing. Performance of fishing projects is key in the growth of Kenya's agricultural sector and by extension the entire economy, however all these contributions by fishing projects to the economy can be derailed due to its challenges of financial resources, lack of training, improper fishing gears, equipment's and unemployment, for instance Odhiambo (2014) conducted a research and established that per capita catch has been declining in Lamu island.

In Lamu the Labor Force Age Group (15-64 Years) stood at 77,919 in 2018 (KNBS & SID, 2018). The number expanded to 83,402 in 2020 and 89,948 in (2022). As a result, there is a pressing need to enhance fishing and agricultural output and to invest in other industries so that the expanding labor population may find gainful work. The poverty rate in Lamu was 30%, while the unemployment rate for those aged 15-64 was 25%, as reported by World Data Atlas in 2016. The development of a new deep-water port in Manda bay, Lamu County, has forced the relocation of some 600 fishermen, on May 1, 2018, a three-judge court in the coastal town of Malindi ruled that the Kenyan government must compensate the fishermen. The port's construction overseers in Kenya, the Kenya Ports Authority, successfully appealed the ruling.

Countries with more developed economies, such as Spain and China, have conducted the vast majority of the research on the dynamics and performance of fishing projects. Moreover, these studies have produced contradictory findings, exposing a number of research gaps, as a result, their findings cannot be extrapolated to the situation in Kenya. Wallner (2017), for example, indicated that the contributions subsistence fishermen contribute to food security and revenue production should be recognized.

Limuwa (2018) found out that although the fishers claimed to be experiencing low fish catches due to changes in climate, lack of advanced fishing gears and vessels, fishing remained a major livelihood source. Evidence of studies showing the linkage between project sustainability and performance of fishing remains scanty, it is against this backdrop that the goal of this proposal is to provide strategies for improving the livelihoods of Lamu fishermen such that they not only benefit local residents but also significantly contribute to Kenya's economic development. The proposal seeks to fill the knowledge void by identifying ways in which fishing can be sustained by giving resources and training to effectively improve the lives of fishermen. The study seeks to analyze project dynamics and performance of fishing Project funded by ICRC in Lamu County Kenya.

Objective of the study

Examine the dynamics and performance of fishing project funded by International Committee of Red Cross funded project in Lamu County, Kenya

Specific Objectives
  i. Determine the effect of fisher men training on performance of fishing project funded by International Committee of Red cross in Lamu County, Kenya
 ii. Establish the influence of monitoring and evaluation on performance of fishing Project funded by International Committee of Red cross in Lamu County, Kenya
iii. Evaluate the effect of fisheries management on performance of fishing project funded by International Committee of Red Cross in Lamu County, Kenya.

THEORETICAL REVIEW

Diffusion of Innovation DOI Theory

E.M. Rogers published Diffusion of Innovation hypothesis in 1962. This idea has been the focus of decades of research into the process by which new technology gain widespread use. DOI aims to elucidate the mechanisms, motivations, and pace at which a concept or invention progresses and permeates within a particular population or community structure, consequently enhancing its efficacy. DOI has extensively demonstrated the acceptance and integration of training and development initiatives by individuals.

The main strength of this theory was that it showed how the model has assisted projects performance explaining the process by which an idea traverses multiple stages of adoption by various participants (Mutuku &Muathe, 2020). This hypothesis is well-suited to the study's objectives, which include learning more about how and why fisherman take up new technologies and techniques. Given that newness may come from anyone, Rogers (2015), whereas diffusion refers to the methods and phases involved in spreading these innovations through formal education and training over time. The Dissemination of Innovations (DOI) research agenda examines who, what, where, and when of cultural innovation. Throughout the DOI adoption process, training and open lines of communication are emphasized. Rogers identified five groups of people who take up new ideas and technologies: the innovators, who are the most enthusiastic about new developments; the early adopters, who are the most enthusiastic about new developments; the pragmatists, who are the opinion leaders; the late majority, who are the most conservative and require bulletproof solutions; and the laggards, who are the most skeptical and always prefer the status quo.

As an illustration of the acceptance of new technology by fisherman, consider this notion. Some fishermen have succeeded in shifting public opinion from commercial, sustainable fish aquaculture to subsistence fishing via use of basic innovations in fish farming whereas a number of competitors have failed and quit the industry (Otieno 2017). This theory proposed five stages of adoption: awareness, where fishermen are exposed to innovation/new technology but lack adequate training; interest, where fishermen become curious about the new idea and look for more information; decision/evaluation, where fishermen weigh the pros and cons of trying the idea, trial: where fishermen put the idea into practice on a limited scale; and adoption, where fishermen fully embrace the new technology.

This theory is considered most suitable and of importance to this study because it exemplifies how the method of innovation is intended to improve the performance of the project. Studies have shown that this theory enables users to perform more efficiently and effectively. DOI perfectly explains adoption to use of new technology. DOI theory supports the study as it benefits and targets sustainability and performance, thus this theory is anchored on training variable.

Classical Management Theory

Henri Fayol (1841-1925) proposed the traditional theory of management, which calls for an objective analysis of work processes and the employees who carry them out. Traditional management theory holds that a stock's production is directly proportional to its size and reproductive capacity (Mwaura, 2014). The goal of fisheries management, according to this line of thinking (Odhiambo, 2014), is to ensure that the stock is exploited at a rate that leaves its reproductive capacity about equivalent to its natural mortality. The basic goal of fisheries management may be understood by using this theory, which is deemed most appropriate and important in this study since it explains the requirement to estimate growth and mortality parameters from exploited populations.

The yield-per-recruit model by Beaverton and Holt (2005) is a key fundamental work in fisheries literature that codifies this concept of fisheries management. How, according to classical management theory. Over time, regulations were implemented to better manage fisheries resources, with the ultimate goal of maximizing sustainable yield. Fishing effort reduction, mesh rules, seasonal closures, and gear limits are only a few, as cited by Pauly (2015).

Technical measures (such as closed seasons, gear and mesh limitations, etc.), input controls (such as licensing to manage ownership, access and effort, etc.), and output controls (such as size limits on fish landed, quotas, etc.) are examples of these, as defined by Odhiambo (2016). Thus, the theory support factors related to fisheries management.

Theory of Change

Invented by French thinker Auguste Comte (1820-1903), it was designed back then to help assessors measure the results of intricate social development programs. Flynn (2016) opines that "Valuable insights are produced through a discussion-based analysis and learning process that supports project design and planning" is one definition of Theory of Change. An intervention's theory of change describes the sequence of actions and outcomes that produce the desired or observed consequences. Theory of change is generally generated during the planning stage but may also be beneficial for monitoring and assessment. An effective theory of change may guide the formulation of more precise Key Evaluation Questions, the selection of appropriate indicators for tracking progress, the prioritization of new data collection, and the analysis and reporting of existing information.

Depending on the timeframe, theory of change can be used to forecast what will happen, and develop data collecting techniques to track changes going forward, or used to make sense of what has happened and the data that has already been acquired. With the use of a theory of change, researchers and evaluators may map current data (if any exists from the intervention or earlier research and evaluation) onto the theory of change and utilize this to prioritize data collection needs. Research has tied the major strength of this theory to frequent monitoring which represents a key aspect of Change thinking theory. By either many firms opt to integrate their monitoring and evaluation systems with theories of change setting indicators every step of the conceptual path of change (James, 2014). It allows businesses to evaluate the extent to which they are affecting change,

identify areas where change is not occurring, and determine whether or not their efforts are having the desired effect.

However, the most important connections are with checking and assessing progress. This is because a theory of Change by outlining the anticipated narrative prior to the occurrence of changes, it offers a clear structure for evaluating long-term transformations. (Ahmed et al., 2015) is notable for its emphasis on longer-term change. Linking this theory with suitable monitoring and evaluation approaches may assist to solve some of the greater challenges facing businesses in project success. Fishing sector stakeholders, including fishermen, fisheries management agencies, and others, are notoriously reluctant to change despite its importance. Transitions toward ecosystem-based fisheries management and the use of conservation engineering to address by catch are two such examples. (Ondiek et al 2014) Conditioning, cultural conservatism, and anxiety could all play a role in this resistance. Many people view change as something they have little power over, something that poses a danger to well-established structures, and something that compels them to confront an uncertain future.

The theory of change has been chosen as the most appropriate and effective framework for this research because it is widely used in the business world and aims to improve people's and organizations' ability to navigate a constantly shifting and unpredictable market. Although some of these models' components have been used in the fishing business before, they have never been consciously used in their whole. The use of these models can have a profoundly favorable effect on collection of fishery data, including aspects like stock assessment using fishery-dependent data, the adoption of technologies like vessel monitoring systems and electronic logbooks, and the sharing of infrequently shared information. The constant practice of evaluation and assessment is the fundamental basis of this idea.

Empirical literature Review

Fishermen Training and Performance of Fishing Project

Mwangi (2018) conducted research that highlighted the lack of technical assistance owing to a shortage of government extension personnel as an obstacle to the triumph of Kenya's aquaculture industry. Mwangi (2018) further said that the few extension staff were unqualified to meet the needs of the farmers. Also see (Ngugi *et al.,* 2017). However, both researchers failed to demonstrate relevance of fishermen instruction on dynamic and accomplishment of fishing projects, which this study focused on.

Similar evidence by Belwal, (2015) undertook research in India regarding impact of fishermen training on performance in Kerala region, where 80 percent of the population solely depends on fishing. The study gathered information from primary sources with the use of questionnaires, the researcher targeted 276 fishermen. The findings revealed that, fishermen in Kerala region lack awareness when planning their trips, managing finances, storing the catch, maintaining hygiene, and making cooperative efforts to optimize the payoffs. To optimize on performance, the study concluded that the majority of fishermen needed formal education/training so as not to depend more

on experience-based learning primarily from their predecessors**.** The study reveals a contextual gap having been done from a different region, the current study addressed this for it was carried out in Kenya Lamu County.

Fisheries Management and Performance of Fishing Project

Similarly, In Cameroon Hamadou, (2019) investigated the cause of poor performance of fishing projects. Descriptive survey techniques were used to investigate the problem. Purposive sampling was employed to select fifty-five participants. Results showed that most fishing projects do not last for more than 5years, they further contented that these projects failed due to lack of experience and financial resources. The study concluded that for the sustainability of these fishing projects, changes must be made at the management level and support should be provided at all levels of the project. Being conducted in Cameroon the findings would be different from this region therefore it presented a contextual gap, which the current study will address in Kenya Lamu County.

Robert, (2017) researched on effects of Fisheries management to fish farmers around river Turkwel in Turkana County. The major objective was to examine effects of fisheries management to performance of fishing in river Turkwel. The study was carried out on 100 respondents selected through random sampling. The study gathered information from primary sources using questionnaires. Observations gathered data from research respondents. Findings revealed that fisheries management wasn't effective in the region and there was no stipulated guideline in place to enhance performance. It concluded that authorities ought to establish a stipulated guideline for a responsive and effective fisheries management in river Turkwel in Turkana County. Whereas the research was done in Kenya, it did not determine the significance of fishermen training on sustainability and performance of fishing project, which this research addressed.

Monitoring and Evaluation, and Performance of Fishing Project

A study by Mwangi (2015) used probability and non-probability sampling on 271 respondents to determine whether or not performance of fish farming projects in Nyeri County was impacted by implementation of monitoring and evaluation practices. It focused on 8 fish farming programs financed by ESP programs in Nyeri County. It suggested that in order to guarantee capacity building and project performance, fish farming initiatives should make more use of monitoring and evaluation outcomes inside the project. Whereas this study was done in Kenya, it poses both contextual and methodological gaps that the study will address by being done in Kenya Lamu County and using descriptive research design.

Paulinus and Iyenemi (2014) conducted research on rural water delivery projects in Nigeria and analyzed the results using monitoring and evaluation techniques. In the context of venture benefits sustenance, the study examines the manageability concerns associated with group water arrangement and challenges encountered in Niger Delta region, Nigeria. Findings exposed the absence of maintainability in the momentum strategy, and the research shows that the formulation and use of maintainability variables are necessary for group-based hand pump working rural water

supply projects to be feasible. Being conducted in Nigeria the findings would be different from this region therefore it presented a contextual gap which this study looked into in Kenya Lamu County.

Conceptual Framework

The following schematic designs did not only serve to direct the investigation, but also to explain the interdependence of the study's primary variables, as shown in Figure 1.

Independent Variables   **Dependent Variable**

Training

- Skills in fishing
- Capacity building to the beneficiaries
- Skills in cash management
- Type of Training
- Frequency of training

Monitoring and evaluation

- Data collection tools and information sharing
- Training fishermen to sustain the project
- Capacity building and groups formation

Performance

- Income generated
- Create employment
- Level of food Security

Fisheries Management

I.   Storage and preservation
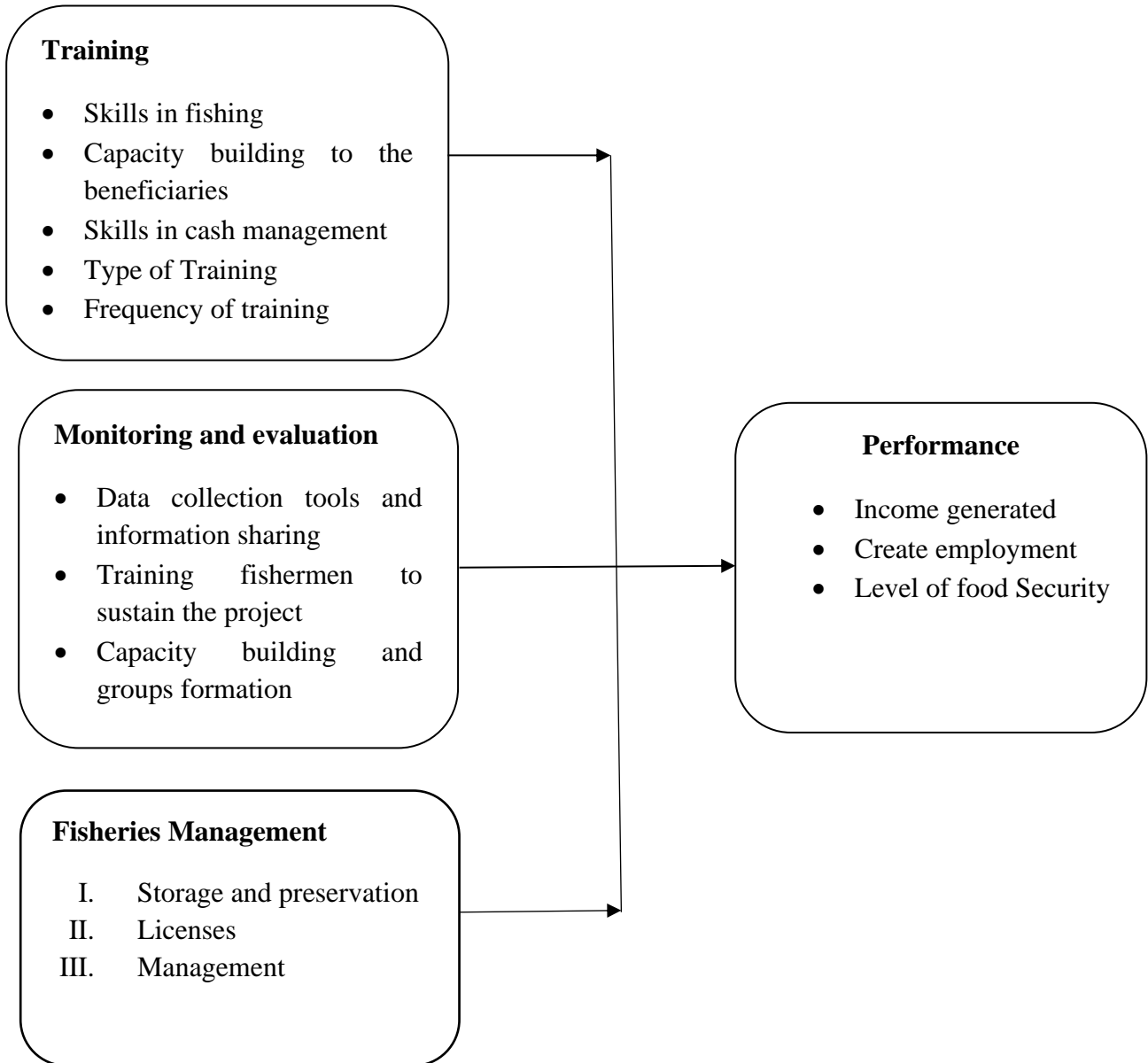II.   Licenses
III. Management

Figure 0.1 Conceptual Framework
Source: (Author, 2023)

Research Design

This analysis chose a descriptive research strategy, as it best depicts the individuals. Systematically and precisely, descriptive research architecture offers the facts and features of a certain population or location. According to Wilson (2015), the frequency, context, and character of a phenomenon are all reflected in the descriptive layout.

Target Population

Target population was the Fishing project funded by the ICRC in Lamu County where the unit of observation comprised of 4 top manager, 10 supervisors, 30 ICRC officials and 300 Fishermen. Stratification was used in selecting individuals who responded to the questions.

Sampling Design

Sampling is done so that generalizations about a population may be made based on information about a smaller subset of the population. Stratified random sampling used to draw sample at random from each stratum of the population. Since this method guarantees an even distribution of respondents between the two cadres, it is the most appropriate for this study. The number of people picked at random from each stratum makes up the sample size. Yamane's allocation sample equations (1967) were used to arrive at a sample size of 185.

Data Collection Instruments.

The instrument of collecting primary data was through structured questionnaires for it's the primary data constituting of raw data gathered in the field. The questionnaires had section A and B which were administered to each member of the sample population. A small sample of the population was used to test and refine the questionnaire's design and content. The study's validity and accuracy of its data collection was improved by doing this.

Data Collection Procedure

Before sending out questionnaires to students, the researcher requested and received an introduction letter from the institution. Respondents filled out questionnaires independently and returned at their convenience in order to allow responders enough time to complete questionnaires; the researcher did not collect them until three days after they have been sent.

Data Analysis and presentation

After collection of data from the field, data was edited to remove mistakes and to detect any inconsistencies and any issues. In addition, SPSS version 21 was used to import data for statistical analysis and report production. Descriptive statistics were utilized to provide a description of the characteristics of the variables under study. Furthermore, inferential statistics were used, including correlation and regression, to provide a causal framework for the study's findings. The link between

the research variables was determined using inferential statistics (correlation and regression). Content collected from open ended questions was analyzed by bringing together common themes to get the correct information. The findings show cased descriptively on tables, bar graphs and pie charts. Multiple regression analysis was used to investigate the performance of Fishing Project funded by international committee of Red Cross in Kenya.

The regression model for the study was:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \epsilon$$

Where Y= Performance

a = constant value

b_1, b_2, b_3, = are the coefficients of the predictor variable and

X_1 = Training

X_2 = Monitoring and evaluation

X_3 = Fisheries management

ϵ = Error term

RESEARCH FINDINGS AND DISCUSSIONS

Descriptive Statistics

Table 1: Fishermen Training

Opinion Statement	SD	D	N	A	SA	Mean	S.D
There is technical know-how on modern fishing gear among fishermen in Lamu	0%	5%	0%	51%	44%	4.3427	0.7229
There are capacity building programs to project beneficiaries in Lamu	0%	0%	3%	23%	74%	4.7133	0.5121
Fishermen in Lamu are trained on modern fishing skills and cash management techniques	3%	33%	21%	23%	20%	3.2517	1.1955
Fishermen apply knowledge on training programs to enhance fishing performance	0%	4%	17%	22%	58%	4.3427	0.8810
Fishing productivity is enhanced through training programs available to fishermen	0%	3%	15%	45%	38%	4.1748	0.7811
						4.1650	**0.81852**

Source: Survey Data 2023

Table 1 shows that when five statements were used to evaluate fishermen's training, the average score was 4.17. With a mean score of 4.17, it's clear that most people feel that fishermen education is important. Ultimately, the respondents agreed that "there is technical know-how on modern fishing gear among fishermen in Lamu" (Mean=4.34; SD=0.72), "there are capacity building programs to project beneficiaries in Lamu" (Mean=4.71; SD=0.51), "fishermen in Lamu are trained on modern fishing skills and cash management techniques" (Mean=3.25; SD=1.19), "fishermen apply knowledge on training programs to enhance fishing performance" (Mean=4.34; SD=0.88) and "fishing productivity is enhanced through training programs available to fishermen" (Mean=4.17; SD=0.78). These findings implied that fishermen had the technical knowhow of

modern fishing gear and knowledge on fishing skills as well as cash management skills. This knowledge has been gained through capacity building programs and trainings. As a result, fishing performance and productivity was enhanced. The findings of the study agreed with the findings of other scholars Ngugi et al., (2017) and Sebastian (2014) who noted that fishermen training and education was majorly affecting their performance. Majority of fishermen need formal education/training so as not to depend more on experience-based learning primarily from their predecessors.

Table 2: Monitoring and Evaluation

Opinion Statement	SD	D	N	A	SA	Mean	S.D
Timely data collection on project enhances fishing project performance in Lamu	0%	0%	22%	34%	45%	4.2308	0.7845
Fishermen in Lamu are trained to sustain the fishing project	0%	3%	6%	55%	37%	4.2587	0.6891
Groups' formation and capacity building are in place to enhance the project performance.	0%	3%	18%	46%	33%	4.0909	0.7864
Fishermen in Lamu have participated in the project implementation	0%	8%	0%	41%	52%	4.3636	0.8354
Fishermen in Lamu are engaged in joint planning and in collectively assessing progress on the fishing projects	44%	27%	0%	29%	0%	2.1329	1.2573
						3.8154	**0.64423**

Source: Survey Data 2023

Table 2 shows that a mean score of 3.81 was obtained for the five statements used to evaluate fishermen's training. With a mean score of 3.81, it is clear that most people feel that monitoring and evaluation is important. Ultimately, the respondents agreed to the statements that "timely data collection on project enhances fishing project performance in Lamu" (Mean=4.23; SD=0.78), "fishermen in Lamu are trained to sustain the fishing project" (Mean=4.25, SD=0.68), "groups formation and capacity building are in place to enhance the project performance" (Mean=4.09; SD=0.78), "fishermen in Lamu have participated in the project implementation" (Mean=4.36; SD=0.83) and disagreed to the statement that "fishermen in Lamu are engaged in joint planning and in collectively assessing progress on the fishing projects" (Mean=2.13; SD=1.25). These findings implied that there was timely collection of data and fishermen were trained to sustain the fishing project. Further, these findings revealed that fishermen participated in planning and implementation of projects. However, very few fishermen participated in assessing the progress of fishing projects. The findings of the study were in agreement with the findings of other scholars Paulinus and Iyenemi (2014) and Wanda (2013) who noted that preserving accurate records is necessary for long-term financial health of M&E initiatives which is key in improving performance of fishing projects.

Table 3: Fisheries Management

Opinion Statement	SD	D	N	A	SA	Mean	S.D
Conservation awareness allows fishermen to conserve fish stock	43%	32%	13%	13%	0%	1.9441	1.0331
Instant feedback and consultation enhance performance of fishing projects	30%	38%	4%	29%	0%	2.3077	1.1822
The local authorities and fisheries management department ensure standardized regulations to all fishermen.	0%	0%	13%	42%	45%	4.3147	0.6963
Issuance of Licenses is fair to all by the local authorities	0%	0%	7%	39%	55%	4.4755	0.6261
Rules that govern fisheries and well enforce by the local authorities	0%	5%	29%	34%	32%	3.9231	0.8966
						3.3930	**0.88686**

Source: Survey Data 2023

Table 3 shows that out of a possible 5 points, the average score for the 5 statements used to evaluate fishermen training was a respectable 3.39. The median score of 3.39 indicates widespread consensus and an adequate knowledge of fisheries management. Ultimately, the respondents agreed that, "conservation awareness allows fishermen to conserve fish stock" (Mean=1.9441; SD=1.03), "instant feedback and consultation enhance performance of fishing projects" (Mean=2.30; SD=1.18), "the local authorities and fisheries management department ensure standardized regulations to all fishermen" (Mean=4.31; SD=0.69), "issuance of licenses is fair to all by the local authorities" (Mean=4.47; SD=0.62) and "rules that govern fisheries and well enforce by the local authorities" (Mean=3.92; SD=0.89). These findings implied that very few fishermen were involved in conservation awareness and as a result, majority felt that the feedback provided did not enhance the performance of fishing projects. The results also indicated that standardized rules and regulations were implemented and enforced by local authorities and licenses were issued fairly. The findings of the study agreed with the findings of other scholars Robert (2017) and Marten (2015) who noted that for the sustainability of these fishing projects

Correlation Analysis

The researcher created a correlation matrix between the variables utilizing the SPSS software. The results are summarized in Table 4.

Table 0: Pearson Correlation Coefficient Matrix

		Performance	Fisherman Training	Monitoring and Evaluation	Fisheries Management
Performance	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	143			
Fisherman Training	Pearson Correlation	.667**	1		
	Sig. (2-tailed)	.000			
	N	143	143		
Monitoring and Evaluation	Pearson Correlation	.833**	.861**	1	
	Sig. (2-tailed)	.000	.000		
	N	143	143	143	
Fisheries Management	Pearson Correlation	.828**	.796**	.756**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	143	143	143	143

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Survey Data (2023)

Results for training fisherman are shown in Table 4, where the p-value is 0.000, which is much lower than the 0.05 threshold. This indicated that educating fishermen significantly impacted the success of fishing endeavors. The favorable correlation between fisherman training and project success is indicated by a Pearson Correlation Coefficient of 0.667. As a result, the research found that training for fishermen was the most important factor in the success of a fishing project supported by the International Committee of the Red Cross in Lamu, Kenya.

Monitoring and assessment had a p-value of 0.000, which is significantly lower than the 0.05 threshold (p0.05), as shown in Table 4. This meant that measures taken to keep track of and assess the success of fishing initiatives were crucial. The r-value for the correlation between monitoring and assessment and the success of fishing initiatives is 0.833, indicating a very significant positive link. Research found that a key factor in the success of a Red Cross-funded fishing initiative in Lamu, Kenya was regular monitoring and assessment.

Table 4 shows that the p-value for fisheries management is 0.000, which is much lower than the 0.05 threshold (p0.05). This indicated that fisheries management was crucial to the success of fishing endeavors. The r-value for the Pearson correlation between fisheries management and fishing project success is 0.828, indicating a very significant positive link. The study's findings, then, indicate that fisheries management was the decisive factor in the success or failure of an International Committee of the Red Cross-funded fishing operation in Lamu, Kenya.

Regression Analysis

Multiple regressing analysis was computed to derive the relationship between the variables.

Model Summary

The model summary shows the degree to which the dependent variable affects the independent variable. Table 5 shows the findings of the study.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.923[a]	.853	.849	1.35265

a. Predictors: (Constant), Fisheries Management, Monitoring and Evaluation, Fisherman Training

Source: Survey Data 2023

In line with the results of (Mohamed, 2014), table 5 shows a highly significant positive association between project dynamics and fishing project performance (R = 0.923). The project dynamics account for 85.3% of the performance variation (R square = 0.853).

ANOVA

In order to learn how much variation there is in the regression model, an analysis of variance is performed. The findings of the analysis of variance (ANOVA) are displayed in Table 6.

Table 6: ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1470.948	3	490.316	267.980	.000[b]
1	Residual	254.325	139	1.830		
	Total	**1725.273**	**142**			

a. Dependent Variable: Performance

b. Predictors: (Constant), Fisheries Management, Monitoring and Evaluation, Fisherman Training

Source: Survey Data 2023

The model for project dynamics (fisheries management, monitoring and evaluation and fishermen training) and performance of fishing project was substantial at 0.000 (P<0.05). As a result, we may conclude that the overall regression model has a substantial impact on the dependent variable. Consistent with the results of (Singas & Manus, 2014), this research concludes that project dynamics have a substantial impact on the success of fishing projects.

Coefficients

Table 7 displays the results of a regression analysis conducted to ascertain the connection between the dependent variable (fishing project performance) and the independent variable (project dynamics).

Table 7: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-1.393	1.000		-1.394	.166		
Fisherman Training	-.800	.101	-.564	-7.922	.000	.209	4.779
Monitoring and Evaluation	1.156	.092	.825	12.530	.000	.244	4.092
Fisheries Management	.756	.064	.653	11.807	.000	.347	2.882

a. Dependent Variable: Performance

Based on table 0.3, the following actual regression coefficient can be derived:

$Y = -1.393 - 0.800 + 1.156 + 0.756$

Where: Y = Performance of fishing Project

X1 = Fishermen Training

X2 = Monitoring and Evaluation

X3 = Fisheries management

Source: Survey Data (2023)

According to the results of a regression analysis, an increase of 0.800 in fisheries management was associated with a corresponding decrease of 1 point in fishing project performance, while an increase of 1.156 in monitoring and evaluation was associated with an equivalent increase in fishing project performance. Subsequently, the coefficients for Fisheries Management, Monitoring and Evaluation, Fisherman Training were significant variables since their significant values was 0.000 (P<0.05). This means that the three independent factors have a considerable impact on the success of fishing ventures when used together. These results are consistent with those of Wanda (2013), who found that fishermen's performance is significantly impacted by training, education, management, and assessment.

The regression equation model for the study, based on the results, is:

Performance of fishing project = -1.393 – 0.800 Fisherman training + 1.156 monitoring and evaluation + 0.756 fisheries management

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study has explored the dynamics and performance of fishing project funded by ICRC Lamu County in Kenya. The findings offer an understanding of dynamics and performance in a fishing project. The study results give project managers an insight on how various dynamics influence

project performance. From the study findings, it is clear that project managers should grasp the concepts of project dynamics and performance for a sustainable project.

Fishermen training impacts heavily on the performance of fishing project and project managers should ensure that the fishermen are well trained and equipped with the latest techniques and fishing gears to improve the fish catch and to improve on the fishermen income in general

Monitoring and evaluation is important to the performance of projects as it enables project managers and staff to be on track, data collected on time using the correct tools allows for accurate information and in return assist in proper decision making, managers should ensure that M and E staff are well trained and equipped to carry out M and E exercise before during and after the project.

Fisheries management enhances the performance of fishing project, local authorities should work together with fisherman offering storage facilities and getting rid of middle men for profit maximization. License issuance should be done as per the laid down rules and the correct fishing gears to be used.

Recommendations

The primary aim of the study was to explore and examine project dynamics and performance of fishing project funded by ICRC in Lamu, Kenya. The findings recommend that organizations to organize training for fishermen to equip them with necessary skills to enhance the performance of fishing projects and to improves the technical know-how of fishermen on modern fishing gear, fishing skills and cash management skills. These skills are important in improving fishing performance. The findings suggest that in order to guarantee capacity building and project performance, fish farming initiatives should make more use of monitoring and evaluation outcomes within the project. The study recommends that Authorities should establish a stipulated guideline for a responsive and effective management of fisheries.

REFERENCES

Basta, L.R. &Aziz, G.S. (2018). Factors instrumental to sustainability of projects in Kenya: A case study of Oparanya Mother Care, Kakamega County. *The Strategic Journal of Business and Change Management, 3*(4), 3030-319.

Belwal, A. M. (2015). Food security and sustainable livelihoods: The policy challenge. *Development, 44*(4), 24-28.

Chepkwony, S. L. (2014). *IT & education in Malaysia: Problems, issues and challenges*: Longman.

Comte, K. (2014). Non-formal education and community development in Senegal. *Community Development Journals, 41*(2), 210-222.

Cooper, J. A. (2014). Techniques of writing. *Research proposals and reports in education and social sciences*.

Creswell, J. A. (2014). Techniques of writing. *Research proposals and reports in education and social sciences*.

Flynn, N. (2014). *Income diversification and poverty in the Northern Uplands of Vietnam* (Vol. 145): Intl Food Policy Res Inst.

Food and Agricultural Organization of the United Nations (FAO-UN) (2019). FAO in Kenya: Project lists.

Hamadou, S. (2019). Analysis of socio-economic factors affecting food production in Taita district, Wundanyi location. *Unpublished research project) University of Nairobi*.

Hecht, L. (2019). *Fish utilization and trade.* Paper presented at the Second International Congress on Seafood Technology on Sustainable, Innovative and Healthy Seafood.

Kothari, C. R. (2014). *Research methodology: methods and Techniques*: New Delhi: New Age International (P) Ltd. *New Delhi*.

Krosnick, J. A. (2018). *Elements of education and social science research methods*. *Nairobi/Maseno*, 126-133.

Limuwa, M, M. (2018). Small scale fishing communities' perceptions of climate change and its impact on livelihood, gender roles and adaptive capacity; a case of Lake Malawi. Norwegian University of Life Sciences

Marten, S. (2015). An overview of Kenyan fisheries and aquaculture current status, challenges and opportunities for future development. *Fisheries and Aquatic Science* 17 (1), 1-11

Mugenda, M. O., & Mugenda, A. G. (2003). *Research Methods*: Quantitative and Qualitative Approaches, Nairobi: Acts press.

Mubarak, P. (2019). Factors influencing the performance of projects in NGOs funded by WFP in Kenya; A case of action against hunger. *uonrepository*, 34.

Mutuku, E. W. & Muathe D.M, (2019). Diffusion of Innovation Theory. *Boston University School of Public Health*, 4.

Mwamuye, M. H. (2019). Improving developing country food security through aquaculture development—lessons from Asia. *Food Policy, 27*(2), 125-141.

Mwangi, E. (2018). Gender, fisheries and development. *Marine policy, 29*(5), 451-459.

Mwarua, J. R. (2015). A Model for Sustainable Rural Development Based on Community-Life School and Agriculture.

Mwathi, N. M. (2014). Effective Strategies for Implementing a Productivity Program in Fish Farming Enterprises in Kenya: A Case Study of Molo Constituency. *Published in the International Journal of Innovative Research and Studies*.

Ngugi, B. J., Bowman, W., & Omolo, P. (2017). The Impact of Transformational Leadership on Organizational Commitment: Psychological Empowerment as a Mediating Factor and Structural Distance as a Moderating Factor. *Journal of Organizational Behavior*Pages 951–968 in Volume 25, Issue 8 of the.

Ngugi, G. S. (2019). Human Resources: An Analytical Study, both Theoretical and Empirical, with a Focus on Education. *Published by the University of Chicago Press.*

Odhiambo, M. G. (2015). Transboundary Aquatic Animal Diseases: A Spotlight on Koi Herpes Virus (KHV). *Aquaculture Asia*, Volume 9, Pages 24-28.

Ochiew A. J. (2015). *Techniques of writing research proposals and reports in Educational and Social Sciences,* (2nd Edition) Nairobi: kaneja H.P Enterprises

Ondiek, R. D. A. (2015). Fish farming as a means of boosting the economy of Kisumu County, Kenya.

Otieno, M. (2017). *Land Fragmentation in China: Economies Policies and Impact on the Environment.* PhD Thesis.

Paulinus, A.N. & Iyenemi, S.W. (2018). Influential Factors Affecting the Performance of Donor-Funded Projects: A Case Study of Embu Water and Sanitation Company in Embu County, Kenya. *International Academic Journal of Information Sciences and Project Management*, Volume 3, Issue 2, Pages 317-330.pdf

Robert, E. T. W. (2017). *Evaluation of Gender Integration in Agricultural Food Security Extension Programs in the Central Division of Kitui District, Kenya. Conducted at the University of Nairobi, College of Education and External Studies, Kenya.*

Ruona, P. (2014). Opportunities in adoption of commercial fish farming as a new enterprise for small scale farmers in Kisii County, Kenya.

Silvius, M. D. (2016). *Educational research*: An introduction, 5th edn (New York, Longman). *5.*

Vince, P. (2013). Implementing a Systems Approach to Foster Integrated Aquaculture. *Aquaculture Economics & Management*, Volume 2, Issue 1, Pages 1-12.

Wanda, A. (2013). Challenges facing fishermen in Western Kenya. *Greener Journal of Agricultural Science*, 3(5), 305-311

William, A. (2017). *Education and Social Science Research Method*. Nairobi: Masola Publishers.

Wilson, M. J. (2015). *Fishery Value Chain Analysis*: Background Report–Kenya. *FAO, Rome, IT*, 2-10.