CHAPTER ONE
INTRODUCTION AND BACKGROUND

1.0 Introduction

This report is as a result of a research carried out to investigate the communication strategies used by the Department of Fisheries in Kafue fishery extension. The report aimed at analyzing these strategies with a view of enhancing them for the benefit of rural development. The report particularly covers Chanyanya to Kafue Gorge fishing sites.

The report has seven chapters. Chapter One provides background information of Zambia's historical, economic, political, social and natural resource with particular emphasis on the types of fisheries in Zambia.

Chapter Two discusses the methodology used in coming up with the report. This includes the quantitative and qualitative surveys.

Chapter Three focuses on the conceptual and theoretical frame works used in the research. In this chapter, the main concepts have been defined, an explanation on how they are linked to the study provided and their relevancy to the study shown.

Literature review is contained in Chapter Four where three levels; the global, African and Zambian perspectives are explored.

Chapter Five contains data analysis and the findings of the research both from the quantitative and qualitative surveys. Chapter Six follows with an analytical discussion of the findings, while Chapter Seven contains the conclusion and the recommendations to the study. The last part of the report contains references and attachments to the report.

1.1 Profile of Zambia

Zambia is a landlocked country without direct access to the sea, situated in south-central Africa. Zambia, which derives its name from the Zambezi River that rises in the northwest corner of the country, occupies a total area of 752.614 square kilometers. Of this square kilometer, 740,724 square kilometers is land while 11,890 square kilometers is covered by water (The World Atlas). Geographically, Zambia lies on the latitude of 10 and 18 degrees south and longitude of 22 degrees and 33 degrees. Zambia is surrounded by eight neighbors namely: Democratic Republic of Congo to the north and northwest, Tanzania to the northeast, Malawi to the east, Mozambique to the southeast, Zimbabwe to the south, Botswana and Namibia to the southwest and Angola to the west, as shown on the map below.

Figure 1.1 Source: http://en.Wikipedia .org/wiki/Image:Za-map.png

1.1.1 Climate

Zambia lies 1,300m above sea level and has a tropical climate which is modified by altitude. Zambia has a moderate temperature climate with humidity normally below 40%. The elevation plateau position and the southward movement of the equatorial low-pressure belt in the summer are the dominant controls of Zambia's climate. Zambia has clearly separated dry and rainy seasons, which are influenced by the south to north movement of the Inter Tropical Convergence Zone (ITCZ).

Zambia has three seasons as shown in the diagram below.

Table 1.1 Seasons in Zambia.

SEASON	**PERIOD**
Cool and dry	May to August
Hot and dry	September to November
Warm and wet	December to April

Temperatures are generally moderate with a mean range of 30 degrees to 35 degrees Centigrade. The coldest month has a range of 5 degrees to 10 degrees Centigrade over most parts of Zambia.

In the warm wet season, heavy showers and thunderstorms occur, followed by spells of bright sunshine. During this season, aquatic life grows profusely as rivers, lakes and streams are full of water.

The average rainfall, between November and April is about 950mm; while summer temperatures are from 20 degrees to 32 degrees Celsius. Winter temperatures

range from 10 degrees to about 26 degrees Celsius. This explains why the country experiences droughts from time to time affecting aquatic life.

1.1.2 Demography

Zambia's population in 2005 was estimated at 11.5 with an annual growth rate of 3.2 per cent. By African standards, Zambia has a low population density estimated at 13 persons per square kilometer, which is half of the Sub-Sahara African average. Zambia is one the most urbanized countries in the region, with over 45 per cent of the total population living in urban areas. Lusaka is the largest urban centre in Zambia. The towns on the Copper belt constitute the largest concentration of urban population with slightly more that 75 per cent of the total.

There are 73 different ethnic groups among the indigenous population in Zambia. English is the official administrative language of the government and provides a means of bridging communication gaps.

The youthful population of below 15 years is estimated at 45.5 percent of the total population. This is according to the Central Statistical Office (CSO) data of 2001. Life expectancy has been rapidly declining from 46.9 in 1990 to 39 in 1999 and to the current 36 as at 2003. Further, infant mortality rate for Zambia is 95 per 1,000 births. HIV prevalence in Zambia has recently seen a small reduction from 16 per cent in 2005 to 14 percent in 2008.

Christianity is the major religion with indigenous beliefs, Islam and Hinduism in minority.

1.1.3 Geography

The topography of Zambia is dominated by an uplifted surface. The highest elevations of 2.164m are reached in the eastern part of the country on the Nyika plateau bordering Malawi. This plateau is associated with the famous East African Rift Valley system. Elevations gradually decline moving west-wards across Zambia.

The Zambezi River and its two main tributaries, the Kafue and Luangwa Rivers, drain approximately 77 per cent of Zambian water to the Indian Ocean. The remaining 23 per cent is drained primarily to the Atlantic Ocean through the Chambeshi and Luapula Rivers, which flow in to the Congo River that traverses the Democratic Republic of the Congo.

1.2.0. Historical background

Zambia is formerly Northern Rhodesia. The country was administered by the British South African Company from 1891 to 1923 when it was taken over by the United Kingdom. The name changed to Zambia at independence in 1964 with Kenneth Kaunda as its first republican president.

1.2.1. Economic social and political background.

When Zambia attained independence in 1964, it adopted a socialist economy. There was a large-scale nationalization of the mining industry and creation of large state owned parastatals such as the Zambia Consolidated Copper Mine (ZCCM). In order to ensure self sufficiency and industrial diversification, the Zambian government embarked on central planning by setting up a large civil service. At independence, the government managed to provide basic services such as health, education, water and sanitation as well as shelter to most of its citizens.

The over-dependency on copper however had its effects following a sharp decline in the price of copper on the World Market, the world price of oil and energy fuelled global inflation pushing up the price of capital imports. These factors entailed unprecedented social and economic difficulties.

Politically, multi-partism only prevailed for the first seven years after independence before the constitution was amended in 1971 to declare Zambia a one party participatory democracy.

Domestically, despite its considerable mineral wealth, Zambia experienced major challenges. At independence, there were few trained and educated Zambians capable of running national affairs.

1.2.2 Natural resources

Zambia is endowed with a lot of natural resource of land and water. Land resources include minerals such as copper, cobalt, zinc, lead, coal, emeralds, gold, silver, uranium. Water resources are vast and include the falls, lakes and rivers. According to the Food and Agriculture Organization (FAO) Fishery and Aquaculture Country Profile (2006), Zambia has 15 million hectares of water in the form of lakes, rivers and swamps which provide the basis for extensive fresh water fisheries. The major basins in Zambia are the Zambezi, Lake Mweru -Wantipa catchment, Luapula and Lake Tanganyika. The Zambezi Basin comprises the Luangwa River, Lukanga Swamps, Kafue River, upper Zambezi, Lake Kariba and lower Zambezi. Luapula Basin consists of the Chambeshi River, Bangweulu Lakes and Swamps, Luapula River and Lake Mweru. The Lake Tanganyika Basin is the smallest with fish fauna of Nilotic affinities while Lake Mweru-

Wantipa catchment is considered as a drainage system with no outlet. Aquatic life inhabiting in these systems is also different.

1.2.3. Types of fisheries in Zambia

The Fisheries of Zambia are classified into major and minor fisheries. Major fisheries refer to fisheries of large water bodies while minor ones include fisheries of small water bodies.

According to FAO (Country profile, 2006), Zambia has eleven main fisheries of which four belong to the Congo River basin and seven to the Zambezi River basin. The fisheries in the Congo River basin include Tanganyika, Mweru-Wantipa, Mweru-Luapuala and Bangweulu. Kafue, Kariba, Lukanga, upper Zambezi, lower Zambezi, Itezhi-tezhi and Lusiwasi belong to the Zambezi River basin. Below is a detailed exploration of selected fisheries;

1.2.3.1 Lake Tanganyika

It is a very ancient and deep lake situated in the northern part of Zambia. Because of its anciency, Lake Tanganyika has over 252 known species of which 72 per cent are endemic to the lake. Of all species, 90 per cent belong to the *Cichlid* (bream) family and 99 per cent of the *Cichlids* are endemic to Lake Tanganyika. The lake supports an intensive commercial fishery exploiting *pelagic* species of *Kapenta, Limnothrissa Miodon* and *Stolothrissa tanganicae*, and a *Lalid, Luciolates sterppersii* (*Bukabuka*).

1.2.3.2 Mweru-Wantipa:

It is a shallow area of lake and swamp without an outlet, with a periodic change in the general water level. The kinds of fish are limited in number. Mweru -Wantipa has a

collapsed bream fishery due to intensive use of beach seines. Consequently, the fishers are now exploiting juvenile *Cichlids* causing further decrease of the species. The Department of Fisheries has recently carried out a restocking exercise of the bream to re-establish the bream fishery (FAO, 2006).

1.2.3.3 Lake Mweru (Mweru-Luapula)

It is a large shallow lake into which the Luapula River drains from the swamps of Bangweulu. The lake is shared with the Democratic Republic of Congo. It is a most productive fishery with its proximity to the market on the Copperbelt. The lake was once famous for its highly valued *Cyprinid Labeo altivelis* (*Mpumbu*) which is now rare due to over fishing and poor fishing practices. The major fish resource is now *Clupeid Microthrissa Moerueusis* (*Chisense*).

1.2.3.4 Lake Bangweulu

It is an area of shallow lakes and vast swamps and lagoons. Lake Bangweulu and swamps complex is made up of six principal lakes and vast fringing papyrus floods plain swamps. It is home to 87 recorded species of fish. Of these 33 are of commercial importance. The fishery is dominated by catches of the *Clupeid angraulicypris spp*, *Cichlids* and *Characids*.

1.2.3.5 Kafue River.

Itezhi-tezhi Lake and the Kafue River are inhabited by *Characid Bycinuslaterlis* and the *Schibed mystus* in their abundance. The Kafue River has two important fisheries; the Lukanga and the Kafue flood plain. Both fisheries however rely on seasonal flooding for their productivity. The flood plain fishery is the largest exporting fishery in Zambia. The Kafue flood plains and the extensions of the Lukanga swamps are a *Cichlid Tilapia*

spp fishery, although of late the non indigenous species *Oreochromisnioticus* has infested the flood plain being introduced inadvertently by the sugar plantation fish farm.

This research dwell much on Kafue fishery but concentrating on the lower part of the river from Chanyanya to Kafue gorge fishing sites.

1.2.3.6 Upper Zambezi River

The upper Zambezi River includes the fishery of the Central Barotse flood plain, the Balovale Fishery in the north. Others on this river are the Mombova and Sesheke Fisheries. The *Cichlids* are the principal stocks and resource being exploited.

1.2.3.7 Lake Kariba

It is a deep man-made lake formed by damming the Zambezi River. It is quite different from the rest of the fisheries. The fishery has two types of fisheries; an artisanal gillnet fishery based on exploitation of fish species originally of the Zambezi River and a commercial fishery based on the introduced *Clupeid* (*Kapenta).*

1.2.3.8 Other fisheries

These are minor fisheries found on almost every river or stream in Zambia. They include, Chambeshi, Lake Lusiwasi, Luangwa River.

1.2.3.9. Conservation dams and fish ponds

Conservation dams have been made in areas developed for fish production. Fish ponds have also been developed in areas of good water supplies and in association with intensive irrigated farming projects.

1.2.4. Types of fishers

In Zambia, as in some other countries in Africa, fishing is carried out by two distinct groups namely; traditional or artisanal fishers and industrial operators.

1.2.4.1 Traditional fishers.

These are also called artisanal or small scale fishers who produce fish enough to eat and sale locally with no ambitions to export. They use simple crafts, nets, dug out canoes and other traditional methods of fishing. According to the Fishery and Aquaculture Country Profile (FAO, 2006), traditional fishers are located around each fishery in camps or villages and counts up to more than 25 000 in number. They dominate in terms of production out-put and labour. Their fish is usually distributed by private and individual traders mostly women. Traditional fishery from a rural development point of view is an important open employment sector.

Dennis and Evelyn (1999) note that large fishing villages and camps are now swelling due to scarcity of fish during certain times of the year and high migration in search of other livelihood activities.

1.2.4.2 Industrial operators

These are mainly found on Lakes Kariba and Tanganyika where they operate large fishing vessels exploiting the *pelagics* (*Kapenta*).

Fisheries in Zambia are largely artisanal and this research mainly concentrates on artisanal fishers on the Kafue plain fishery.

1.3. Statement of the problem

This research examines the communication strategies used in small scale fishery extensions of the Kafue plain and how these communication skills can enhance the lives of rural communities. Communication, which is defined as a process of transmitting information, ideas, opinions from one person to another through the use of symbols such as words, art, gestures, etc (Berelson, 1964), is very important to any human being as a person is by nature communicative.

With the assertion in this paper that about 50 per cent of Zambian population live in rural areas, communication for development of these poor rural population is cardinal. Rural development is defined as a distinct approach to interventions by the state in the economies of underdeveloped countries and one which is at once broader and more specific than 'agricultural development' (Harriss, 1982). Rural development is in this case a process of change in as far as rural societies are concerned.

With the exception of Lake Tanganyika, most fisheries of Zambia are occupied by large numbers of small-scale fishers, rather than a few highly organized units. Most of the fishing is carried out by individuals with one or two helpers. In the Kafue plain to be specific, fishing was until recently not been a full time occupation; many fishers tend to revert to crop growing in the rain season. At present, many fishers still use dug out canoes and live in temporal structures in the fishing camps which are also used as permanent homes, raising families with little or no sanitation facilities. On the other hand, these small-scale fishers are persistently inadherable to State sanctions, for example during fish ban period or when there is an outbreak of fish disease (Kapasa, 2004). The

use of forbidden fish gear is also rampant among these small scale fishers who solely depend on fishing for survival.

The problem therefore is that despite claims of constant communication by the Department of Fisheries. . .

- Fishers continue to lack knowledge of fish conservation methods.
- Fisher communities portray a negative attitude towards the Department of Fisheries in comparison, for example, to the way farmers portray the Department of Agriculture.
- Fishers continue to defy the fish ban policy and conservation methods.
- A gap of isolation continues to separate the fisher communities from the Department of Fisheries with poor levels of interaction between them.
- Existing penalties have not deterred would be offenders.
- Fish ban policy has not contributed towards fish conservation.
- Fisher communities have remained among the poorest even in the midst of economic growth.

This research therefore endeavors to examine the communication strategies engaged by the Department of Fisheries in the Kafue fishery extension, identify challenges and inadequacies faced by both the fishers and the Department of Fisheries. It also makes recommendations with the view of enhancing their lives.

1.4 Rational

The reason behind this research is that there is potential in small scale fisheries which need to be identified and exploited to its maximum for the benefit of the poor rural communities. Fish is an important food item in the Zambian diet accounting for up to 55 per cent of the national dietary. According to FAO (2006), rural households account for 47 per cent of fish consumption followed by urban households of 30 per cent.

Everyone irrespective of social economic status enjoys fish in Zambia. Similarly, fish production is an important occupation in rural Zambia with about 25,000 artisanal fishers. The sector either directly or indirectly offers employment at various levels, improving the local economy especially in rural areas. It is therefore a strong contention that aquaculture can and should play an important role in terms of food security, nutrition and income generation.

Access to communication is vital for the rural community appraisal and specifically in this case. According to the FAO code of conduct for responsible fisheries (2005), responsible fisheries require the availability of a sound scientific basis to assist fisheries managers and other interested parties in making decisions. It is with this view that this research endeavors to bridge the existing gaps between fish managers and the fishers and contribute to their effective interactions.

1.5 Objectives

This research hopes to achieve the following objectives:

1. Identify communication strategies used by the Department of Fisheries in reaching out to fishers in the Kafue plain fishery extensions.

2. To analyze the strategies used by both the Department of Fisheries and the fisher communities.

3. To identify barriers that the fishers meet in the communication process.

4. To determine the extent to which local fishers are involved in designing and dissemination of messages in their set-up.

5. Make recommendations for improved communication in order to enhance rural life of fisher communities.

CHAPTER TWO

METHODOLOGY

2.1. Research Questions

The following are the research questions that were employed to help solicit information from respective respondents:

1. What are the communication strategies used by the Department of Fisheries in reaching out to its fisher communities?

2. What are the leadership structures in the fisheries extensions?

3. How effective are fisheries associations and clubs in Kafue fisheries extension?

4. Of the communication strategies used, which ones are effective and easily applicable?

5. What are the challenges or obstacles that fisheries extensions and fisheries associations meet in the communication process?

6. What can be done to improve the communication among member associations and individual fishers?

7. What can the Department of Fisheries do to improve its message packaging in order to meet specific target groups?

2.2 Target group

The population on which this research was done consisted of the people living along the Kafue River and involved in fishing activities from Chanyanya to Kafue Gorge fishing sites. The target group included the fishers themselves, leaders of the fisheries associations, the Department of Fisheries extension officers, Fisheries consultants based

in Kafue Town and Kasaka Fisheries Training Institute lecturers and students respectively.

2.3. Methods used to collect data

To ensure that as much data as a possible is collected, the researcher used both the quantitative and the qualitative surveys.

2.3.1 Quantitative survey

2.3.1.1 Questionnaires

Questionnaires are a systematic and scientific means of data collection in which a number of questionnaires were used on the members of fisheries extensions, fisheries associations to solicit their valuable responses. The questionnaires were administered by way of interviewing the respondents in local languages as the majority was disadvantaged by the use of English. This approach was advantageous in terms of precision and use of statistics thereby reducing to a great extent the risk of subjectivity inference in the study.

2.3.2 Qualitative survey

In this approach, the following methods were used:

2.3.2.1 Focus group discussion

The researcher conducted the focus group discussion with a group of eight participants distributed as follows:

4 Fishermen.

1 Lecturer from Kasaka Fisheries Training Institute.

1 Student from Kasaka Fisheries Training Institute.

1 Senior Fisheries extension officer.

1 Consultant in Fisheries and Aquaculture.

Selection of members to be on the focus group discussion was based on their knowledge of the communication strategies used in their locality. The researcher used a convenient sampling method for the focus group discussions. It was cheaper and applicable for the researcher.

2.3.2.2.1 Procedure

1) The researcher set a date and time and allocated 90 minutes to the focus group discussion. The researcher moderated the discussion assisted by three research assistants.

2) The researcher checked with the discussants to ensure the information was correct.

3) The researcher created the coding sheet with categories where information was entered, the data analyzed and the findings summarized.

2.3. 2.2 In-depth interviews

This was another data collection method in which an in-depth interview was conducted with a Senior Fisheries extension officer in Kafue. This method enabled the researcher make a follow up on the focus group discussion with the Department of Fisheries. It also helped the researcher gain a deeper understanding of the relationship between the Department of Fisheries and the fisher communities.

2.3.3 Limitations of the study

The researcher encountered four major limitations to this study. The first one is the long distances in reaching out to the fisher communities. For example Chanyanaya fishing site is over 50 Kilometers from Kafue Town while Kafue Gorge is over 60 Kilometers from Kafue Town. Secondly, the researcher experience resource limitation as he was using his personal resources. Thirdly, the researcher faced language barrier in

reaching out to other fishers who were not respondent to languages familiar with the researcher. However some research assistants were able to help with an interpretation. In the process some questions lost the original meaning through the process of interpretation. Fourthly, the researcher faced the limitation of mistrust between the Department of Fisheries and the fisher communities as they initially accused the researcher of being an envoy of the Department of Fisheries to investigate them. This took time and dialogue before some fishers opened up to the interviews. Connected to this limitation is the amount of illiteracy among the fisher communities. This hampered the quick administration of the questionnaires as the researcher needed to follow up the questionnaires slowly and trying to explain the same questions in several ways in order for the respondents to understand. This had a huge disadvantage on the time factor.

CHAPTER THREE

CONCEPTUAL AND THEORETICAL FRAME WORK

3.1.0 Definition and operationalisation of concepts.

3.1.1 Participatory communication

According to Diaz (1994) Participatory communication is a type of communication in which all the interlocutors are free and have equal access to the means to express their views, feelings and experiences.

3.1.2 Participatory development communication

This is similar to participatory communication. Participatory development communication refers to the use of mass media, traditional and interpersonal means of communication that empowers communities to visualize aspirations and discover solutions to their developmental problems and issues (Nsangu, 2007).

3.1.3 Communication for development

3.1.3.1 Development defined

Dudley Seers (2006) defined development as the "reduction and elimination of poverty, inequality and unemployment within a growing economy" (2006: 27). While Schramm and Winfield understood development as "the economic and social changes taking place in a place and in a nation as it moves from a traditional to a modernized pattern of society, these changes are associated with division of labour, growth of industry, urbanization, and incomes, and the preparation of citizens – by literacy, education of citizens, and information – to participate broadly in national affairs" (1967:425).

For Mwosa (1987), development varies in its understanding depending upon the community in which one lives. To an urban dweller, development means more job opportunities, more and modern buildings, and better facilities. On the other hand, to a villager, development might mean easier access to water, an irrigation scheme, or primary health care.

Foure (1996) defined development as the general improvement of human conditions in the third world. For him, development is measured by the existence of conditions that were not present prior to implementation of intervention programmes.

The Communication for development manual (2002) refer to development as a long process of qualitative and quantities changes in society in political, economic, social and cultural terms, which leads to individual or collective well-being.

In the definitions above, the movement of individuals and communities especially the poor rural from less to more is emphatic. It evolves human life conditions and progression from a lower to a higher level (Kasoma, 1994). This research views development in this perspective.

3.1.3.2 Communication defined

The word communication comes from the Latin's "*communis*," which means "common." It aims to make common. Berelson (1964) defined communication as the transmission of information, ideas, emotions, skills, etc by use of symbols such as words, pictures, figure, graphs, etc.

McQuail said, "The term communication has many meanings and definitions but the central idea is of a process of increased commonality or sharing between participants on the basis of sending and receiving messages" (1994:23).

Central to the definitions above is the increased participation between the sender and the receiver using common symbolic expressions.

3.1.3.2.1 Types of communication

The following methods of communication have been singled out as relevant to this study.

1. *Intra personal communication* – communication that takes place within oneself (thought processes). It could be through meditation before one makes a decision (Muzyamba, 2008).

2. *Interpersonal communication* – it is a kind of communication which takes place between two individuals or between and individual and a group. It allows face to face interaction and instant feed back is guaranteed.

3. *Mass communication* - it is the sending of messages from the source to a large heterogeneous and unorganized audience through electronic or print media. Electronic media refers to Television, Radio, and Internet while print media includes news papers, books, and some magazines.

4. *Organizational communication* - is a kind of communication which takes place within an organization or between organizations.

5. *Intercultural communication* – this is communication which takes place between people sharing information and human experiences from different cultural backgrounds.

3.1.3.3 Communication for development

The definition of the World Congress on Communication for Development (2006) is appropriate to this study. The World Congress on Communication for Development (WCCD) defined communication for development as a process that builds consensus and

facilitates the sharing of knowledge to achieve positive change in development projects. This building of consensus and the facilitation of the sharing of knowledge is achieved through the use of appropriate technologies; modern technology, traditional and interpersonal communication methods.

3.2 Main theories applicable to the study.

3.2.1 Multi-Step flow theory

Communication shows how consumers pass along information about innovations to other consumers within social networks. The theory looks at conditions that increases the likelihood that a new idea, product or practice will be adopted by members of a given culture or society. Related to this theory is the Innovations and Adoption model which suggests that innovations spread through communication between groups about the meanings of goods and services.

The theory is particularly relevant to our research because it posits that the process of communication from the point of dissemination passes through some inter-mediaries before they are received by the targeted audience. This promotes the importance of opinion leaders who are key to communication within the fisheries extensions.

3.2.2 Wesley and McLuhan's Triadic communication theory

According to the works cited in Chitoshi (2008), this model was developed by Wesley and McLuhan in 1958. It is also called a purposive or professional communication model. The model includes such elements as advocates, beneficiaries, communicators and surrogates.

1) Advocates: these are people who plan and design policies for organizations. They include such as extension agents, field officers. Their work is to diffuse innovations to selected beneficiaries.

2) Beneficiaries: they include individuals, groups or organizations for which the innovation is intended or the target audience.

3) **Communicators**: these are professionally trained people whose work is to ensure beneficiaries participate fully in decision making. They are advocates.

4) **Surrogates**: these are representatives of the target community who may act like a bridge between development agents and the local community.

This theory is relevant because it helps this research evaluate the different field players in the fisheries sector and their tasks.

3.2.3 Diffusion of Innovation theory

Rogers (1962) defined diffusion as the process by which an innovation is communicated through certain channels over time among the members of a social system. Rogers identifies four elements present in the diffusion of innovation process. They include:

1) Innovation – an idea, practice or object that is perceived as new by an individual or other units of adoption.

2) Communication channels - these are means by which messages get from one individual to another.

3**). Time** – the three time factors are:

a) Innovation-decision process

b) Relative time with which an innovation is adopted by an individual or group

c) Innovation's rate of adoption

4). **Social system** – a set of inter-related units that are engaged in joint problem solving to accomplish a common goal.

In diffusion of innovation, the communication process between the media and the point of decision-making by the audience passes through many hands. This promotes the role of opinion leaders who are critical to information dissemination in the fisheries extensions.

Rogers defined the diffusion process as one which is the spread of a new idea from its source of invention or creation to its ultimate users or adopter. He noted that the process of diffusion occurs within society (group process) while the adoption process pertains to an individual. It is a mental process through which an individual passes from first hearing about an innovation to final adoption.

3.2.3.1 Five Stages of Adoption

1. *Awareness*: it is the stage at which an individual is exposed to the innovation but lacks complete information about it

2. *Interest or information stage*: it is where an individual becomes interested in the new idea and seeks additional information through inquiries or consultation

3. *Evaluation or assessment level*: here the individual mentally applies the innovation to his present and anticipated future situation and makes a decision.

4. *Trial Stage*: here the individual makes full use of the innovation.

5. *At the adoption stage*, the individual decides to continue the full use of the innovation.

Nkunika (2006) quoted in the works of Nsangu (2007) has a similar illustration as follows:

1. *Relative advantage to the innovation* – this refers to the degree to which an innovation is perceived to be better than the one it is superseding.

2. *Compatibility*- concerned with the degree to which an innovation is perceives as being consistent with the existing values, past experience and needs of potential adopters.

3. Complexity – refers to the degree to which an innovation is perceived as difficult to understand. Is it easy to understand or appreciate?

4. *Triability*- this points to the degree to which an innovation may be experienced on a limited basis.

5. *Observability* – concerned with the degree to which others can see the results.

The theory is relevant to the research because it looks at the importance of stages involved in the assimilation process of innovations before small-scale fishers can adopt the new ideas disseminated by the planners in the Department of Fisheries and how these ideas can be assessed in a participatory manner.

3.3.0. Co-management concept in the Department of Fisheries.

The Co-management concept arises from the three types of government based management and property right arrangement namely;

1. Direct state control management.
2. Private ownership of the resources.
3. Community based control system of resources.

Kapasa, (2008) notes the limitations involved in all the three types of fisheries management as follows;

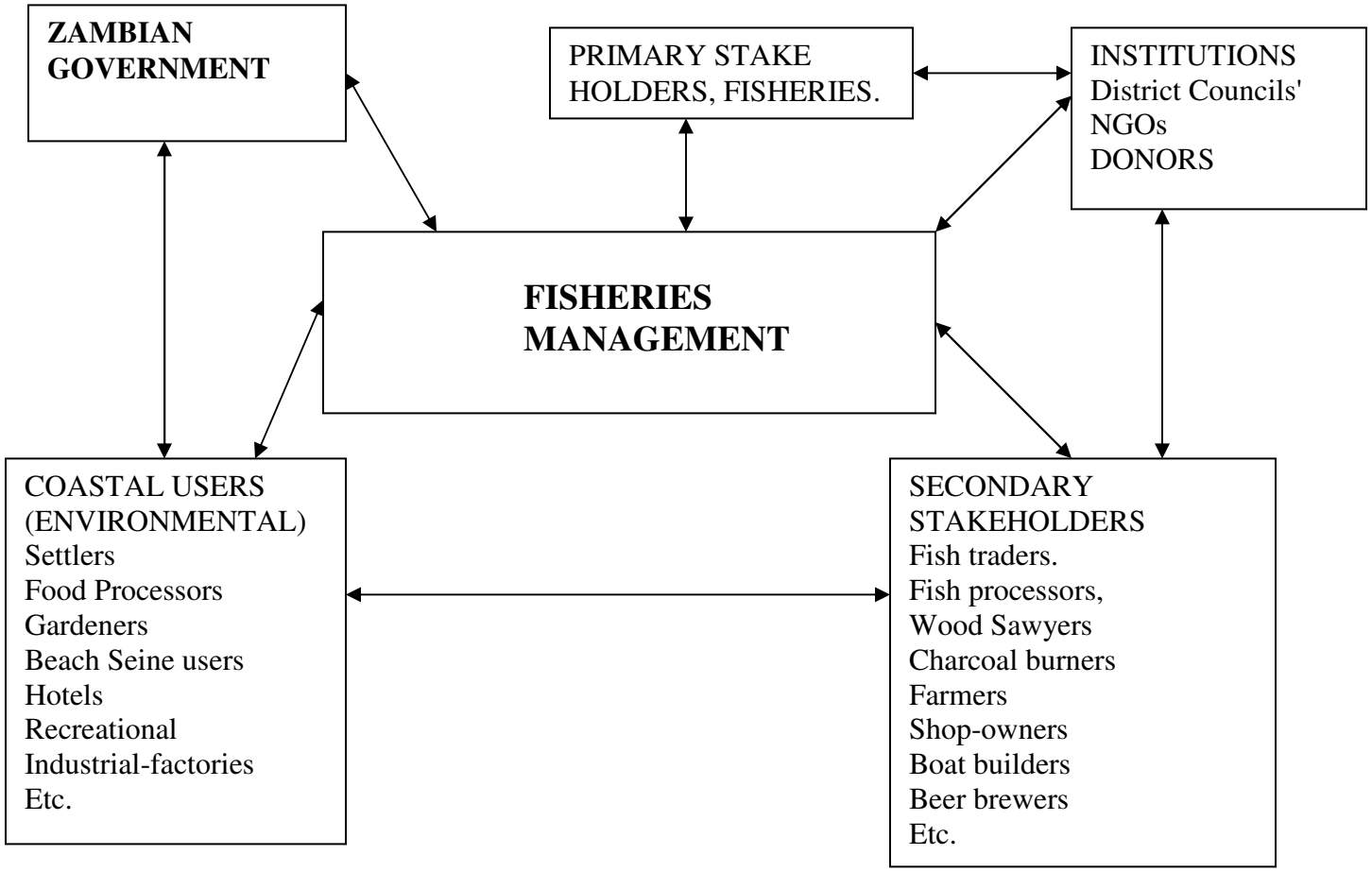
- Direct state control management as having high information costs and often lacking monitoring mechanisms, trained personnel and financial resources.
- Private ownership of the resources as often having prohibitively expensive management costs for enforcement and unequal distribution of outcomes
- Community based control system as often excluding the poorest people in the community from accessing a community property resource resulting in increasing inequality.

A combination of the three management systems in a collaborative manner can therefore offer a more effective, equitable and sustainable management because there is an element of collaborative management of the resources. This combination is what is referred to as ***Co-management.***

By definition, Co-management is a partnership arrangement primarily between government and resource users, but may include other stakeholders, to share the responsibility and authority for managing resources (Kapasa, 2008). In this arrangement, two or more social actors negotiate, define and guarantee amongst themselves a fair

sharing of the management functions, entitlements and responsibilities for a given, area or set of natural resources. The concept of Co-management is an alternative to the conventional top-down approach to resource management and recognizes the value and the importance of involving resource users and other stakeholders in all aspects of management and decision making. The structural frame work below shows how the concept is organized and related to stakeholders.

Figure 3.1 Structural frame work of Co-management. Source: Kapasa, (2008).



3.3.1 Related Concepts

3.3.1.1. Stakeholders are persons, groups or institutions with interests in a project, programme, resource or an area. Stakeholders affect or can be affected by an organization's actions and decisions regarding the future management of the resource.

Stake holders are classified as:

3.3.1.1.1 Primary stakeholders; those whose livelihood may be directly affected or impacted by the decision regarding the future management of the resources on which they depend, for example fishers on fish.

3.3.1.1.2 Secondary stakeholders those whose livelihood may be indirectly affected or impacted by the decision regarding management of the resources or area.

3.3.2. Key features of Co-management

Kapasa (2008) outlines the following as key features of Co-management:

- Consultation between the relevant government agency and resource users over the content of the management.
- Plan capacity building and empowerment of partners.
- Negotiate over rules governing the resource
- Agreement on the rules and responsibilities of partners.
- Delegation of specific management functions to resource users.

Co-management therefore emphasizes partnership and is concerned about agreeing on the roles and responsibilities of the partners and developing a strategy for making decisions together.

It is a process and participatory management approach that provides and maintains a forum for discussion and action on a variety of management related issues including:

- Making rules
- Setting criteria for access to resource
- Conflict management
- Decision-making powers
- Monitoring and enforcing
- Defining roles and responsibilities
- Leadership and livelihood issues.

Through collaborative management, partners and stakeholders learn what works and what does not work according to the capabilities of various partners, circumstances and needs of the particular situation.

3.3.3. Key terms

3.3.3.1. Fish ban or closed season

The Department of Fisheries in Zambia is empowered by Act CAP 200 (1974) to institute a fishing ban to a fishery during a particular period of the year in order to allow fish increase in quantity, grow and breed. This is also done to give time to fingerlings of fish to pass the vulnerable stage. According to Danis and Evelyn (1999) no body is allowed to fish during this period as it is the peak period for breeding. The period is from 1st December to the end of February. Mubanga (1992) outlines the advantages of the fish ban as follows:

- Gives chance for a fishery to regenerate itself;
- Provides opportunity for fishermen/women to concentrate on alternative activities like farming.

- Contributes to reducing the fishing pressure particularly in fisheries which are threatened with over-fishing.

3.3.4. Other concepts and definitions

3.3.4.1 Knowledge

This concept refers to the acquaintance with or understanding of something with familiarity gained through experience and association. It is used to refer to one's range of information and principles acquired through association.

3.3.4.2 Attitude

This concept is understood to refer to the position or postures assumed by the body in connection with an action. In this study it refers to the manner of feeling or thinking that shows one's disposition, opinion, mental set about some information acquired or obtained.

3.3.4.3 Practice

This concept was defined and used to refer to actual performance or application; to carry out an application as a condition of being proficient through systematic exercise (Dennis et Evelyn, 1999). The best practice in this research are those fishing activities which conform to the fish conservation methods as regulated by the government of the republic of Zambia through the Department of Fisheries.

3.3.5 Other terms

3.3.5.1 Fishing

Dennis and Evelyn (1999) defines fishing as any act which is directed at the taking, killing or injury of any fish for household supply or supply to any market or industry.

3.3.5.2 Fisher

A fisher is any person who undertakes fishing as a regular occupation, draws their income from fishing and sustains their livelihood from fishing. Fishers may undertake fishing for the supply of fish to their households, to the market or industry. They may be male or female (Mubanga, 1992).

CHAPTER FOUR

LITERATURE REVIEW

4.1. World Level

4.1.1 Participatory communication as a tool for development

Participatory development has been variously described as a means and an end, an educational and empowering process necessary to correct power embalances among people (Jennings, 2000).

It is broadly conceived to embrace the idea that all "stakeholders" should take part in decision making. Narrowly, Participatory development is described as the extraction of local knowledge to design programmes off site.

Participation is the involvement by a local population and at times additional stakeholders in the creation, content and conduct of a programme or policy designed to change their lives (Jennings, 2000).

This definition is built on a belief that local citizens be entrusted to shape their own future. Participatory development requires recognition and use of local capacities as opposed to the imposition of priorities from outside. It increases the odds that a programme will be on target and its results will more likely be sustainable.

4.1.1.1 Historical perspective of participatory development

The root of participatory approach to development is traced to as early as 1970s when many people in the developing communities began to question the top-down approach to development which was dominant in the 1950s and 60s. This kind of development approach targeted the economic growth of countries as its main goal (Yoon, 2000).

During this time, development was thought to be triggered by the wide-scale diffusion and adoption of modern technologies. In the 1970s and 1980s there was a wide spread of institutionalism rhetoric of participatory development in response to evidence of the failure of large numbers of expensive large-scale, top-down projects in both

capitalist and socialist countries (Mayo and Craig, 2005). By the end of 1980s participatory development had become an umbrella term for a new style of development.

Over the past recent years a number of organizations with very different ideological agendas have seen the need to involve local people in their own development. According to the strongest advocates of participatory development, normal development is characterized by biases which are Eurocentric, have positivism and top-downism approach to development. The tendency was to equate development with 'modernity' which means modernity as achieved by Western societies. Hence, development meant copying these 'advanced' countries through rational planning by experts. This flipside posits that non-experts, local people were sidelined and that their only role was as the objects of grandiose, rational schemes (Mayo et Craig, 2005). Hence criticism grew that top-downism had limited benefits.

In the 1970s, radicals like Freire (1970), advocated participatory action research which created appropriate learning environments for people to expand their needs and achieve development. Main stream organizations like the World Bank argued for the participatory approach to development. Today, most international donor agencies have official statements about the need for beneficiary participation; project guidelines for participatory projects. Academicians like Robert Chambers, (1983) argued that putting the 'last' first was the only way to achieve rural development.

At the core of participatory development is the belief in not relying on the State for development. Participatory development gained popularity around the same time as the neo-liberal counter-revolution of the early 1980s, with its discourse of self-help and individualism (Toye, 1987).

In rejecting the statism and top-downism of 'normal development' the focus of participatory development has become the local or grass root level (Mohan, 2000). This permits a plurality of development goal to be realized as well as giving the community the self-determination it needs. The essence of participatory development is change of role, behavior, relationship and learning, where;

1) Outsiders do not dominate and lecture but facilitate, sit down, listen and learn.

2) Outsiders do not transfer knowledge but share methods which local people can use for their own appraisal, analysis, planning, action, monitoring and evaluation.

3) Outsiders do not impose their reality but encourage and enable capacity for local people to express, create and manage their own ideas.

4.1.1.2 Reasons advanced for participatory development

Mayo and Craig (2005) identified four reasons for participatory development, namely;

1) **Human Rights:** participation and particularly of the poorest and most vulnerable participants is a human right and an inherent and indivisible component of pro-poor development strategies and empowerment.

2) **Effectiveness:** participation of the main stakeholders increases the accuracy of information and relevance of the realities of people's lives and policy decision as well as implementation processes.

3) **Cost – efficiency**: the involvement of the main stakeholders, increases ownership of the development process, better use of resources and is likely to enable mobilization of local resources to augment or even substitute those from outside.

4) **Capacity building:** the participatory process through building skills, capacities and network is a contribution in itself to pro-poor development, civil society and empowerment.

Today, generally four different ways of participation for development can be observed in most development processes:

1) **Participation in implementation:** here people are mobilized and encouraged to take part in the actualization of projects.

2) **Participation in evaluation:** people here are invited to critique the failures and successes of the projects at its completion.

3) **Participation in benefits:** people take part in enjoying the fruits of a project

4) **Participation in decision-making:** people initiate, discuss, conceptualize and plan activities they want to do as a community (Yoon, 2000).

Of the four different ways, decision-making is the most important form of participatory development because it ensures sustainable and community ownership of the projects.

In the light of this research, when fisher communities are involved in the communication and development process, they attain self sustainability and empowerment.

4.1.2 FAO Research agenda on small scale fisheries (Bankok 2004).

Literature from the different parts of the world shows little research in the area of communication strategies in reaching out to small scale fisheries. However, there are significant fishery developmental communications and efforts from the Food and Agriculture Organization (FAO) regarding the small scale fisheries.

This research here isolates relevant points from the research agenda for small scale fisheries done by FAO in 2004, Bankok, Thailand.

The research agenda acknowledged that small scale fisheries globally make an important contribution to nutrition, food and security, sustainable livelihood and poverty alleviation especially in developing countries. However, despite this significant contribution, the position of small scale fisheries and how they fit in to the multiple activities of rural economy remain poorly understood. They have low visibility and receive little attention from policy makers. In this agenda, FAO has a vision in which small scale fishers are not marginalized but their contribution to national economies and food security is recognized, valued and enhanced. It also recognizes that these people should be empowered to participate in decision-making with dignity and respect through integrated management of the social, economic and ecological systems underpinning small scale fisheries. To achieve this vision, FAO came up with five major themes supported by accurate and timely information on which to base decisions and action. The five major points include:

1) Policy, legislation, governance and institutional arrangements.

2) Contribution, role and importance of small scale fisheries.

3) Management approach to small scale fisheries.

4) Post-harvest issues and trade.

5) Information systems.

In this research the committee recognized that the failure to estimate the real role that small scale fisheries play in the economic growth of developing countries and the role of fishing activities at the micro-level (household and local economies) demanded a better understanding of the complexity of the diversification of activities over time.

4.1.3 FAO Advisory Committee on Fisheries Research, Rome, 2004.

The Advisory Committee on Fisheries Research (ACFR) of the FAO meeting in Rome in 2004 recommended designing communication strategies that identify the target audience, tailor messages and define media strategies to reach the intended target audience. The committee recommended the follows:

1) Informative workshops aimed at facilitating the exchange of information between planners and fisheries stakeholders. This would increase their participation.

2) Organization and co-ordination of fisheries forum at different levels (local, district, national and international) to foster stakeholder participation in the decision-making process and institutional development of the fisheries sector and more fully appreciate their importance.

3) Working with the fisheries departments as key carriers through to ministers.

4) Influencing the major donors agencies (in particular the World Bank) to ensure that small scale fisheries are part of their own agenda.

5) Considering the potential role of 'pressure groups' (International NGOs, Civil society, World forums) in influencing the agenda setting and the policy process of national governments.

4.2. African level

4.2.1 The concept of rural development

In the works, "Rural development: Theories of peasant economy and agrarian change", Harris (1982) defines rural development as a distinct approach to interventions by the state in the economies of under-developed countries and one which is at once broader and more specific than "agricultural development". According to Harris, rural development has taken a central role in the area of development. Harris posits that it impossible to talk about development especially in the third world countries without the concept of rural development. Rural communities are not merely a burden on the national eceonmies but also contribute to the Gross Domestic Product (GDP) through small-holder farming activities. Swanapoel (2000) on his part argues that apart from the large concentration of population in rural areas, there is also a problem of rural poverty which is endemic in rural areas. Swanapoel observed that it is mostly in rural areas where cases of malnutrition, hunger, and disease are more pronounced. Therefore if you want to grow the economy, rural communities are a must.

According to Harris, it is from this context that a 'new strategy' for development was coined by the World Bank in order to help developing nations deal with the perennial

problems of poverty. The concept of rural development must be considered as a broader and comprehensive process rather than the goal of simply increasing production. Consequently, rural development as a concept, has given rise to very large development projects in the rural areas mostly in developing countries. Harris contends that rural development has in fact emerged as a distinctive field of policy, practice and research due to issues of poverty, reduction of inequality in income and employment as well as access to public goods and services. Focusing on problems associated with rural communities has marked out rural development as distinctive field because an overwhelming majority of the poor people in developing countries like Africa lives in rural areas.

De Beer (2000) adds that poverty is largely a rural phenomenon. He observed that people in rural communities are in the deprivation trap; poor, weak, isolated, powerless and vulnerable. They live in rural areas which lack most of the basic facilities such as good roads, good health facilities, education, electricity and many others which urban dwellers enjoy. Since rural communities are deprived in essential and basic infrastructure and requirement, rural areas in turn lack any meaningful development.

Economically, the rural poor depend on poor and primitive technologies such as hoes and axes. With this humble technology, their productivity is generally very low compared to their counterparts in urban set-ups. They are further marginalized in the distribution of national resources. Many of their programmes are left unattended to or completely forgotten by national governments. Swanapoel and De Beer (2000), for example argue that most third world development policies are biased towards urban development. Policies only favour investments in cities for the sake of prestige and therefore systematically neglecting the poor rural communities which are actually in dire

need of such developments. According to Swanapoel and De Beer, Tanzania's *Ujamaa* and probably South Africa and a few isolated third world countries have attempted to integrate rural development. The lack of development initiative in rural communities makes them even more powerless, weak and vulnerable especially that representation of governance in their lives is next to zero.

The concept of rural development as explained by Harris, Swanapoel and De Beer contributes greatly to this research which focuses mainly on the poor rural communities of fishers and how they can use communication tools to improve their lives.

4.2.2 Communication strategies for rural development.

Gray Coldevin of Concordia University in his works, "Communication Strategies for Rural Development" (1987-1988), took Lesotho as a case study in setting the goals to prepare the staff of the Agriculture information service to design, implement and evaluate media channel communication campaigns. Its applicability is a range across a variety of rural development themes within agriculture, fisheries and several FAO executed projects for UNFPA involving information and communication for population activities.

The model is particularly appropriate for multi-media campaigns. Broken down into its essential elements, the systematic approach comprises four stages as follows:

1) Needs assessment/Information gathering.

2) Decision-making/ Strategic development.

3) Implementation.

4) Evaluation.

4.3 Zambian level

4.3.1 Rural development in Zambia

Ollawa, in the works: "Participatory Development and Political Economy of National Development in Zambia" (1979), observes that rural under development springs from colonial rule and policy. Ollawa posits that under the benevolent despotism of the British colour government, there was almost a total neglect of rural development however defined. According to Ollawa, at that time there was virtually no defined set of policies or goals which guided the actions and orientation of colonial administration towards incorporating the rural sector in the overall frame work of economic development. Ollawa contends that there was a deliberate policy by the colonial masters to ignore the agriculture sector with only a limited number of European commercial farmers living along the line of rail who directly benefited from government extension services, credit facilities and infrastructural investment.

The other factor which significantly added to the distorted colonial policy on rural development was the total absence of any form of modern industry in the rural provinces of Zambia, yet 50 per cent of Zambia's population lived in rural provinces. Ollawa observes that the Western capitalism and exploitation created the structures and conditions that have actively continued to maintain the economic under development of Zambia since independence. This, according to Ollawa, has generated the events and formidable obstacles that undermine the exploitation of the potentialities and integration of the rural economy in to a national economy of Zambia.

After independence, Ollawa notes that there was an improvement in the rural development outlook. Like many other African countries, Zambia embraced the socialist system of governance in order to quickly undo the distortions in the economy created by the colonialists so as to empower the indigenous citizens. This system of governance saw the introduction of Co-operatives, incentives like the setting up of Lima Bank and fertilizer plant, Nitrogen Chemicals of Zambia in Kafue, in order to increase access of loans and in-puts for farmers. Many other developmental activities were put in place with an emphasis on rural community were most people lived.

Similarly, in his works; "Rural and Agriculture Development", Siame (2006) observes that migration from rural Zambia in the 1970s to 1980s also explains the neglect of rural areas as people followed development to urban areas instead of development following people in the rural areas.

4.3.2 Programme for Luapula Agriculture and Rural Development (PLARD)

Kapasa (2008) in his works, "Progamme for Luapula Agriculture and Rural Development" (PLARD) highlights the need for participatory methodologies in the management of fisheries.

According to Kapasa, participatory methodologies are used to strengthen the delivery of services through the involvement of extension, research workers and stakeholders. Kapasa notes that the involvement of client system in planning, managing and implementation of programmes is central. It ensures improvement in the adoption rates of technologies that are aimed at increasing income and food security and poverty reduction among the poor rural population. The importance of community participation at all stages of development is important and a means of empowerment. In this research,

Kapasa examines how effective the Department of Fisheries has been in reducing the communication gap between extension workers, researchers and beneficiaries of the disseminated information.

4.3.3 Fish conservation in Zambia.

Dennis et Evelyn (1999) undertook an elaborate study on the Fish conservation in Zambia: Knowledge, Attitude and Practice of fishers towards the fish ban policy in Luapula Province.

The study was aimed at assessing how fishing practices, fishers' knowledge and attitude towards the fish ban or closed season policy have contributed to the conservation or depletion of fish stocks in Nchelenge and Kashikishi Fisheries of the Luapula Province. The study examined the following factors;

- Knowledge levels of fishers regarding the ban policy and fish conservation measures.
- Attitudes of the fishers with regard to regulations and policies governing conservation of fish and their responses to them in practice;
- Extent of involvement of the fishers in practices that are not destructive to fish and other aqua spices such as algae, plankton, grass and other marine life.
- Constraints to adopting practices that are friendly to fish environment were also examined with a view that possible and appropriate policies and regulations can be generated.

4.3.3.1 Methods used

The methods used by Dennis et Evelyn in this study included survey and review of literature on fishing in general and fish ban in particular. Other methods included community assessment by means of participatory research methods such as semi-structured interviews and focus group discussions.

4.3.3.2 Findings of the study

The Dennis et Evelyn's study discovered that;

- Fishing is a male dominated activity and that the majority of those involved are married and household heads
- Very few of those fishers have ever been to school while a small number has reached senior secondary school education.
- Fishing is an open activity and does not require any form of educational attainment.
- Fishing is not only perceived as a survival option but as a way of life.
- Fishing is perceived as a dependable form of livelihood that can sustain people's lives if properly managed.

4.3.3.3 What the study did not tackle

The study above did not explore in specific terms the reasons why fishers engage in illegal fishing during the fish ban period. The study did not also investigate the communication strategies used by the Department of Fisheries and to evaluate their impact on fisher communities' lives. This study is therefore aimed at investigating further on the factors that lead to defiance of fish ban policy and to evaluate the communication strategies used by the Department of Fisheries and their effectiveness.

4.4 Conclusion

Having looked at the literature relating to this study, the researcher now looks at what has been left out by the earlier researchers and make a contribution to the knowledge gap. This research aims at up-lifting the lives of the small scale fisheries in the Kafue plain fishery.

CHAPTER FIVE

RESEARCH FINDINGS

Chapter Five of this research deals with the findings of data collected through quantitative and qualitative surveys. The chapter has two parts; findings of the quantitative study and secondly the outcome of the qualitative study. One hundred (100) questionnaires were distributed randomly to solicit responses from the target population and ninety eight (98) questionnaires were received by the researcher. For easier interpretation of data, bar and pie charts as well as cross-tabulations have been used.

5.1 Quantitative survey

5.1.1 Fishing as a main stay of livelihood

Knowledge of fishing as a main stay of peoples' livelihood in the catchment area was cardinal to this study. The research used random sampling method to solicit responses from the target group. According to our findings, 98 per cent depend on fishing for their livelihood while only 2 per cent do fishing as part time activity as illustrated by the table below;

Table 5.1 **Fishing as a main source of income.**

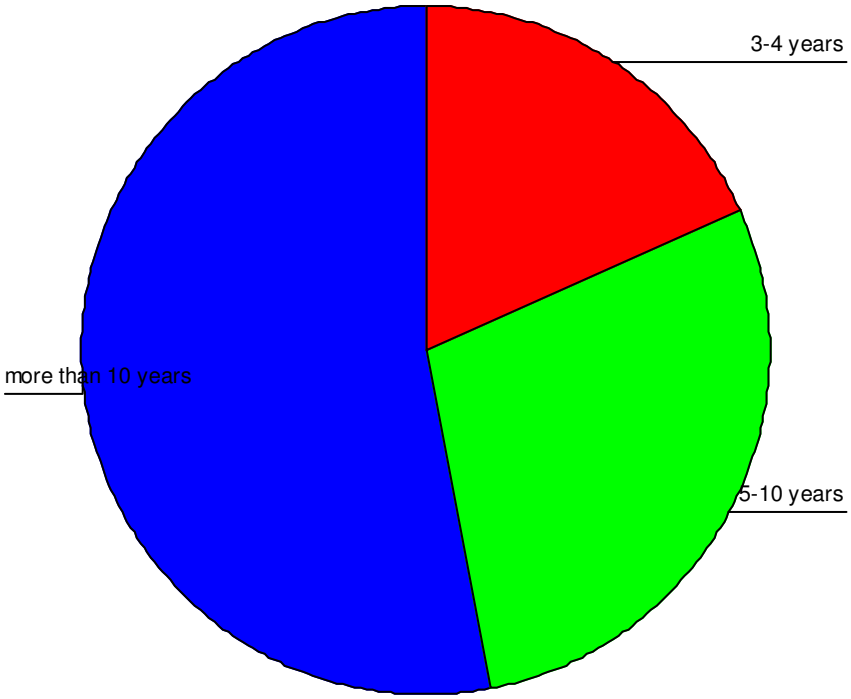
		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Yes	96	98.0	98.0	98.0
	No	2	2.0	2.0	100.0
	Total	98	100.0	100.0	

The results of the table above are sufficient for the researcher to ascertain the relevance of the study as well as attainability of the research results as a good number of the respondents have a lot to do with fishing.

5.1.2 Duration of fishing

It was important for the researcher to know how long the target group had been engaged in fishing. The result would help the researcher determine their Knowledge, Attitude and Practice (KAP) gaps as those who are only few years in the fishing activity may not have deeper knowledge, clear attitude and regular practice of the laws regarding fishing. The findings revealed that 18.4 per cent of the respondents had been fishing for 3 to 4 years, 28.6 per cent have been engaged in fishing for the period of 5 to 10 years, while 53.1 per cent have been fishing for more than ten years. Figure 5.1 below demonstrates the findings;

Figure 5.1 period of fishing



5.1.3 Reasons for fishing

According to the findings, 26.5 per cent engage in fishing as the only source of income, 28.6 per cent do fishing as the only skill of sustenance, while 10.2 per cent are involved

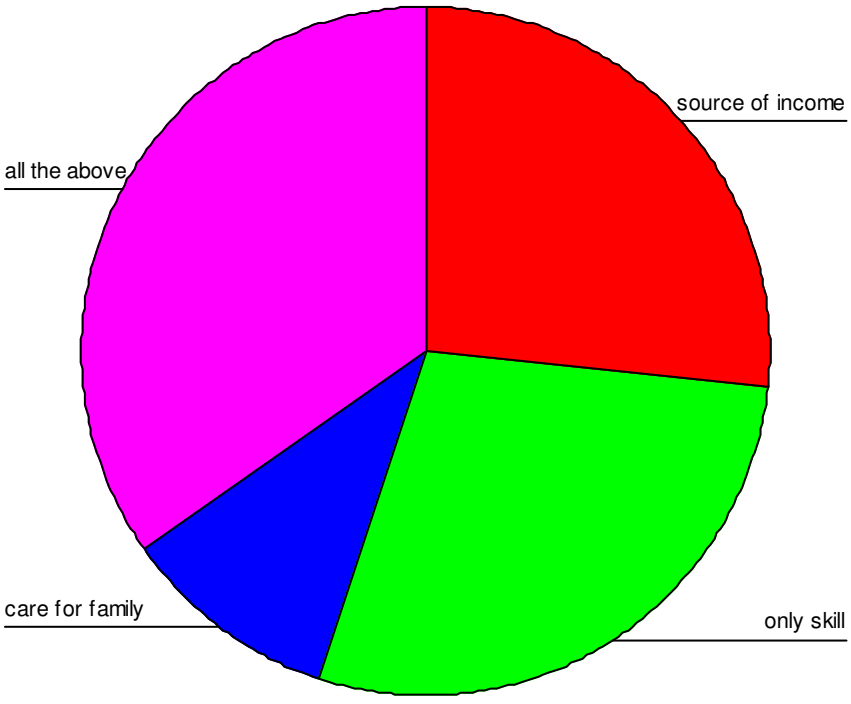
in fishing to care for their families. 34.7 per cent are engaged in fishing for all the three reasons above. The table and the pie chart below illustrate the research findings:

Table 5.2 **Reasons for fishing**

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	source of income	26	26.5	26.5	26.5
	only skill	28	28.6	28.6	55.1
	care for family	10	10.2	10.2	65.3
	all the above	34	34.7	34.7	100.0
	Total	98	100.0	100.0	

The pie chart below illustrates the same results of the study concerning the reasons for engaging in fishing by the target group.

Figure 5.2 Reasons for fishing



These findings coupled with the results on fishing as the main stay activity gives substantive results for the relevance of this study. The fact that the majority of the respondents are engaged in fishing as their main stay activity points to the attainability of the hypothesis of this study.

5.1.4 Other activities involved before fishing

The researcher had interest in knowing other activities the respondents where involved in before they resorted to fishing as their main stay activity. This was important as it helped the researcher to determine the knowledge base of the respondents as those who have been engaged in fishing from childhood may have stereotype knowledge base and may not appreciated alternative sources of income offered by the government. The table below shows the results of our findings;

Table 5.3 **Other work engaged before fishing?**

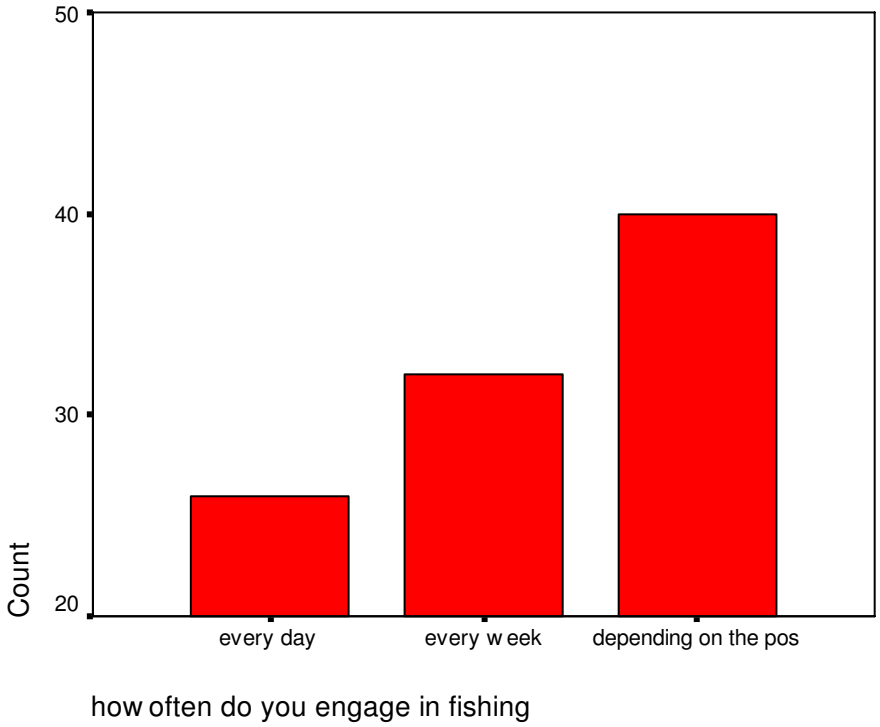
		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Business	38	38.8	38.8	38.8
	School	6	6.1	6.1	44.9
	Farming	16	16.3	16.3	61.2
	Formal employment	16	16.3	16.3	77.6
	Always been fishing	22	22.4	22.4	100.0
	Total	98	100.0	100.0	

According the findings, 38.8 per cent had been involved in small-scales businesses before resorting to fishing, 16.3 per cent were farming before engaging in fishing, 6.1 per cent had attended school before turning to fishing while 16.3 per cent were in formal employment. Further the study reveals that 22.4 per cent of the respondents have been engaged in fishing always.

5.1. 5. Regularity of fishing by respondents

The respondents were asked how often they engaged in fishing to determine their closeness with fishing activity as remote fishers may lack accurate knowledge of this research. However, the results of the quantitative survey differs with those of the qualitative findings where most of the discussants said they engage in fishing every day for survival although they have a big catch of fish depending on the position of the moon as shown in the bar chart below;

Figure 5.3 How often do you engage in fishing?



The results above show that 26.5 per cent of the respondents engage in fishing everyday, 32.7 per cent do fishing every week while 40.8 per cent go fishing depending on the position of the moon.

5.1.6 Sex of the respondents

The study shows that the majority of those engaged in fishing are male at 67.3 per cent while the female are only 32.7 per cent mainly as fish sellers. The table below illustrates the results;

Table 5.4 Sex of respondents

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Male	66	67.3	67.3	67.3
	Female	32	32.7	32.7	100.0
	Total	98	100.0	100.0	

This information is important as it helps planners, policy makers and change agents which sex category to target most in discussing fish conservation issues. This is also true with the qualitative study as only male fishers turned up for the focus group discussion despite some female fishers being invited. Some female fishers said they felt it was not their forum but men's.

5.1.7 Levels of education

The findings show that 28.6 per cent of the respondents have not been to school, 46.9 per cent have only gone up to primary school and 16.3 per cent have gone up to secondary school only, while a minimal percentage of only 8.2 have gone up to college level mainly at a local trade college of St Ambrose where they attained basic skills but can not make use of their skills due to lack of capital and support.

The bar chart below illustrates these results as follows;

Figure 5.4 Level of Education attained.

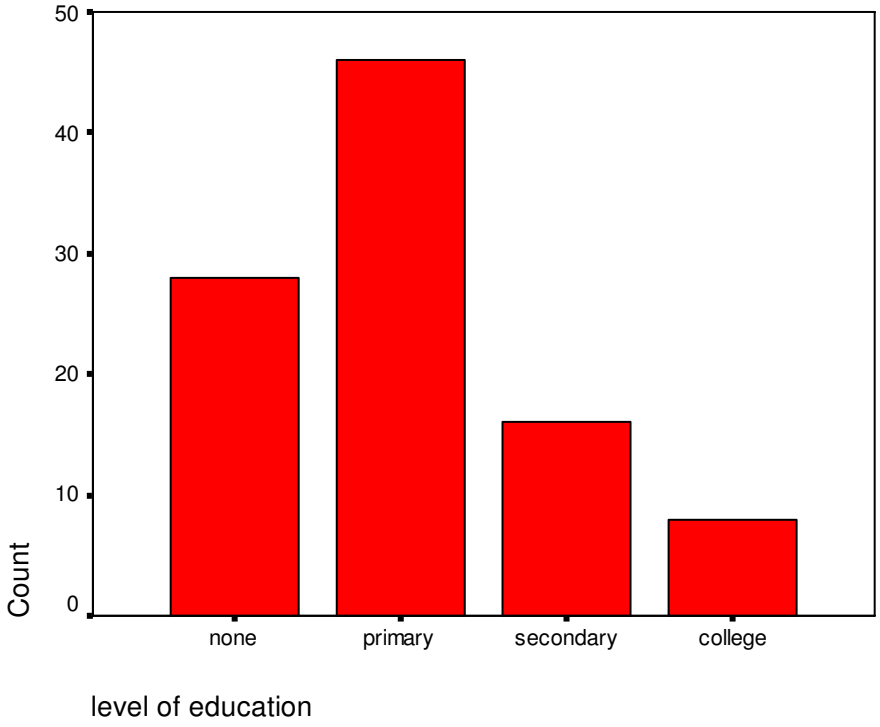


Figure 5.5 above shows that most of the respondents are of humble education background as most of them have gone only up to primary school. This information is important as it helps us understand the levels of comprehension and application of government's policy on fish ban and conservation methods as enforced by the Department of Fisheries.

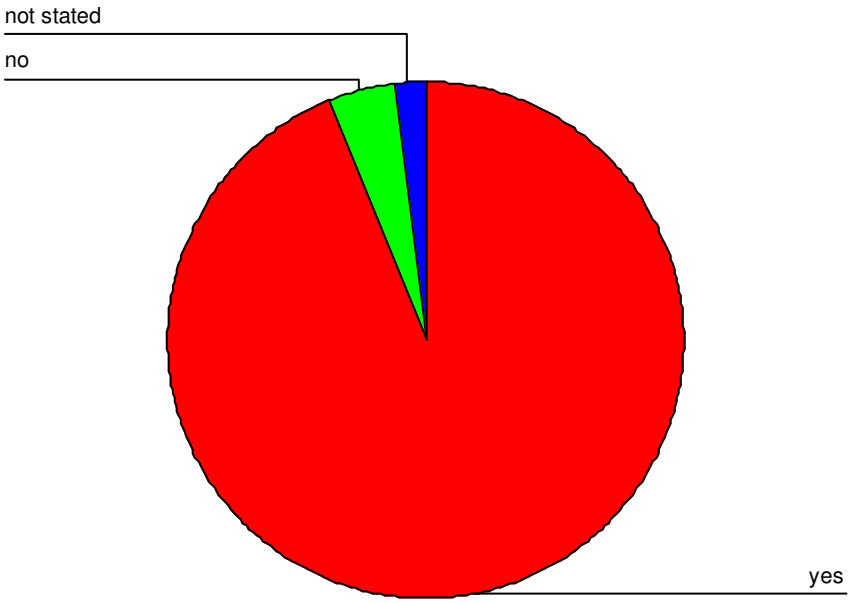
5.1.8 Knowledge, Attitude and Practice (KAP)

The researcher now turned to the critical area of the study; awareness of the Government's fish ban policy and conservation methods. In this section, the researcher was interested in knowing the knowledge levels of the respondents concerning government's policy on fish ban and conservation methods. Further the researcher wanted to know how much the respondents adhere to these regulations. This is against

the background of our observation earlier in this work that despite several warnings, fishers have continued defying government's fish ban policy and have continued to use forbidden fishing gear against government's conservation methods.

The research shows that 93.9 per cent of the respondents are aware of government's policy and only 4.1 per cent expressed ignorance of the policy while 2.0 per cent did not state their position. The pie chart below shows the research findings;

Figure 5.5 Awareness of government's fish ban policy and conservation measures.



5.1.8.1 Knowledge of forbidden fishing gear

Further to the question above, the researcher wanted to know a representation of respondents which is aware of the forbidden fishing gear before we could discuss if at all

they understand and appreciate government's reasons for imposing fish ban during a particular time of the year and the cause for conservation methods. Table 5.6 below shows the results.

Table 5.5 Awareness of the forbidden fish gear

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Yes	83	84.7	84.7	84.7
	No	15	15.3	15.3	100.0
	Total	98	100.0	100.0	

The findings again show that a good number of respondents are aware of the forbidden fishing gear, at 84.7 per cent while only 15.3 per cent expressed ignorance of the forbidden fishing gear as shown by the table above. However, during the focus group discussion, all the discussants showed that they are aware of the forbidden fishing gear and were able to describe it in local languages.

5.1.8.2 Understanding and appreciation of the fish ban policy

The researcher now wanted to know if those who are aware of the policy do understand and appreciate the government's reasons for imposing fish ban during certain times of the year as well as methods of conservations. The table below shows the results of the findings;

Table 5.6 understanding and appreciation of policy

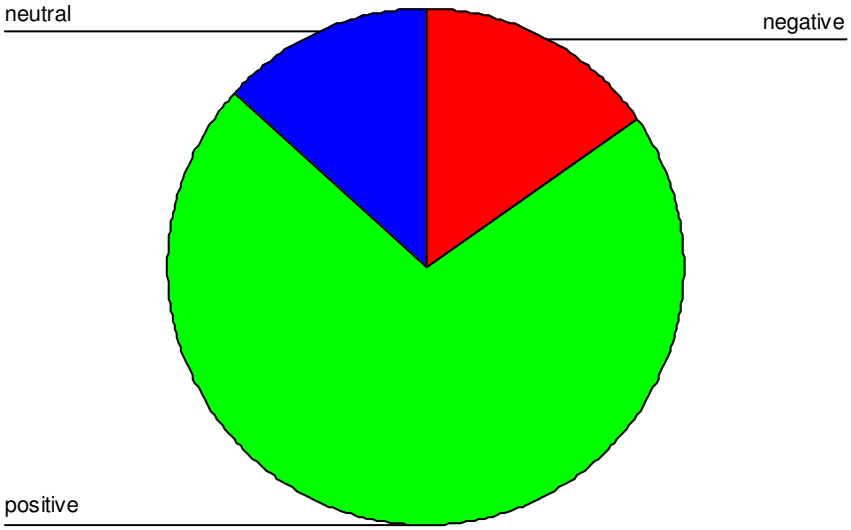
		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Yes	76	77.6	77.6	77.6
	Not stated	22	22.4	22.4	100.0
	Total	98	100.0	100.0	

Table 5.7 above shows that 77.6 per cent of the respondents do understand and appreciate government's reasons for fish ban and for conservation methods while 22.4 per cent declined to state their position.

5.1.8.3 Attitude towards fish ban

Respondents were asked to state their attitude towards fish ban policy. This was to ascertain the knowledge of fishers against their attitude as this would determine their practice of the policy. The pictorial depiction below illustrates the results;

Figure 5.6 Attitude towards fish ban policy



According to the findings above, 71.4 per cent of the respondents have a positive attitude towards the policy, 15.3 per cent have a negative attitude about the policy while 13.3 per

cent are neutral over the policy. Further the respondents were asked to describe their adherence to the fish ban policy. This was now to tie up their knowledge, attitude and practice of the policy. Table 5.8 below depicts the results of the study.

Table 5.7 Adherence to policy

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Faithful	40	40.8	40.8	40.8
	Irregular	58	59.2	59.2	100.0
	Total	98	100.0	100.0	

The table above shows that 40.8 per cent of the respondents are faithful to the fish ban policy while 59.2 per cent are irregular in observing the fish ban policy. Here the researcher finds a big discrepancy in the knowledge, attitude and practice of the respondents. A good number of our respondents, 93.9 per cent showed that they are aware of government's policy on fish ban and 84.7 per cent have knowledge of a forbidden fishing gear. The findings further revealed that 77.6 per cent appreciate government's reasons for fish ban and 71.4 per cent have a positive attitude towards the fish ban policy. This shows that the people have knowledge of the government's policy but are inconsistent when it comes to adherence. This suggests that there could be other factors affecting their practice as a higher percentage of 59.2 are irregular in observing the fish ban policy and conservation methods as advised by the government. This inconsistency is further seen by a higher percentage of the respondents, 55.1 who are agreeable that fish ban offenders must be punished, against the 8.2 per cent that think fish ban offenders must not be punished while 36.7 per cent are hesitant about defiants being punished. The table below depicts these results;

Table 5.8 Do you think those who defy policy must be punished?

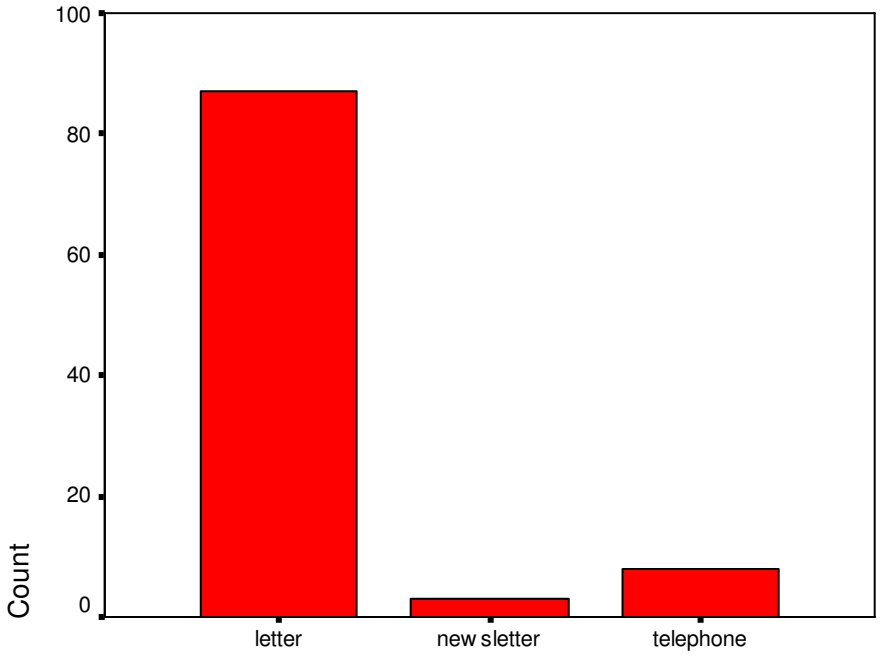
		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Yes	54	55.1	55.1	55.1
	No	8	8.2	8.2	63.3
	Neutral	36	36.7	36.7	100.0
	Total	98	100.0	100.0	

5.1.9 Communication strategies used by the Department of Fisheries

In this section, respondents were asked to state and analyze communication strategies used by the Department of Fisheries in reaching out to fisher extensions. Respondents were also asked to state the language used by extension officers in communicating to fishers and to evaluate how munch the Department of Fisheries involves them in the communication process at their local level. The researcher had in mind the Co-management concept in the Department of Fisheries as earlier explained in this work. This part is cardinal to this study for it focuses on the actual communication strategies employed by the Department of Fisheries and analyze their effectiveness.

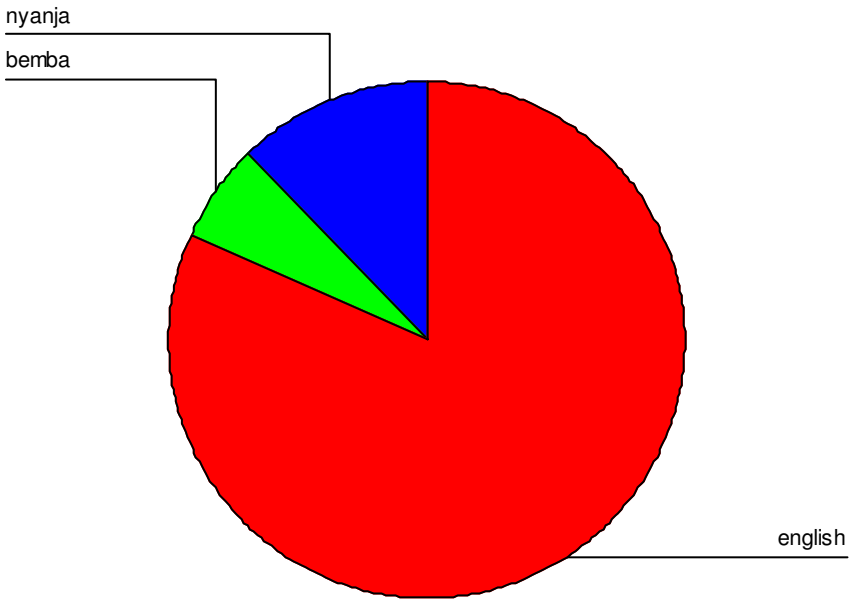
According to the study, 88.8 per cent said the Department of Fisheries communicates to them by letter, 3.1 per cent said they are communicated to by newsletter and 8.2 said they are communicated to by phone. The bar chart below depicts the results.

Figure 5.7 Methods of communication used by DOF extension officers



According to the survey on the language used, 81.6 per cent respondents said the Department of Fisheries extension officers use English (sometimes with the help with an interpreter) when talking to fishers, 6.1 per cent said the officers use *Nyanja* while 12.2 said the officers use *Bemba* when reaching out to them as demonstrated by the pie chart below;

Figure 5.8 Language used by DOF extension officers.



These results show inconsistency with common languages spoken by the majority in the catchments area. According to the same study, 36.7 per cent said are fluent in *Bemba,* 46.9 are fluent in *Nyanja* while only 16.3 per cent is shared by other languages. This result shows that to a larger extent, the extension officer who mainly use English at 81.6 per cent do not use the common language of the people in their catchments area as shown by the table below.

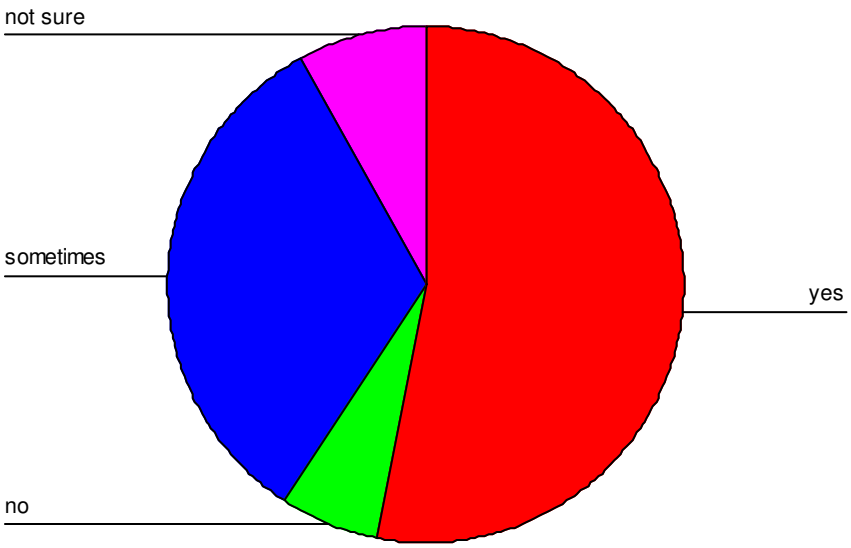
Table 5.9 Fluent language spoken by respondents

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Bemba	36	36.7	36.7	36.7
	Nyanja	46	46.9	46.9	83.7
	Other	16	16.3	16.3	100.0
	Total	98	100.0	100.0	

The results above show that the majority in the catchment area are fluent in *Nyanja* followed by *Bemba* while a small segment is shared by the rest which includes English. However, during the in-depth interview it was argued that the extension officers are flexible and use the common language of the fisher communities.

Regarding their satisfaction on the level of communication between the Department of Fisheries and the fishers, 53.1 per cent said yes, 6.1 percent said no 32.7 percent said only some times while 8.2 per cent said where not sure as depicted in the pie chart below.

Figure 5.9 levels of satisfaction on communication between the DOF and fishers



Further, 67.3 per cent said where content with levels communication while 32.7 said where not content and cited bad approach (military approach) and language barrier among the reason for their dissatisfaction as shown by table 5.11 table below;

5.10 Contentment with the way DOF communicates

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Yes	66	67.3	67.3	67.3
	No	32	32.7	32.7	100.0
	Total	98	100.0	100.0	

The bar char below reveals the reasons of discontentment cited as bad approach (military approach as the local people called it) and language barrier as explained above.

Figure 5.10 Reasons for discontentment

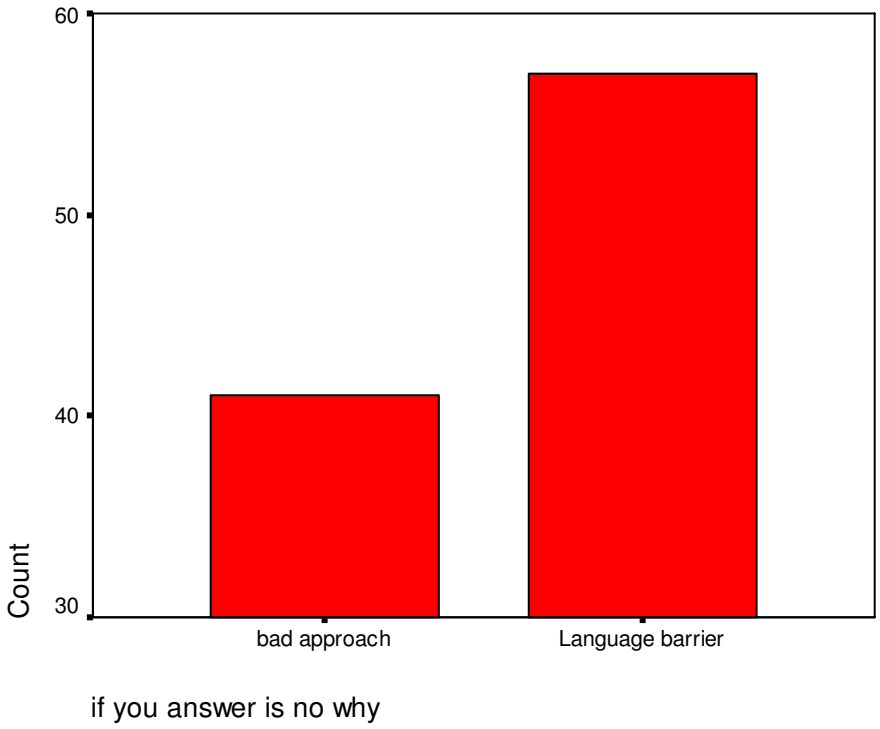


Figure 5.11 above shows that out of the 32.7 per cent respondents who were not content by the levels of communication, 41.8 per cent of them cited bad approach (military approach as they called it) while 58.1 per cent of them cited language barrier as their reason for dissatisfaction with the levels of communication.

The study also reveals that 53.1 per cent said that they are not involved in the communication planning and process by the Department of Fisheries while 46.9 per cent said they are involved but only some time and remotely, not directly and consistently as depicted by the table below;

Table 5.11 Involvement of the fishers in the communication process

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Sometimes	46	46.9	46.9	46.9
	Not at all	52	53.1	53.1	100.0
	Total	98	100.0	100.0	

The respondents identified among other factors, distance as a major challenge they face in communicating with the Department of Fisheries extension officers while 100 per cent of our respondents recommend the formation of associations for fishers in the catchment areas as an enhancement to communication levels between the Department of Fisheries and the fisher extensions as well as among themselves as fishers. This point was also amplified during our focus group discussion where it was learnt that the department of fisheries has vacated the fishing camps along the catchment area due to lack of personnel and also due to high levels of mistrust between the Department of Fisheries and the fisher

communities. It was also learnt that the fish associations around the area where banished due to lack of co-operation between the Department of Fisheries and the fisher communities. This, as cited by the respondents and the discussants, creates a wide gap of communication as the extension officers can only be accessed at their offices in Kafue Town. However, it was argued during the in-depth interview that extension officers do conduct routine patrols around the area though with a lot of caution due to a poor relationships between the Department of Fisheries and the fisher communities. Table 5.12 depicts the results of our study.

Table 5.12 **Solution to communication problems**

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Form an association	98	100.0	100.0	100.0

The results above show that the fishers are unanimously agreed to the formation of fish associations as an immediate solution to the problems of communication. This was also cited as the handmaid step to the formation of the Co-management concept currently being contemplated by the Department of Fisheries in Zambia.

5.2 Qualitative survey

5.2.1 Focus group discussion

One focus group discussion was held consisting of eight participants drawn from different organizations and stake holders in the fishery extensions of Kafue. The discussants comprised the following;

1 Lecturer from Kasaka Fisheries Training Institute, Kafue

1 Student from Kasaka Fisheries Training Institute, Kafue

1 Senior Fisheries Technical officer, Kafue' Department of Fisheries

1 Consultant in Fisheries and Aquaculture, Kafue

1 Former member of the defunct Chanyanya Fisheries Association

3 Local fishermen, Kafue.

The researcher facilitated the discussion assisted by three members of community. See appendix III for the prompt list of discussion.

The following were the findings and evaluation of the discussion;

The group defined communication as the process of imparting or exchanging information or ideas and receiving a response. Predominantly they understood communication as transferring of ideas from one person to another.

The discussants identified seven steps in the flow of communication process as follows;

1. The communicator or source; referred to as Department of Fisheries, extension worker or change agent.

2. Goal or objective – has the aim of communicating.

3. Channel- methods of communication.

4. The message –content or information to be delivered to achieve a desired goal.

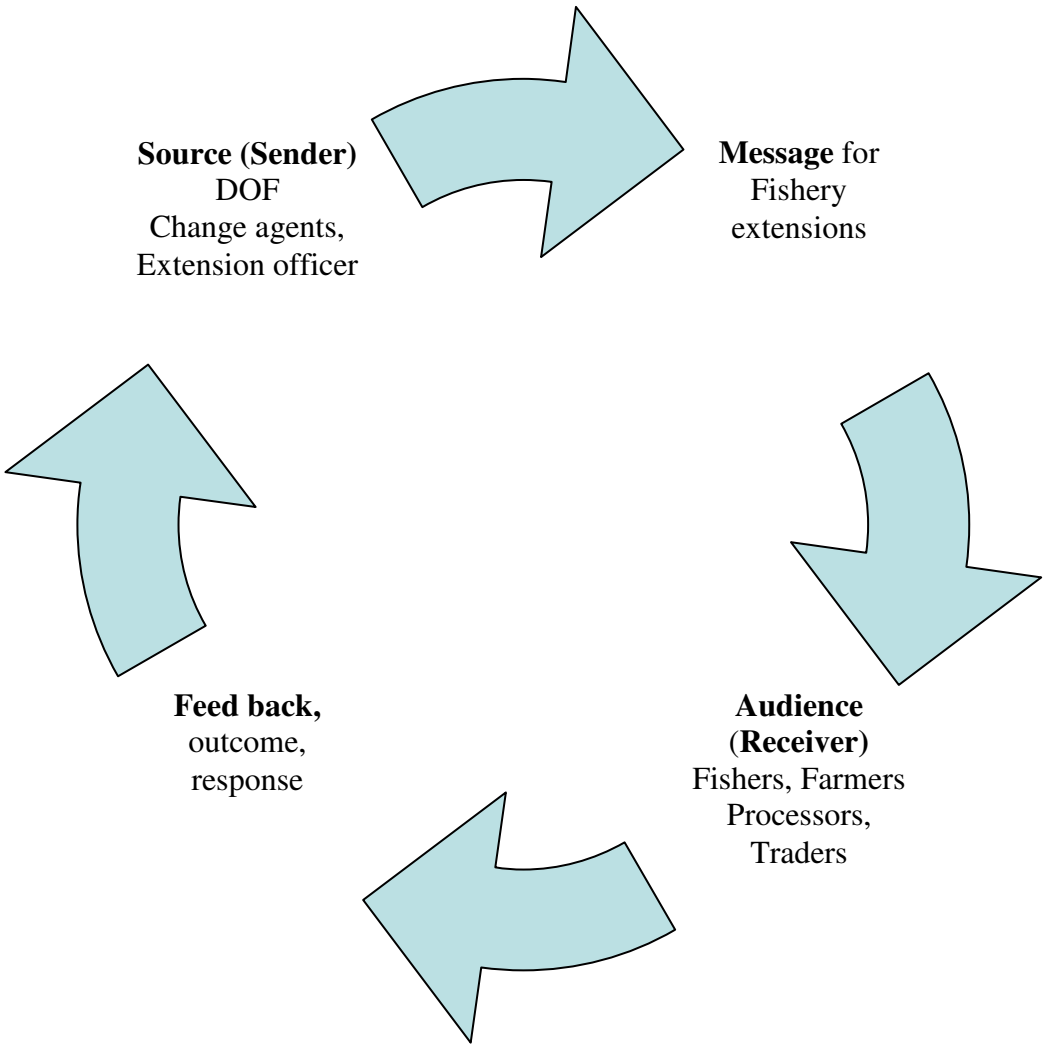
5. Treatment – Method of presenting the message to the audience.

6. The audience – people (target group, in this case fish farmers, fishers, traders, etc.)

7. The feed back or follow-up – action taken on message delivered/ given.

The diagram below illustrates the process of communication as presented by the discussants at the focus group;

Figure 5.11 Communication circle as explained during the focus group discussion.



The group was asked to identify the methods of communication the Department of Fisheries uses and if they are content with the levels of interaction.

The group identified letters, and irregular group meetings as methods of communication used by the Department of Fisheries in reaching out to fishery extensions.

Though members of the Department of Fisheries expressed contentment with the methods, the general discussion expressed dissatisfaction and called for more effective methods and reinforcement of interpersonal methods of communication like personal visits. During the discussion, it also came to light that the Department of Fisheries does not effectively reach out to fishery extensions citing poor relationship and mistrust between the Department of Fisheries and the fisher communities as well as lack of adequate transport. The fisher representatives at the discussion also strongly argued for the formation of fish association or co-operative groups to enhance communication and support. They also urged the Department of Fisheries to reinstate their camp offices in their areas which were vacated due to threats of lynching.

The group was asked to state the challenges they face in the process of communication. The following were cited as challenges;

1. Social economic characteristics: under this, the discussants observed that it was difficult for the fishers to adhere to methods of conservation and fish ban policy due to poverty. They generally agree that fish ban is necessary to encourage fish breading but that poverty, lack of alternatives sources of income during fish ban period and the need to attend to urgent needs like food are the reasons for defiance to government's policy.

"You see, we have families to take care of, if the government imposes fish ban, they must immediately provide an alternative source of income for fishermen" said one discussant.

2. Distance; the discussants also identified distance from their fisher communities to the offices of the Department of Fisheries as hampering effective communication.

3. Lack of confidentiality. The fisher representative identified lack of confidentiality among some extension officers as they would divulge private information meant for their operations. This, they said, creates a distance for those who may have the good will to report on those who defy government's regulations.

In conclusion, the group was asked to discuss the potential they see in the fisheries extension services of the Department of Fisheries. They were generally agreed that the fisheries sector if well harnessed can bring a lot of economic activities to their communities and alleviate poverty. They called the sector as a "gold mine" which has been left at the mercy of illiterate people to run. "What do you expect from illiterate people?" one fisher asked "it's all destruction for the sake of survival." He concluded. The discussants also recommended creating two wings in the Department of Fisheries, one responsible for extension services and another wing responsible for reinforcement of the fisheries regulations. This would help avoid conflicting roles of the same officer doing extension work and policing at the same time. When Policing is combined with extension service, they said, it crates a negative image of the Department of Fisheries and affects the delivery of extension services to fishing communities.

The discussion also pointed out inadequate staffing and demotivated staff in the Department of Fisheries as causes for poor delivery of communication process. The discussants also called for workshops to sensitize fishers on the concept of Co-management. This, they hoped, would help change the negative attitude in the fisher communities.

5.2.2 In-depth interview.

One in-depth interview was conducted with a senior fisheries extension officer. The following is what was gathered from the interview.

5.2.2.1 Interpersonal communication

Interpersonal communication was stated as the most common method used followed by group methods which includes camp or village meetings. Drama was also noted as another method of communication for demonstrations during field days. Exhibitions especially during the annual Agriculture Show were also noted as a method of communication. It was learnt that the Department of Fisheries is content with the communication strategies available in the Department taking into account each target group's perception and nature of the message to be imparted.

He further outlined the advantages and disadvantage of interpersonal communication as follows;

5.2.2.1.1 Advantages of interpersonal communication

1) It is most effective.

2) One gains first-hand knowledge of actual problems encountered by the client, target group or an individual clientele.

3) One develops good will and confidence of the client.

5.2.2.1.2 Disadvantages

1) It demands a great deal of time and effort of the change agent.

2) Number of clients visited through this method is few.

3) It is a costly method of extension.

5.2.2.2 Challenges faced in the process of communication

When asked on the challenges faced in the process of communication, the following were noted;

1. Social-economic factors

This includes lack of communication tools by some clients like cell phone, to contact them. Poverty levels by most fishers and high mobility as some clients are highly mobile in search of fish along the river.

2. Psychological factors

Attitude (cultural influence) was noted as another challenge as most fishers think fish is a natural gift from their ancestors and can not be regulated by the human rules. Selective perception is another; some clients have pre-conceived ideas about the Department of Fisheries and refuse to co-operate even when the ideas are to their own benefit.

3. Education levels

Most fishers are of humble education hence unable to comprehend the purpose of regulation. The officer observed that is difficult to measure any significant change in the poverty level of the people as a result of their communication strategies due to high levels of illiteracy among the fishers. Others may benefit but they have no capacity to save their income. Mostly they live on hand to mouth basis of life.

On the question of what can be done to improve communication in the fisheries extension, a motivated staff, improved transport to fishery extensions, and enforcement of the Co-management concept were cited as important so that fishers can own fishery affairs in their localities. This would also help them handle their own problems without looking up to the extension officers all the time for solutions and policing.

On the government's vision of the fisheries community, it was discovered that the national policy on fishery management is still in its draft form and could not be cited for scientific works. However, it was explained that the government's vision is to increase fish production and promote sustainable utilization of fisheries resources, thereby contributing to the economy through the generation of employment, income and improved availability of fish.

On the aspiration of the cooperatives in helping the fisheries achieve their desired goals, it was noted during the interview that the enforcement of Co-management concept is key to strengthening the co-operatives and helping them deliver to individual members who will have direct access to such co-operatives and associations.

CHAPTER SIX

DISCUSSION OF THE RESULTS

This chapter discusses the findings of both the quantitative and qualitative study of the communication strategies used by the Department of Fisheries in Kafue fishery extension with a view of enhancing rural development.

6.1 Language as a factor in participatory communication

McQuail (1994) defined communication as the process of increasing commonality or sharing between participants on the basis of sharing and receiving. Central to this definition is the increased participation between the sender and the receiver using common symbolic expressions. Language in this regard plays a pivotal role in connecting the sender and the receiver as a common symbolic expression. According to the result of the study, both quantitative and qualitative surveys, the issue of language barrier came out as an impediment to communication. Our quantitative survey for example shows a big disparity between the common language used by the people and that used by the fisheries extension officers. The cross-tabulation below indicates that 80 respondents said extension officers use English when communicating to them yet 46 of them are fluent in *Nyanja* and 36 commonly use *Bemba* and only a small ratio of 16 people share other languages including English.

Table 6.1 Fluent language * language used by the DOF extension officers Cross tabulation

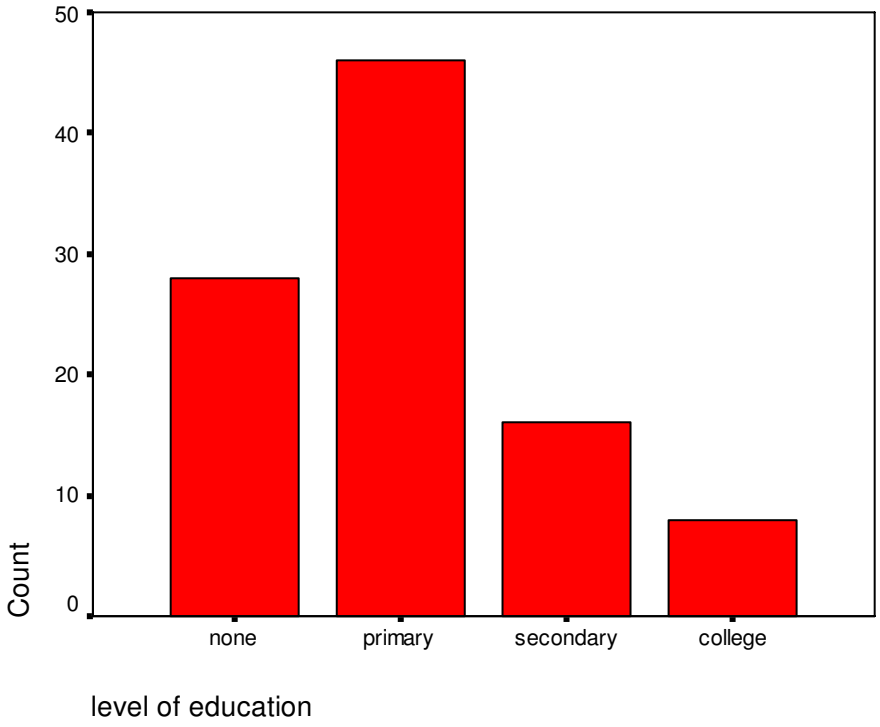
Count

		what language do DOF extension officers use			
		English	Bemba	Nyanja	Total
what is your fluent language	Bemba	20	4	12	36
	Nyanja	46	0	0	46
	Other	14	2	0	16
Total		80	6	12	98

The issue of common language usage was also identified during the focus group discussion where the discussion apart from in few instances, was done in *Njanja* and *Bemba* languages to accommodate discussants.

The analysis of the cross-tabulation above and the out-come of the focus group discussion give the researcher an insight into the barriers of communication in reaching out to fisher extensions. This is also coupled by findings of this study that most of the fishers in the catchment area have only gone up to primary school of their education as shown by the bar chart below;

Figure 6.1. Levels of education of the respondents



Language as a barrier in communication was also cited as creating a remote distance between the extension officers and the fisher communities as the later felt intimidated by the use of English which associated with the learned and the rich.

6.2 Leadership as a channel of communication.

During the focus group discussion, lack of fish associations and co-operatives in the fishery communities came out as a strong point for poor communication between the Department of Fisheries and the fisher communities. During the same discussion it was learnt that lack of structured leadership to relay information between the Department of Fisheries and the fisher communities has increased defiance to government's regulations on fish ban and conservation methods as there is no one to monitor and control the usage of the resources. According to Kapasa (2008) on the concept of Co-management,

community based control system of the resources is key to the success of the Co-management concept as resource users. The researcher, basing on the findings above, observes a big task ahead of the Department of Fisheries in implementing the Co-management concept without structured leadership already in place. Leadership in the community forms opinion leadership which conveys information from the government to individual fishermen and women and vice versa. If the stake holders need to have a say and be heard by the central management, an association for fishermen and women is a strong contention. The table below shows an overwhelming demand from the respondent for the Department of Fisheries to form an association for fisher communities.

Table 6.2 What can DOF do to improve communication?

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Form an Association	98	100.0	100.0	100.0

The formation of associations for fisher communities was also recommended during our in-depth interview where it was hoped that through an association, fisher communities would access financial help through micro financial agents and other money lending institutions thereby improving their rural life.

6.3 Access to communication channels

Rodger (1962) in his works "Communication of Innovations," talks about communication channels as the means by which messages get from one individual to another. Accessibility to the means of communication by communities themselves plays a vital role in enhancing their participation in development. According to the quantitative

survey a high number of respondents are exposed to different kinds of medium both electronic and print. The table below illustrates the out come.

Table 6.3 Exposure to media

Type of media	**Percentage of access**	**Percentage of no access**
1. Television	57.6	42.4
2. Radio	97.3	2.7
3. Phone (Cellular)	98.7	1.3
4. News paper, brochures	14.3	85.7

Table 6.3 above shows that a good number of respondents are accessible to media except print media which recorded a low percentage probably because most of them cannot meaningfully read print media.

Although our focus group discussants did not show the relationship between ownership of media receivers and communication for development, the Department of Fisheries can take advantage of this exposure to media by designing appropriate messages for the fisher communities.

One fisherman from Chanyanya area posited that the Department of Fisheries does not involve the use of the radio or television to convey messages to fishers. He gave an example of the Department of Agriculture under the same ministry which uses the radio and television to broadcast "Lima programme" to farmers.

"Our department (Department of Fisheries) can not even put forward a simple programme on radio in local languages so that we can be educated. The only time you hear anything from the department is when a minister is announcing fish ban in Lusaka". He lamented.

His sentiments were also discussed during the in–depth interview were it was learn that lack of funds for such programmes on radio or television is the source of concern for the Department of Fisheries.

The researcher agrees that broadcasting development related programmes on radio in local languages would help the Department of Fisheries register its presence to the fishers by communicating to them through the radio in their homes.

6.4 Fishing as a way of life

Most respondents, both in quantitative and qualitative surveys, strongly described fishing as a way of life.

"We found our parents fishing in this river (Kafue River) and we learnt from them as a way of life. When we die, our children will continue fishing in this river." Explained one fisher from Kafue's Zambia Compound.

We observe that fishing should not only be seen as a way of life to exploit nature without regulation but as an enterprising resource that, if well managed, can bring about development. During our focus group discussion, the tendency by some fisher discussants was that they felt no need for regulation since fish is a natural gift from God. This tendency has no developmental value. The need for interpersonal communication therefore needs reinforcement to re-orient such negative mentalities among fishers.

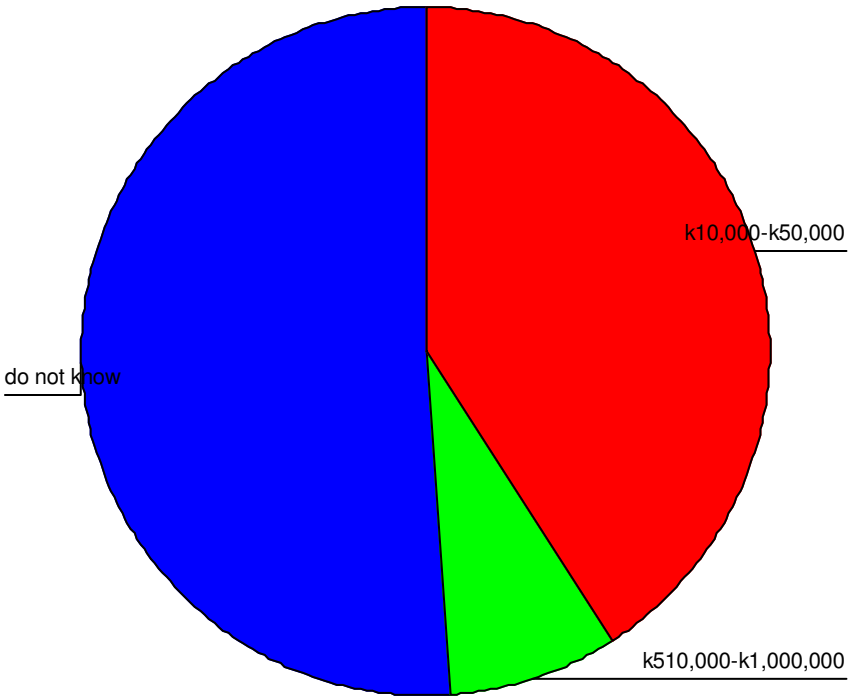
6.5 Fisheries and development

Schramm and Winfied (1967) defined development as the economic and social change taking place in a nation as it moves from a traditional to a modernized pattern of society. These changes are in form of division of labour, growth of industry,

urbanization, income and the preparation of its citizens' way of education, illiteracy and sharing of information so that they may participate broadly in national affairs.

Our focus group discussion revealed that most fisher communities have no capacity to participate in national development due to illiteracy, lack of education and poverty. It was also learnt that most fishers can not borrow money from the bank or money lending institutions because they have no capacity to pay back as the kind of fishing they are involved in can not guarantee as collateral to the banks or other money lending institutions. It also came out during the in-depth interview that it is difficult to estimate how much the fishery industry in Zambia contributes to Gross Domestic Product (GDP) due to lack of statistical information from fishing sites. The research agenda of the Food and Agriculture Organization, fourth session of the Advisory Committee on Fisheries Research (ACFY) of December, 2004 in Rome also observed that failure to estimate the real role that small-scale fisheries play in the economic growth of developing countries undermines development itself. The fish industry in general lacks an industrial drive to give it an enterprising motivation and an economic capacity to contribute to national development. It is a sector mainly driven by small scale fishers who only produce enough to eat. This is also reflected in our study where 40.8 per cent of the respondent earned between 2 US$ to 10 US$ per month from fishing activities while the majority of 51 per cent did not know their monthly income. The pie chart below illustrates the results.

Figure 6.2 Monthly income levels



The researcher is for the view that if the fisheries sector is given an institutional capacity and small-scale fishers empowered and recognized as contributors to national economy, the sector would bring about a lot of development to the rural population who barely survive on fishing.

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

Communication is defined as the transmission of information, ideas, emotions, skills, etc by use of symbols such as words, picture, graphs etc (Berelson, 1964). Communication as understood by the discussants of our focus group is that it is a process of imparting or exchanging information or ideas and receiving a response, or transmission of ideas from one person to another. Communication is also seen as a powerful tool for the emancipation of poverty especially in rural communities as understood by the World Congress on Communication for Development (2006) when it defined communication for development as a process that builds consensus and facilitates the sharing of knowledge to achieve positive change in development projects.

The study was undertaken to evaluate the communication strategies used by the Department of Fisheries in Kafue fishery extension in order to enhance them for the improvement of rural life.

Both quantitative and qualitative methods were used in extracting valuable responses from respondents in order to come out with a scientific and researched position on the level of communication in the Kafue extension fishery and recommendations for enhancements.

In the quantitative survey, answers were extracted from respondents using an audience survey questionnaire while the qualitative survey took form of one focus group discussion and an in-depth interview. In this study, respondents were asked to state their

understanding of communication, and whether they were content with the communication strategies employed by the Department of Fisheries in Kafue fishery extension. Lastly, they were asked to recommend how the Department of Fisheries can improve on its communication strategies in order to add value to the rural community life in Kafue fishery extension.

It was established during the study that the Department of Fisheries uses letters, personal visits, group meetings, posters and traditional channels such as drama in communicating to fisher extensions in Kafue fishery. Other methods the study found out are the Agriculture Show exhibitions which are conducted annually at district level.

The study also established that the audience was not satisfied with the level of communication between the fisher communities and the Department of Fisheries. Examples of dissatisfaction include the use of English language by extension officers to common people who may not fully understand in order for them to participate and respond effectively. Other reasons are exclusion of the fishers in the communication process, the remote distance between the fishers and the Department of Fisheries as there is no camp nearby for the fishers to interact with the extension officers. It was also established that lack of an association through which fisher members can channel their suggestions, complaints and compliments creates a gap between the Department of Fisheries and the fishers.

The study also learnt that there is a lot of mistrust between the fishers and the Department of Fisheries where the community refuses to be regulated even for causes that are of to their own benefit. This mistrust demoralizes extension personnel as every effort made is seen in bad faith.

Further, the study discovered that most respondents understand and appreciate governments reasons for fish ban and conservation methods but since fishing is taken as a way of life, it is difficult for some fishers to adhere to such regulations as they are driven by poverty to defy government's regulations. Poverty and illiteracy were also cited as incapacitating the fisher communities to seek assistance from money lending institutions as their level of fishing can not guarantee collateral with such institutions.

7.2 Recommendations

Based on the results of this study and the discussions herein, the researcher recommends the following to the Department of Fisheries in order to enhance its communication strategies for the betterment of rural communities they serve:

7.2.1. Designing communication strategies that are tailored on specific messages for a target audience using common language. This would take the format of the already suggested "Lima programme" mainly on radio produced in local languages. This would increase their participation and help change their negative attitudes and perception.

7.2.2. Facilitation of workshops, seminars to get the actual feel of the people's needs and to involve them in the communication process. This would increase their awareness on the need for regulation and motivate them to participate in the developmental programmes of their locality.

7.2.3 Department of Fisheries must consider re-opening fisheries camps in the fisher communities to increase their presence and interaction among them. This would greatly improve their levels of communication as they will speak the language of the people on daily basis and listen to their complaint, suggestion and compliments. It would also help

the Department of Fisheries to regulate and monitor the fisher communities' adherence to government's policy. The step would greatly help reduce the existing gap between the Department of Fisheries and the fisher communities in Kafue extension. Inevitably, this move would also demand enforcement of more extension workers, improved transport and motivation for extension workers staying in fishing camps.

7.2.4 Establishing fishers' associations. It is imperative for better organization and for the success of the concept of Co-management that the Department of Fisheries forms fishers' associations among the fisher communities. This will help create opinion leadership which will link the Department Fisheries and the fisher communities. The establishment of such association will greatly capacitate the fishers to vigilante themselves and be helped to solve their own problems. This would also help change agents to find leadership on the ground for easier communication.

7.2.5 Capacity building. The researcher is of the view that the government through the Department of Fisheries identifies stakeholders and partners to offer technical and financial support to fisher communities in order to alleviate high poverty levels in the communities. This would also help the fisher communities find an alternative source of income during the fish ban period. It was also the view of the fourth session of the Advisory Committee on Fisheries Research (ACFR) when it recommended that major donor agencies like the World Bank must ensure small scale fisheries are part of their own agenda. Through similar arrangements, the government would help find competitive market for their products so that they realize a reasonable income from their labour.

7.2.6 Creation of Communication Department in the new Ministry.

The researcher recommends that as the Department of Fisheries transforms into a Ministry of Live Stock and Fisheries, a department of communication be created in the new ministry as a link between the Fisheries Extension and Management, and the Fisheries Research Departments. This would ensure effectiveness communication internally within the ministry and externally to extension sites. The communication department would employ effective channels of communications like radio and television to publicize the activities and promotions of the new ministry.

7.2.7 Involvement of fishers at decision level.

Finally, it is recommended that the fisher communities through their opinion leadership be involved at decision-making level as highlighted by Kapasa (2008). Participatory methodologies must be used to strengthen delivery of communication system, new methods aimed at improving income and food security and reduction of poverty levels among the rural poor communities. This would ensure community participation at all stages so that the fisher communities own the programmes and feel part and parcel of the development of the nation.

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APPENDICES

Appendix I:

Audience survey questionnaire.

Dear Respondent

You have been selected to participate in providing information for our research. This questionnaire is intended to collect information on the communication strategies used by the Department of fisheries to the fisheries extensions in the Kafue plains. The information to be collected aims at uplifting our rural community by analyzing these communication strategies in order to enhance them for the improvement of our rural life. Kindly be assured that names of respondents will be kept anonymous to ensure confidentiality.

Section A

1. What is your sex? 1. Male [ ] 2. Female [ ]

2. Kindly tick the range of your years in which you fall

1. 15 – 24 [ ]

2.25 – 34 [ ]

3. 35 - 44 [ ]

4. 45 – 54 [ ]

5. 55 – 64 [ ]

6. 65 – 74 [ ]

3. Are you involved in other activities for your living apart from fishing?

4. If Yes, please specify _____

5. What is your residential area? 1. Fishing camp [ ] 2. Village [ ] 3. Town [ ]

6. For how long have you been living in your locality?

1. 5 - 10 years [ ]

2. 11 – 15 years [ ]

3. 16 – 20 years [ ]

3. 21 –25 years [ ]

4. 26 years & above [ ]

Section B

7. Education level attained: 1.None [ ] 2. Primary [ ] 3. Secondary [ ]

4. College [ ]

8. Your fluent language: 1.Tonga [ ] 2.Bemba [ ] 3. Nyanja [ ] 4.Lozi [ ] 5.any other _____

9. Is fishing your main source of your household income? 1.Yes [ ] 2.No [ ]

10. What are your monthly income levels?

1.K10, 000 – K50, 000 [ ] 2. K60, 000 – K100, 000 [ ] 3. K110, 000 – K250, 000 [ ] 4. K260, 000- 500,000 [ ] 5.510,000 – 1,000,000 [ ] 6. Do not know [ ]

11. For how long have you been involved in fishing?

1. Less than one year [ ] 2.one to three years [ ] 3. Three to five years [ ] 4. six to ten years [ ] 5. More than ten years [ ]

12. What are the reasons for fishing?

1.Way of life [ ] 2.Source of income [ ] 3. Only skill [ ] 4.Care for the family [ ] 5. All the above [ ]

13. What other work did you do before you engaged in fishing?

1.Trading [ ]2. school [ ] 3.farming [ ]4. formal employment [ ] 5.always been fishing [ ]

14. How often do you engage in fishing?

1.Everyday [ ] 2.every week [ ] 3.once a month [ ] 4. depending on the position of the moon [ ]

Knowledge Attitude and Practice (KAP)

15. Are you aware of the Government's fish ban policy and conservation measures?

1.Yes [ ] 2.No [ ] 3. Not stated [ ]

16. For how long have you known the policy?

1.Can't tell [ ] 2.less than six months [ ] 3. One year [ ] 4. five years [ ] 5. Before started fishing [ ] 6. After started fishing [ ]

17. Do you understand and appreciate the government's reasons for fish ban?

1.Yes [ ] 2.no [ ] 3.not stated [ ]

18. Are you aware of the forbidden fishing gear?

1.Yes [ ] 2. No [ ]

19. What is your attitude towards fish ban policy?

1.Negative [ ] 2. Positive [ ]3. Neutral [ ] 4.not stated [ ]

20. How would you describe your adherence to the fish ban policy?

1. Faithful [ ] 2. Irregular [ ] 3. Total defiance [ ] 4.convenience [ ]

21. Do you think those who defy fish ban policy must be punished?

1. Yes [ ] 2. No [ ] 3. Neutral [ ]

Communication strategies used by the Department of Fisheries

22. Kindly tick the methods DOF extension officers use in communicating to you

1. Letter [ ] 2. Newsletter [ ] 3. Telephone [ ] 4. Radio [ ] 5. Any other _____

23. What language do the DOF extension officers use?_____

24. Answer the question below with a tick regarding your access to media

		1. Yes	2. No
25	Radio		
26	News paper		
27	Newsletter		
28	Pamphlet/brochure		
29	Telephone (cell phone)		
30	Television		

31. Type of Communication used by DOF. 1. Interpersonal [ ] 2. Group [ ] 3. Through leaders [ ]

Analysis of the strategies

32. Do you think there is enough communication between you and DOF? 1. Yes [ ] 2. No [ ] 3. Sometimes [ ] 4. Not sure [ ]

33. Are you content with the way DOF communicates to you? 1. Yes [ ] 2. No [ ]

34. If the answer to question 33 is "no", could you kindly write why_____

35. How much does DOF involve you in the process of communication?

Challenges

36. What problems do you face in communicating with DOF extension officers and with one another?_____

37. What kind of transport to the DOF extension officers use in reaching to you?

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38. Are you satisfied with the measures to punish fish ban defiants?

1.Yes [ ] 2. No [ ]

Recommendations

39. What would you want the DOF to do in order to improve communication to fisheries extensions

40. Is there anything else you would want to share with us regarding communication strategies used by the DOF

Thank you for your participation

Appendix II:

In-depth interview guide

1. Could you give the communication strategies used by DOF in reaching out to fisheries extensions?

2. Are these means satisfactory?

3. What are the challenges you face in the process of communication?

4. Would you say there is significant change in the people's poverty levels as a result of your communication strategies?

5. What can be done to improve communication in the fisheries extensions?

6. What is the government's vision of the fisheries community?

7. What are the aspirations of the co-operatives helping the fisheries achieve their desired goals?

Appendix III:

Prompt list for a focus group discussion.

1. What are the communication strategies used by

   a) DOF

   b) Co-operatives

2. What methods do you use?

3. Are you content with the communication strategies?

4. What challenges do you meet in the process of communication?

5. What potential do you see in fisheries extensions?

6. How much does fishing activity contribute to the GDP in the country?

7. What is the general economic status of the fishermen/women in Kafue plain fishery?