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A historical critical analysis of causes of poverty among fishermen of Samfya district, Luapula Province, Zambia

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Abstract

The purpose of the study was to establish the life style and causes of poverty among fishermen in Samfya District of Luapula Province, Zambia. The target population included fishermen of Samfya District, employees of National Archives of Zambia (NAZ) and Department of Fisheries in Chilanga. Data were collected using structured and open-ended interviews, Focused Group Discussion and through observations. Qualitative data were analysed using content analysis and themes derived from the research objectives while quantitative data were analysed in excel environment. The findings of the study were that majority of the people especially in Samfya district were employed in fishing and fisheries related activities. The entire economy of Samfya district depended on fishing and the decline in fish stocks automatically affected all sectors of the economy in the district. The study further observed that the fishermen of Samfya caught and sold a lot of fish but most of them did not benefit from those abundant fish resources due to a combination of factors. The findings revealed that most local fishermen were poor because of their lifestyle. Second, some did not invest their money in productive ventures, but spent much of it on beer drinking while some of them spent it on women because they believed fish was always there in lakes and rivers and they would find it whatever time they went to fish. Although the rich and a few middle class fishermen managed to educate their children from their earnings, the poor fishermen did not and ended up forcing their children into early marriages where they wallowed in poverty. Thirdly, the fishermen did not form fishing cooperatives to handle issues such as fish marketing, fish prices, acquisition of fishing equipment and diversification into other business ventures. Each fisherman fixed his/her own price which depended on how urgent he/she needed the money and also on the bargaining experience of the trader. Further, the poverty of some fishermen in Samfya district was due to a static mind set. They lacked knowledge of what was obtaining in other parts of the country which could have assisted them to change their mind set and perception of the fishing industry. Based on the findings, the study strongly recommended that the government of Zambia should help the fishermen of Samfya with markets and loans to purchase suitable fishing methods and diversify their fishing business. Government should orient the fishermen on the fish ban as Lack of participatory approach on the enforcement of the fish ban raised economic hardships among the fishing folk that consequently resisted the policy.

Keywords: causes of poverty, fishermen, economic hardship, participatory approach

1. Introduction

Samfya district, located in the southwestern portion of Northern Zambia in Luapula province. Samfya became a district in 1959, taking over the areas of Fort Rosebery and Luwingu districts bordering Lake Bangweulu. Before that, the area was part of Northern Province until 1958 when Luapula was established as a province, and comprised only Fort Rosebery and Kawambwa districts (NAZ,1939-1948) [33] Most of Samfya is covered by Lake Bangweulu, other lakes and lagoons, swamps and dambos (NAZ,1948) [32]. The Bangweulu is Zambia's largest lake. To the South of the lake lies a massive expanse of swamps known as the Bangweulu swamps, where the Unga people live. Samfya is inhabited by three main ethnic groups namely; the Ng'umbo, who are the largest, to the north and north-west, the Kabende to the south and the Unga to the east of Lake Bangweulu. Within the Bangweulu swamps are found the remnants of the Batwa tribe who are the original inhabitants of the whole district.

In fishing like any other industry, fishermen were classified

into various categories of status of rich, middle or poor depending on capital accumulation and fishing equipment one owned. In Samfya district three groups of fishermen were easily distinguished based on ownership of the means of production (Interview, 2009) [16]. In the first group were successful rich fishermen who owned fibre glass or plank engine powered boats with more than 20 nets. Those were regarded as wealth men who usually hired or employed some helpers to do the fishing and supervised the sale of the catch. Such fishermen occupied a distinguished social status among the fishing villages and commanded a lot of influence in determining fish prices. The second group comprised middle class fishermen who were neither rich nor poor. These were fishermen who did not own adequate fishing gear to stand on their own, but combined their productive assets in partnerships of two or more. They could neither hire nor employ helpers, so they did the fishing and sold the catch for themselves. The last group comprised poor fishermen who owned nothing except for their labour which they offered to the rich

fishermen. The reward for the poor fishermen was determined by the employer on account of how much fish they caught.

2. Poverty Defined

It is difficult to come up with a universally acceptable definition of poverty because poverty was perceived differently by various communities and societies. Poverty also depended on the level of development a given society attained. O'Connor (1991)[38] defined poverty in association with low levels of income, in terms of cash or subsistence production and therefore low levels of consumption of goods and services. The World Bank (2007) [2] defined poverty in absolute and relative terms. According to the World Bank (2007) [47] absolute poverty referred to a set of standards which were consistent over time and between countries. For instance, all people living on less than \$1.25 per day were considered poor (World Bank, 2007) [47] Relative poverty on the other hand was a socially defined phenomenon and was dependent on social context as a measure of income inequality. Thus relative poverty was a condition of having fewer resources or income than others. Henry (1991:30) [11] treats poverty as a severe lack of material and cultural goods which impedes the normal development of individuals to the point of compromising their personal integrity. According to Henry, a person in want was someone who was found in such a degrading and consuming struggle with life and lived in a permanent state of isolation and insecurity. Such an individual had no guarantee of meeting fundamental cost of living as a human being (Henry, 1991) [11]. Iliffe (1987) [12] defined poverty in terms of physical want, which included lack of food, shelter and clothes. Iliffe (1987) [12] looked at poverty to be structural and conjectural. Structural poverty was a long term poverty of individuals due to their personal and social circumstances while conjectural poverty was a temporary situation into which people may be thrown by crises such as drought, floods or fish ban.

However, many respondents in Samfya had also their own description of poverty in their local language as insala, icipowe, ubucushi or ubupina. According to them any person who owned less than ten fishing nets was considered to be a poor fisherman (Chabwela, 1994) [3]. With all the above definitions in mind, this study used poverty to refer to the inability of some fishermen to harness the fullest benefits of the abundant fish they had been catching and selling but which, on the other hand, the fish traders had benefitted from. The causes of poverty among some fishermen were multifaceted and are rooted in the social and cultural domains of the fishing societies. Some of the causes of poverty were internal factors related to those which were associated among the fishermen themselves while the external factors were those to which fishermen had no direct control.

3. Literature Review

In his study of the fish industry of Kashikishi, Musambachime had painstakingly explained the important contribution of the fish industry to the social and economic status of not only the people but also the development of Kashikishi as a major fishing area after 1952 (Musambachime,1920-1964: 236) [23]. Though Musambachime's study did not show who were the major beneficiaries between the fishermen and fish traders, the study was used, in this study, to determine the factors which

favoured the development of Kashikishi into a more viable fishing industry than the fishing industry of Samfya.

According to Gordon (2006:117) [9], fish conservation measures by the Northern Rhodesia government started in 1937 due to the sudden disappearance of the Labeo Altivelis (Mpumbu) species in Lake Mweru which the local fishermen blamed on the increased number of expatriate fishermen of the Greek and Belgian origins (Kashitomo, 2009) [13]. With Africans, Greeks and Belgian fishermen being the major players, Gordon did not indicate who the conservation measures benefitted most. Friday Njaya's study in Malawi revealed how in 1946, the colonial government curbed the indiscriminate use of non-selective fishing methods by the local people through the control of the fisheries to ensure sustainability in fish resource utilization (Njaya, 2009:23) [36]. Although the measures were meant to safeguard the fishing interests of the local people, the study did not show the extent to which those colonial fish conservation measures benefitted the local fishermen.

Beresford (1947:80) [2] argued how from 1943 the government assumed control and management of the lake fisheries in order to prevent over exploitation of the fisheries resources through non-selective fishing methods and instruments. Local fishermen in the Bangweulu fishery and its surrounding areas were subjected to various fishing restrictions whose effects, both on the fishery and the local fishermen, Gordon's study did not bring out. Nabuyanda and Mubamba's survey of the Bangweulu fishery argued that in 1960 the Bangweulu swamps produced three times more fish than open waters and lakes (Misery, Nabuyanda and Mubamba, 1993) [22]. The study emphasised the need for credit facilities to enable fishermen procure suitable fishing gear to exploit the open waters and lakes for their maximum benefits. The Ministry of Lands and Natural Resources (1965:1) [21]. reported the increase in fish production in the country from 12,518tonnes in 1952 to 33,866tonnes in 1964 and that the Bangweulu fishery had a total of 7 000 fishermen. That report showed the importance of fish to the people of Samfya district which this study also investigated.

Evans's study argued that Lake Bangweulu and its adjoining basins and swamps had long been a major supplier of fish for the local towns and the northern industrial cities of the Copperbelt (Evans, 1995) [7]. However the study did not show why most fishermen were still poor despite their long history in catching fish. In Malawi, a FAO report argued that, fishing in Lake Malombe and the south-east arm of Lake Malawi, was an occupation that was combined with agriculture (FAO, 1989: 6) [8]. But due to increased economic demand on fish, the industry gradually assumed an overwhelming economic importance that saw its transformation into a competitive rural industry. However the report lacked details of whether or not fishermen benefitted from the opportunities offered by the lucrative urban markets. Commenting on the profitability of fishing in Lake Malombe (Mdaihli and Donda, 1960) [18] in their report revealed how the total economic output of the upper Shire River declined in the 1980s due to the collapse of the Chambo fish stocks. The report further stated that except for the fishermen of Lake Malombe, fishermen on the upper Shire River and south-east arm of Lake Malawi operated on a low or no profit at all. Mdaihli and Donda's report failed to identify the major impediments why fishermen of upper Shire and south –east arm of Lake Malawi made no profit. The joint Malawi - German Fisheries Project revealed how the increase in the number of fishermen in Malawi led to the decline of fish catches per fisherman and how consequently it affected the livelihood and health status of the people (Malawi-German Project, 1996) [15]. That report revealed a similar situation which this study observed in Samfya district.

In Zimbabwe, Nyikahadzai (1996:2) [37] observed that both the colonial and post-colonial governments intervened in the fishing industry through various legislations aimed at helping fishermen accrue optimum benefits from the fish resources while ensuring sustainability of future supplies of fish. Nyikahadzai argued that colonial intervention was on assumption that the fishermen were only interested in satisfying their present needs with little or no concern for the future of the fisheries. However, the study did not appreciate the resilience of the local traditional fishing methods and failed to show the extent to which the traditional fishing methods were destructive. Manyala (1998) [16] studied the social and cultural features and impact of small scale fishery on the lower Sondu-Miriu River in Kenya. Manyala concluded that where only the local people fished in the river; there was no evidence of fish stock depletion.

The NINA-NIKU project report (2000:2) [35] carried out in the Okavango River in Namibia revealed the importance of subsistence fishery in supporting the growing number of human population which had been subsisting on fish resources. The report revealed how in the Okavango River 53 percent of the people catch fish and 91 percent subsisted on fish for their livelihood. That report revealed an important aspect of how most people along the Okavango River depended on fish as their only source of livelihood which was also peculiar to the people of Samfya district.

Reynolds' study vividly pointed out how fish permeated the lifestyle of the people of the Gwembe valley in Southern province (Reynolds, 1968:53). [39] The study explained how people possessed vast knowledge of fish, where each fish was known by its name and every child in the community was initiated along the same lines. Knowledge of fish underpinned the importance of fishing among the riverine communities.

Sanyanga and Lupikisha's project report appreciated the economic importance of fishing in mitigating the impact of poor crop yields and food insecurity in areas such as Gwembe, Siavonga and Sinazongwe where agricultural activities were widespread (Sanyanga and Lupikisha,1993:2) [42] However Reynolds' study and Sanyanga and Lupikisha's report appreciated the important contribution of the fish industry to the economy of the people in the Gwembe valley, but did not show how fish permeated the holistic lifestyle of the people in that area which this study investigated in Samfya district.

Weza Chabwela's study explained how the Northern Rhodesia government maintained strict control of fisheries through various statutory instruments which did not allow overfishing and how after independence, the Zambian government decontrolled the fisheries to please its own people (Chabwela, 1994:61) [3]. Though most of the population in Zambia depended on fisheries resources for employment as fishermen, fish traders and middlemen, the study called for the need to exercise control of the fisheries resources to ensure

profitability and sustainability of the industry. Since fishing in Northern Rhodesia was done by both Europeans and Africans, Chewela's study did not indicate which group was overfishing and how the local fishermen benefitted from the Northern Rhodesia government fish conservation measures.

However, it should be appreciated that rural communities in Zambia and Africa as a whole had limited options for survival and were thus compelled to exploit those resources below the level of resilience (NAZ, 1965) [24]. In Lake Kariba, the SADC Fisheries Project revealed how the local fishermen welcomed the idea of regrouping them into permanent fishing settlements but not away from the main fish breeding grounds (Zambia-Zimbabwe SADC Fisheries Project, 1995) [49]. The report showed how the Tonga fishermen were suspicious of any attempt to deprive them of their fishing grounds, which case this study identified among the fishermen of Samfya district. Chipungu and Moinuddin had a similar study as the SADC Fisheries Project and also revealed how the Tonga fishermen categorically rejected being regrouped in fishing villages away from the fish breeding areas which had been designated for seasonal closure (Chipungu and Moinnuddin, 1996). [5] Reynolds and Molsa 's study noted how fishing in Zambia was the third most important occupation after farming and mining where most Zambians were involved in fisheries related employment (Reynolds and Molsa, 2000) [40] The study emphasised the importance of fishing which this study also observed among the people of Samfya district.

Van der Aalst's study in Mweru-Luapula, observed how lack of credit facilities for fishermen to purchase suitable fishing gear compelled them to use fishing equipment that were either illegal or non-selective (Van Der Aalst, 1997) [45]. Aalst's revelation was not peculiar to Mweru-Luapula fishery but also to Bangweulu fishery which this study investigated. The Ministry of Lands and Natural Resources Interim Report also argued how an adequate reorganization of national fisheries had a significant large potential for increasing fish production in the country (Ministry of Lands and Natural Resources, 1981) [19]. However the report did not tabulate who should reorganize the national fisheries and when that could have been done.

Studies in the Zambezi Basin by the World Fish Centre echoed the valuable contribution of the fisheries in the provision of not only high quality nutrition for the people of the Zambezi Basin, but also sustenance of a diversity of livelihood strategies ranging from those who caught the fish to those who processed and traded the catch (World Fish Centre, 2004) [48]. Similarly, the Technical Consultative meeting on Fisheries and Wildlife in Maseru (Mauritius), recognized the importance of the fishing industry in SADC region as an employer of people in the region (Technical Consultation Meeting on Fisheries and Wildlife, 1984). [44]

In Lusaka the ninth Technical Consultation Meeting on fisheries and Wildlife called for regional training of fishermen in fish conservation, processing and marketing so that they could benefit fully from the fish resources of the region (Technical Consultation Meeting on Fisheries and Wildlife, 1986) [43]. However, the meeting did not indicate how fishermen would raise their own resources for processing and marketing of fish when credit facilities for fishermen were not available.

James Siwo Mbuga (2009) [17] studied the socioeconomic aspects of the Tilapia, Nile Perch and Pelagic fisheries in Lake Victoria. The study observed how the increased demand on fishing by people searching for a livelihood endangered the sustainability of the fishery. Mbuga's study identified the increase in population as a reason for the decline in fish catches per fisherman as opposed to over fishing and use of bad fishing methods which only existed on a small scale. Kolding, Ticheler and Chanda (2010) [14] studied the fishing methods and gear in the Bangweulu swamps and concluded that since Bangweulu was a multi-species fishery different meshed nets and fishing methods should be used in order to harvest different fish species.

4. Research Methodology

The first part of this research was conducted in the University of Zambia library. It involved consulting published and unpublished primary and secondary sources. Further, the study used M.A. Dissertations, PhD Theses, books, articles, and research papers which provided relevant information and theories on the topic the study was investigating. The second part of this research was devoted to collecting data from primary sources and other published documents in the National Archives of Zambia (NAZ). Provincial Annual Reports, Annual reports on Native Affairs, Samfya district notebook, District Commissioner's Conferences and Tour Reports yielded a lot of information on Colonial and post-Colonial governments' policies on the fish industry. The third part of this research involved the use of records at the Department of Fisheries in Chilanga, for information on the fish industry and government policies on the fish industry in Zambia. The Central Statistical Office (CSO) publications in Lusaka provided annual fish statistics for Samfya district. The last part of research was field research in Samfya district. Several visits were made to Mansa provincial fisheries offices for information on annual fish production per fishery in Luapula province. In Samfya, fishermen, fish traders, middlemen and the general public were interviewed on the lifestyle of the fishermen. Structured and open-ended interviews, Focused Group Discussion and direct observations were employed to collect relevant data. Qualitative data were analysed using content analysis and themes derived from the research objectives while quantitative data were analyzed within the excel environment. A case study of fishermen of Samfya District guided the study as research design.

5. Internal causes of Poverty among Fishermen in Samfya

The internal causes of poverty among the fishermen in Samfya relate to those factors which the fishermen themselves could overcome. They included lack of knowledge, dependence on family labour, entry of women fish traders from the Copperbelt, absence of alternative sources of income and underdeveloped agriculture. The fishing industry in Samfya district was characterised by various obstacles which allowed price differences to persist in different fishing villages. While fishermen strove to maximise prices for their catch, fish traders used every available avenue to pay minimum prices in order to obtain a lot of fish and enjoy the best value for their money. Most fishermen in the Bangweulu fishery lacked adequate knowledge on how to add value to their fish in order

to uplift their living standards. They caught a lot of fish but did not take time to preserve it for sale in lucrative urban markets and create more wealth. Instead, fish traders from towns bought fish from fishermen at low prices and took it to towns where they sold it at higher prices ^[6]. That exploitation of fishermen was also noted by Absolom and Mulongo who wrote thus;

From 1935 however the growing fish trade till 1939 did not bring substantial prosperity to fishermen due to exploitation by European traders who bought at low prices from Africans and sold to the copperbelt. In 1939 for instance European traders bought at 1d and 1½ d per pound and yet those Africans who disregarded those middlemen sold the same fish at 3d on the copperbelt Absolom and Mulongo, 1980: 145). [1]

The exploitation of fishermen was not peculiar to European traders alone; it was intensified by African fish traders who had come on the scene after independence. Those capitalist oriented African fish traders developed equally exploitative methods of obtaining fish from the fishermen through exchange with assorted types of merchandise. A female fish trader explained that, it was cheaper and faster to obtain fish from fishermen through exchange with various items such as bicycles, clothes and basic necessities than using money. For instance a bicycle costing K280,000 (equivalent to K280 current rebased currency) would earn a trader three 50kg bags of dried fish, which if a trader was to use money would spend K900,000 or K900 rebased currency (Chama and Shitima, 2009) [4]. Due to lack of knowledge of the prices of those items, fishermen found themselves embroiled in a state of destitution where they were deprived of the fullest benefits on their catch and became hopelessly dependent on the traders for provision of basic necessities (Chama and Moba, 2009) [4]. When compared to how much those items were bought on the Copperbelt and how much they were sold to the fishermen in fishing camps, it became clear that the Purchasing Power Parity (PPP) of the Kwacha on those items always favoured the fish traders. Most fishermen in Samfya depended on family labour for their fishing activities which meant that the absence of a family head plummeted all the fishing activities. When there were no fishing activities, a family would have no money or fish to purchase family requirements or they would purchase them on credit. If the fisherman took the fish for sale at the lakeside market in Mwamfuli village, he was subjected to the controlled market prices and government levies. Fishermen therefore realised that by remaining on water, they would catch more fish to offset the differences between the controlled market prices at the waterside on the one hand and the black market price in fishing camps without expenses on the other (NAZ, 1939-1948) [32]. Many fishermen did not want to risk taking their fish to urban markets due to high transport and other costs. By the time he returned home much of what was to be profit had been used up in expenses. Furthermore, some fishermen feared to take their fish to urban markets due to strong rumours of reported pickpockets at that time (Willy, 2009) [46].

Though the fishermen found it more profitable to remain in water throughout, the same idea contributed to their poverty

because by being confined in fishing camps where the traders followed them, they were completely detached from the prevailing market situations in Samfya main land and let alone lucrative Copperbelt markets. The result was that from 1944 when a complete fishing life became entrenched, there emerged a group of people especially among the Unga and Batwa who, because of their isolated swamp environment had limited exposure and took fishing as the only economic and social activity [12]. They were born and bred in swamps and some had never visited Samfya mainland where they could have experienced a different lifestyle. Such people were victims of perpetual exploitation by fish traders who they depended on for the supply of basic necessities.

Though there were some colonial policies that favoured the fishermen of Samfya, they did not utilise them to their benefit. For instance in 1943 when the law abolishing the payment of tribute was enforced, chiefs were deprived of the powers to control the fishing activities in the fisheries (NAZ, 1939-1948) [33]. The fishermen were free to fish as they wished but still lacked the ability to share knowledge on how best to utilise the fish resources. Unlike other fisheries in the country, the Bangweulu fishery did not attract fishermen from other provinces who could have brought in new ideas which the local fishermen could have benefitted from (Willy, 2009) [46]. Though the Bangweulu fishery was wholly exploited by the locals, that could have been an incentive where it concerned organising and sensitising fishermen towards fisheries comanagement owing to the fact that locals could have respected what came from their traditional leaders, the opposite was also true. Fishing knowledge was confined to the local environment and initiative compared to other fisheries where different ethnic groups pooled together their vast experiences on trade and investment. Furthermore, it appeared that the Bemba ethnic groups, some of who might have originated from Samfya district, were found in all fisheries but did not take the experiences gained from different people in those fisheries back home to go and develop the Bangweulu fishery. Before independence fish trade was a preserve of the men folk but thereafter, more and more females joined the fish trade industry which robbed many fishermen the benefits of their sweat. Some fishermen entered into marriages of convenience with women fish traders whose main aim was to entice fishermen to get more fish at lower prices (Willy, 2009) [46]. Those fishermen who cohabited with female traders laboured to catch fish for those women in exchange for sex and some second hand clothes. Furthermore, fishermen in Samfya regarded the fishery as a mine where they would continue getting fish indefinitely without realising that, over time, fish catches per fisherman diminishes with increased fishing population. Fishermen were supposed to conduct their fishing activities sustainably with regard to time and methods of fishing and the type of fishing gear at different times of the year. But even the little money they realised from fish sales, many fishermen spent it on beer drinking and women. Apart from the rich and a few middle class fishermen who spent part of their money to educate their children, none of the poor fishermen saved the money in the bank or invested it in other businesses (Willy, 2009) [46].

As mentioned earlier Samfya district had no other viable industry apart from fishing and so every aspect of life in the

district depended on fish. In areas such as the Gwembe valley where agricultural activities were widespread, fishing was regarded as a shield that cushioned the impact of poor crop yields and was merely an alternative source of income Sanyanga and Lupikisha, 1993:2) [42]. But in Samfya agriculture was not developed and there was no other industry which could provide alternative sources of income. Some able bodied young people were compelled to drift to the Copperbelt in search of employment and those who did not depended exclusively on fishing as the only means of subsistence. Many fishermen interviewed revealed that, sometimes they resorted to using prohibited methods of fishing in order to survive (Kashitomo, 2009) [13]. In times of low fish supplies fishermen resorted to the use of mosquito nets, fish weirs locally known as ubwamba and baskets, which regrettably led to the depletion of some fish species.

Most fishermen in Samfya did not venture into agricultural activities because, as Roland Hill, District Commissioner for Samfya observed in 1960, people's income from fishing compared very favourably with rural incomes in the rest of the country (NAZ, 1960) [28]. Along the lake however, where cassava was the main crop, agriculture was intense. Millet, Monkey nuts and Sweet potatoes were grown in small quantities which allowed trade to develop between people along the lake and those in senior chief Kalasa Mukoso's area. But one of the major agricultural difficulties of Samfya was that most people were fishermen and were not interested in agricultural activities, because they lived and had lived for a large number of years close to the Lake. Failure by the fishermen to engage in agricultural activities contributed to their poverty especially during the closed fishing season when there was nothing to do.

6. External causes of Poverty

Among the external causes of poverty were the absences of credit facilities for the fishermen, poor marketing system, unreliable transport, lack of capacity building among the fishermen and increased fishing population. The Bangweulu fishery was one of the largest suppliers of fish to the Copperbelt but was again the least developed among the fisheries in the country. Brelsford noted this when he was District Commissioner for Mufulira (1942-44):

...out of the existing fisheries in the country at that time, the Bangweulu, Luapula, Lukanga, Barotseland, Luchazi and Chokwe, the bulk of fish came from the Bangweulu via Kapalala and most of it was brought by native cyclists...(Brelsford, 1947: 80) [2]

In 1952 Murray, Provincial Commissioner for Northern Province also acknowledged the abundant fish resources of the Bangweulu when he advised on the Draft Fisheries Development Ordinance. He advised that if the fishermen, women and peddlers were going to be restricted in their trade, he recommended those of Mweru and Bangweulu which were richer in fish (NAZ, 1951-1954) [30]. Murray further recommended the establishment of reasonably sized public utility companies to be marketing fish in those areas and whose corporate social responsibility should benefit the Africans.

While the colonial and post colonial governments provided financial assistance to fishermen especially those in Mweru-Luapula, those in Bangweulu were neglected. For example, the shortage of meat on the Copperbelt during the Second World War compelled the District Commissioner (DC) for Kawambwa to push the colonial authorities to develop the fish industry of Mweru Luapula which resulted in the construction of the gravel road from Kawambwa to Mulwe village in 1949 (Musambachime, 1920-1964: 236) [23]. That road opened Mweru-Luapula to the Copperbelt traders and also the local fishermen and traders were able to transport their fish to the Copperbelt markets. Furthermore the government introduced a loan scheme to assist Mweru-Luapula fishermen to buy better nets and big boats which led to the establishment of boat making school at Nchelenge in 1955 (Musambachime, 1920-1964: 240) [23]. As if that was not enough between 1950 and 1953, fishermen were encouraged to form fishermen's cooperatives in the fishing camps to handle the selling of fish to fish traders. With those interventions Mweru-Luapula fishermen were able to harness the fullest potential of the fish resources compared to the Bangweulu fishermen.

Lack of institutional credit was an obstacle to the development of the Bangweulu fishery. Credit was needed especially by the poor fishermen to buy boats and nylon nets and to repair their fishing equipment (FAO, 1989:Vii) [8]. Most fishermen made between £70 and £80 in an average year from fish sales, but of which they spent about £15 procuring new nets and repair of boats (NAZ, 1960) [28]. In 1955 for example, the Acting Commissioner for Native Development made an application for a grant of £400 to the Native Authority which would be used to grant loans to assist the fishermen of the Bangweulu to purchase boats. Though the grant was approved loans were not given to the fishermen (NAZ, 1941-1947) [31]. Thus in almost all fishing villages in Samfya the canoe still remained the most widely used by fishermen due to lack of credit facilities to acquire boats. In the absence of boats which could be used in high waters, the fishermen of Samfya used ukutumpula method which was confined to low waters. Besides driving fish into small gill nets that method also destroyed the fish breeding grounds (NAZ, 2007:11) [34].

All fishing gear and methods were inherently selective by their design and operation and different fish species had very different catchabilities due to their habitat preferences and individual behaviour (Kolding and Chanda, 2010) [14]. In essence it meant that, fish resources of the open Lake were not exploited because fishing in the Lake were confined to seine netting in shallow waters. Lack of adequate fishing craft therefore, led to unselective fishing pattern which exerted higher fishing pressure on the smaller species and prevented the exploitation of the deeper waters which haboured fish of considerable size (Ministry of Lands and natural Resources, 1980:11) [20].

Besides lack of credit facilities to the fishermen of Samfya, there was no organised market with regulated government prices where fishermen could sell their fish. All efforts to establish a dependable fish market in Samfya failed. In 1947, Vaughan Jones, the Director of Game and Tsetse Control objected to the proposal to set up a company in the Bangweulu area that would buy fish from the local fishermen. Vaughan's argument was that the move would conflict with the African

fishing interests (NAZ, 1949-1960) [28]. Furthermore, in 1952, a company known as Copperfields Cold Storage Co. Ltd whose proprietors were Kellenbert and Pinshow, wanted to organise trade in the Bangweulu area, with suitable boats and refrigeration installations. Unfortunately the company's request was also turned down by the Director of Game and Tsetse Control who falsely claimed that there were already signs of over-fishing in the area (NAZ, 1959) [27].

Though Mwamfuli had developed as a centre of the Bangweulu fish trade which could have improved the marketing conditions for Bangweulu fishermen, there was still a general complaint on the use of scales. Traders started buying fish using scales and weights instead of the usual method of counting the numbers of fish. That new method compelled fishermen to purchase scales or hire them on daily basis which was very expensive. Above all the scales were heavy duty and they favoured the fish traders because they loaded a lot of fish to reach a pound and were not suitable for small species of fish (NAZ, 1949-1960) [34]. The fishermen lost out because they sold huge quantities of fish to the fish traders at low prices.

Difficulties in transporting fish to the Copperbelt were another obstacle in the development of the Bangweulu fishery and consequently contributed to poverty among the fishermen in Samfya district. In Mweru-Luapula for instance the government constructed a gravel road from Kawambwa to Mulwe village in 1949 which opened the area to the Copperbelt markets (Musambachime, 1920-1964:236). [23] But in Samfya, the proposal to construct a road along the watershed of Luombwa and Lulimala rivers was turned down by the Fisheries Advisory Committee in 1937 (NAZ, 1932-1946).^[25] That road was to join monument road in the south east and on to Luapula river at Mukuku village. The proposed road was very important because it was meant to divert Bangweulu fishermen from using Kapalala-Sakania route to Ndola. Furthermore, if that proposed road was financed, it could have enhanced trade in the Bangweulu area and consequently the fishermen could have benefitted from the booming fish trade on the Copperbelt.

However, even the justification in the 1951 report of the Fisheries Advisory Committee on fisheries that the planned road was too expensive for fish traffic alone because it would cost £39,000. for a class 3 earth road or £129 000 for a class 2 road was not true (NAZ, 1932-1946). That was because the Bangweulu fishery was supplying huge quantities of fish at that time compared to Mweru-Luapula which received huge financial and infrastructural support from the same government. One would only conclude that Mweru-Luapula received maximum government attention due to competition posed by the neighbouring Belgian Congo that had developed its fisheries on its side and was threatening to encroach on the Zambian side of Lake Mweru (Gordon, 2006:117) [9].

There was also lack of training to prepare the fishermen on future fishing prospects. In Samfya, the colonial and post-colonial governments did not sensitise fishermen on the importance of sustainable fishing and closed fishing season. Fishermen were not trained to diversify into other commercial activities especially during the fish ban in order to appreciate its long term effect. In the colonial era, government officials were very much alive to the economic plight of the local

people whose only source of income was in fishing. During the fish ban, they allowed any fisherman with nets of mesh size from three inches upwards to continue fishing because the nets only caught bigger types of fish (NAZ, 1949-1960) [28]. Additionally, fishermen who did not possess those nets could obtain written permits from District Commissioners to fish for relish only and school children less than 15 years were exempted from the closed fishing season and were allowed to use any size of net (NAZ, 1939-1948) [33]. Thus fishermen had a choice of either purchasing bigger meshed nets or obtain written permits.

After independence the Zambian government at first maintained the colonial government fish conservation Ordinance of 1955 which took into account the interests of the local fishermen by enforcing the fish ban during the fish breeding period to ensure adequate future supplies of fish (GRZ, 1965) [10]. Though fishermen saw the fish ban as an affront on their only means of livelihood, its relaxation in later years resulted in unrestricted influx of migrant fishermen. That culminated into increased fishing population which was increasingly making it difficult for individual fishermen to make a living out of the fishery due to decreased catch per fisherman.

However, many of the training proposals that would have benefitted the fishermen in the Bangweulu fishery did not reflect the aspirations of the local fishermen. In 1954 for instance, the Livingstone mail reported about the joint Northern Rhodesia and Nyasaland Fish Research station to be built at Samfya on Lake Bangweulu. The mail explained that the station would be staffed by scientists working at the joint fish Research station at Nkata Bay on Lake Nyasa (NAZ, 1954-1959) [29]. Unfortunately when the main unit for that project was set up in 1955, only the Headquarter offices and laboratory were at Samfya, the Research fish farm was put at Fort Rosebery Mansa (NAZ, 1962) [34]. Initially the project was to help the fishermen improve local methods of fishing and introduce new fishing methods suitable for African fishermen.

However, when the project was implemented its main focus changed to a comprehensive survey of the ecology of the Bangweulu region with a view to determining the cause of, and the possibility of remedying the low productivity of the Lake. It also embarked on investigating the nature and extent of the swamp fishery and possibility for improvement which was never done. Finally, the project started compiling a representative collection of Northern Rhodesian fishes with a view to producing a check list. All those activities of different significance the project embarked on had no direct relevance to the fishermen, who were supposed to be the direct beneficiaries. The fishermen of the Bangweulu fishery had always been fishing and had developed a fishing pattern that suited their local conditions. Over the years they evolved well balanced fishing strategies tuned to maximise the exploitation of fish stocks in all their diversity, using a combination of gears, methods and mesh sizes without over exploiting the fish stocks (Kolding and Chanda, 2010) [14]. What fishermen needed were practical government interventions to supplement their local fishing initiatives.

7. Conclusion and Recommendations

Fishing was the third most important industry in Zambia after farming and mining. The majority of the people especially in Samfya district were employed in fishing and fisheries related activities. The entire economy of Samfya district depended on fishing and the decline in fish stocks automatically affected all sectors of the economy in the district. This study has observed that the fishermen of Samfya caught and sold a lot of fish but most of them did not benefit from those abundant fish resources due to a combination of factors. The study has demonstrated that fishing was the only viable industry in Samfya district but the fishermen did not realise that the industry was a diminishing resource which needed sustainable utilisation. Local fishermen regarded the fishing grounds as a mine where they would be fishing throughout their lives without fish being depleted. They therefore employed a variety of fishing methods fishing methods some of which were destructive such as fish poisoning, weirs and mosquito nets which destroyed immature fish, fish eggs and fish breeding nests and this led to a decline in certain species of fish stocks. It was observed that most local fishermen were poor because of their lifestyle. Most fishermen of Samfya district did not invest their money in productive ventures, but spent much of it on beer drinking while some of them spent it on women because they believed fish was always there in lakes and rivers and they would find it whatever time they went to fish. While the rich and a few middle class fishermen managed to educate their children from their earnings, the poor fishermen did not and ended up forcing their children into early marriages where they wallowed in poverty.

Fish acted as a catalyst in uniting the fishermen of Samfya but the fishermen themselves did not unite to create wealth for themselves. They did not form fishing cooperatives to handle issues such as fish marketing, fish prices, acquisition of fishing equipment and diversification into other business ventures. Each fisherman fixed his/her own price which depended on how urgent he/she needed the money and also on the bargaining experience of the trader. In most cases traders bought fish at lower prices because they bargained with the poverty and ignorance of the fishermen in mind. The poverty of some fishermen in Samfya district was due to a static mind set. This study has observed that the local people depended on fishing for their livelihood. It follows that in times of poor catches, their economic base was affected. For instance, many shops at Katanshya and Chinsanka became seasonal shops because of dependence on the availability of fish. Fishermen of Samfya district lacked knowledge of what was obtaining in other parts of the country which could have assisted them to change their mind set and perception of the fishing industry. The colonial government introduced the Fish Conservation Ordinance in order to control the fishing activities and restrict certain methods of fishing. Although their main interest in those fishing legislations was to create a revenue base for local authorities and to pay salaries to colonial government workers, the measures ensured sustainability of the fisheries and continuity of future fish production. Over-fishing was curtailed through the use of nets with acceptable mesh sizes, especially during the fish breeding period, which caught fish of full grown sizes.

This study has also observed that the colonial government did not issue fishing licences to European commercial fishermen or European commercial traders to set up companies to buy fish in the Bangweulu area because they did not want the local African fishermen to be exploited or undermined. Besides exploitation, the colonial government was aware that increased fishing activities by European commercial fishermen would erode the fish stocks of the Bangweulu area because they used more advanced methods of fishing than the local African fishermen. Though the measures contributed to the poverty of the local fishermen by denying them a ready market for their fish, the same measures kept the fishing population low which ensured continued supplies of fish on which the livelihood of the fishermen of Samfya district depended.

The government of Zambia also contributed to the poverty of some fishermen in Samfya district by not taking keen interest in the welfare of the fishery. The government did not help the fishermen of Samfya with markets and loans to purchase suitable fishing gear. Most fishermen depended on old and destructive fishing methods which depleted fish stocks in the Bangweulu fishery. The fish ban was an effective intervention as a fish conservation strategy. But fishermen resisted it because of lack of effective propaganda on its actual long term benefits. The government did not orient the fishermen on the fish ban. Lack of participatory approach on the enforcement of the fish ban raised suspicion among the fishing folk that consequently resisted it.

During the colonial period the government fixed the price of fish at the lakeside market and the Copperbelt markets which afforded the fishermen some profit on their fish. However the Zambian government relaxed the fish pricing system and left market forces to determine the prices. Fish traders found it expensive to buy fish at varying prices from different fishermen and devised a system of exchanging consumer goods with fish. The system of exchanging fish with certain consumer goods contributed to the poverty of the fishermen and consequently rural income diminished.

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