

The Economics of Recreational Fishery in Namibia

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ABSTRACT: The linefish sector is one of the 10 commercial fisheries in Namibia. This sector is made up of two subsectors: commercial right holders and angling. The angling subsector is further divided into two types of fishing activities; subsistence angling which serve as a source of food supply and recreational angling which is carried out for pleasure or sport. As the custodian of fisheries resources in Namibia, the Ministry of Fisheries and Marine Resources conduct an angling survey every year to draw conclusions and recommendations to aid prudent and sustainable management of this resource. The survey also collects data on the economic value of angling in terms of government revenue through angling permit fees, contribution to food supply; expenditure on angling activities in terms of buying bait, fishing equipments, food, accommodation and entertainment. The angling survey is conducted during December because it is the month with the highest number of angling permits issued as its holiday time for most of the anglers. Unlike other commercial fisheries in Namibia, angling is not subject to a quota system but rather to a daily bag limit. The objective of this paper is to look at the economics of recreational fishery in Namibia.

Table of Contents

Introduction	3
Overview of the recreational angling sector.....	3
Methodology.....	4
RESULTS	4
Catch and Effort	5
EXPENDITURES ON ANGLING.....	6
Government revenue.....	7
Conclusions	7

Introduction

The Ministry of Fisheries and Marine Resources is responsible for managing and administering the sustainable use of marine resources in Namibia. Line fish fishery is a dynamic sector, and requires the Ministry to react and adjust its operations accordingly while ensuring optimal utilization of marine resources. The annual angling survey is one of the tools used to evaluate the fees, policies and legislation as well as the importance of this fishery to the Namibian economy. The aim of the survey is to estimate the economic value of the angling sector as well as determining the number of people harvesting the resources in the angling sector. The main objective of collecting data on the dynamics of this sector is to aid the Ministry of Fisheries and Marine Resources in introducing and implementing prudent management measures for the sustainable utilization of this resource. The survey targets Namibian residents; visitors from around the region and further afield who partake in angling activities along the coast of Namibia.

Overview of the recreational angling sector

The recreational angling sub-sector falls under the Linefish sector and it is subjected to a daily bag limit in terms of the amount of fish that each angler can catch per day. Anglers in this sub-sector are further subjected to the size limit which stipulates the length of the fish each angler is authorised to catch and this varies from species to species. Recreational angling is done for the purpose of leisure or sport and anglers are not allowed to sell their catches but they can either consume them or return them to sea provided the fish is still alive. The main fish species being targeted by recreational anglers include silver kob (*Argyrosomus inodorus*), also known locally as kabeljou, west coast steenbras (*Lithognathus reti*) and Galjeon (*Coracinus Capensis*). There is no limit to the number of people who can partake in recreational angling any day, month or year but every angler is required to obtain an angling permit from the Ministry of Fisheries and Marine Resources which they should carry every time they go out angling.

Unlike in the commercial sub-sector of the Linefish sector where data on the catches and sizes are recorded in a logbook, data on catches and sizes in the recreational angling sub-sector is obtained through interviews and measuring anglers catches. Recreational angling is one of the popular forms of angling in Namibia because of the friendly environment that the country has. According to foreign anglers, they prefer angling in Namibia because they are allowed to park their cars on the beach while they angle. Some anglers chose to angle in Namibia because the coastal line is very clean and the people are very friendly.

Methodology

The methodology employed for data collection was a survey. A random sample of 219 anglers taking part in recreational angling activities between Swakopmund and Moe Bay participated in the survey.

A structured questionnaire was used during the survey looking at recreational anglers and subsistence anglers. There is no clear defined distinction between subsistence and recreational angling and this was the identified limitation to the survey. However, all necessary attempts were made to categorize the two types of angling accordingly.

The survey was carried out under the auspices of the Ministry of Fisheries and Marine Resources all interviewers were from the Ministry. The interviewing team comprised of two Economists, a Fishery Administrator and an Inspector. They interviewers carried the Ministry's identification cards during the interviewing process.

RESULTS

PROFILE OF ANGLERS

The survey aimed to get the overview of the demographic profile of anglers by looking at the nationality, gender and age structure of anglers. In addition the employment and income status of these anglers will also be illustrated in order to have an understanding of the economic status of anglers.

The survey results showed that the majority of recreational anglers were males, which made up 84% of all respondents, while 16% were female recreational anglers. In terms of nationalities, 51% of the respondents were Namibians and the balance indicated that they were from the SADC region. Anglers who indicated that they were Namibians, 63% were from Erongo while 37% are from others regions.

Anglers in the age group 41-50 represented 21% of all the respondents and 20% each fell in the age group 21-30 and 51-60 respectively. The remaining 59% indicated that they belong to the age groups 31-40, 61-70 and over 70 years of age. In addition, 39% of anglers were employed, 35% were self-employed, and 16% were students, while 3% and 7% of the respondents reported to be unemployed and retired respectively.

The majority of anglers totalling 79% prefer beach angling, and 13% prefer rock angling. A very small percentage of anglers, amounting to 4% each of the respondents indicated that they also undertook ski-boat fishing and diving.

Slightly more than half of the respondents (56%) indicated that their gross monthly income is more than N\$11000, While 15% indicated that they have a gross monthly income less than N\$1000. Furthermore, 29% of the respondents indicated that their monthly income ranged between N\$2000-8699 and N\$8700-10799 respectively.

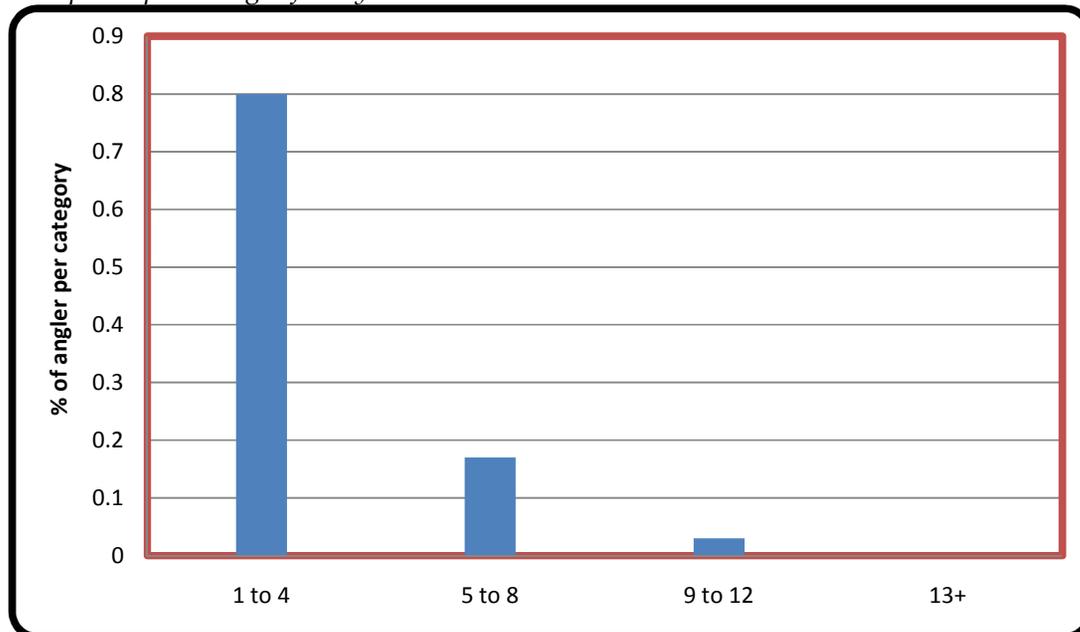
Catch and Effort

The effort applied to the Linefish fishery by the recreational anglers is very low if compared with that of commercial Linefish boat operators. Results indicated that 37% of anglers spend up to 7 days angling per month while 24% indicated that they spend around 14 days. In addition, 53% of anglers indicated that they spend 6-8 hours angling per day and the balance indicated that they spend either less or more hours.

The main species targeted by the recreational anglers are Kabeljou (36%), Steenbras (28%), Galjoen (25%). Most anglers, about 52% indicated that they prefer angling in the morning, while 38% and 10% preferred angling during the day and all day respectively. All respondents indicated that they partake in angling for leisure and consume all their catches.

Graph 1 below represents the percentage of the number of fish caught by each angler per day.

Graph: 1: percentage of daily catches



Source: MFMR, 2011

The graph above indicates that 80% of respondents catch 1-4 fish per day, 17% catch 5-8 while 3% indicated that they catch 9-12 fish per day. Catches are generally depended on the availability of fish and weather conditions at sea on a specific angling day. The majority of respondents indicated that they are happy with the daily bag limit of ten fish set by the Ministry, while 11% expressed their dissatisfaction with the set limit. These anglers dissatisfied, 36% would prefer the limit to be set at 16-20 fish per day, while 32% and 14% felt the bag limit should be 11-15 and more than 30 respectively

EXPENDITURES ON ANGLING

The survey also aimed to determine the economic value of recreational activities for the year under review which was done by looking at the actual expenditures on activities relating to recreational angling. Expenditures looked at were accommodation, travel cost (fuel), entertainment, bait, fishing equipments (rod, reel, tackle and others (food etc). The exchange rate was US\$1=N\$8 at the time of analysis. Total expenditures on angling in 2011 were N\$428,330,812.4 as representative of these respondents. The challenge with this figure is that it includes fuel and fishing equipments and one cannot clearly separate expenditures incurred in other countries e.g. South Africa from the one in Namibia, and that made it difficult in determining how much was exactly spend in the local economy. Anglers were also asked to estimate the replacement value of their fishing equipments which was estimated to be N\$1,619,050.

Table 1 below gives a breakdown of expenditures on angling activities for the year 2011. Accommodation constituted the highest share of expenditures at N\$159,370,793 followed by travel cost (fuel) at N\$144,974,202.7. The survey was carried out during December holidays and that is usually the time when most people flock to the coast for leisure. It was not surprising to learn that respondents indicated that they spent around N\$46,365,225.21 on entertainment during their stay.

Table 1: Total expenditures on angling 2011

Item	Amount (N\$)
Travel cost	159,370,793
Accommodation	144,974,202.7
Entertainment	46,365,225.21
Tackle	19,911,853.15
Reels	18,699,130.68
Rods	17,893,319.42
Bait	11,212,848.49
Others	990,3439.726
Total	428,330,812.4

Source: MFMR, 2011

Government revenue

To partake in recreational angling in Namibia, each angler is required to obtain an angling permit from the Ministry of Fisheries and Marine resources for a fee of N\$14 for a monthly permit and N\$168 for an annual permit. Respondents were asked to give their views on the current angling permit fees, 87% indicated that the fee is quite reasonable while 13% indicated that the fee is too little. (The angling permits are issued at the Ministry's offices in Windhoek, Luderitz, Swakopmund, Walvis Bay and Henties Bay.) In 2011, the total number of anglers registered was 60,498 and the permit fees paid amounted to N\$1,173,914. Table 2 below gives a breakdown of permits issued per centre and the fees collected.

Table 2: Angling permits issued and fees collected, 2011

Centre	No of permit issued	Fees collected (N\$)
Windhoek	2926	54978
Luderitz	2228	3626
Swakopmund	26626	551,404
Walvis Bay	9895	218,456
Henties Bay	18823	345,450
Total	60,498	1,173,914

Source: MFMR, 2011

Conclusions

The recreational angling sub-sector is very important to the Namibian economy in terms of revenue to government, direct expenditures on angling activities as well as indirect expenditures in the local economy. Angling in Namibia is very attractive in the sense that the coastal line is very clean and anglers are allowed more freedom on the beach such as parking and having family around while angling.

The Ministry of Fisheries and Marine Resources has introduced and implemented conservation and management measures to sustainably utilise fisheries and marine resources in the Namibian waters. Measures such as daily bag limit and size limits are all aimed at conserving the recreational angling species while at the same time ensuring that the stock is sustainably utilised to provide socio-economic benefits to the Namibian people. Recreational angling in Namibia is open to anyone wanting to spend time angling provided that they obtain an angling permit. Permits cost N\$14/month or N\$168/year.

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