CATCH-AND-RELEASE BEHAVIOUR AMONG ANGLERS IN TASIK MUDA, KEDAH

MUHAMMAD ADI SYARQAWI BIN SHAEFE

FP 2018 26

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This project report is submitted in partially fulfilment of the requirements for the degree of Bachelor of Agriculture (Aquaculture)

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CERTIFICATION OF APPROVAL

DEPARTMENT OF AQUACULTURE

FACULTY OF AGRICULTURE

UNIVERSITI PUTRA MALAYSIA

Name of student : Muhammad Adi Syarqawi bin Shaefe

Matric number : 168684

Programme : Bachelor of Agriculture (Aquaculture)

Year : 2018

Name of supervisor : Izharuddin Shah bin Kamaruddin, Ph.D.

Title of project : Catch-and-release behaviour among anglers in Tasik Muda, Kedah

This is to certify that I have examined the final project report and all corrections have been made as recommended by the panel of examiners. This report complies with the recommended format stipulated in the AKU4999 project guidelines, Department of Aquaculture, Faculty of Agriculture, Universiti Putra Malaysia.

Signature and official stamp of supervisor and co supervisor:

_____

Supervisor's name:

Date:

ACKNOWLEDGEMENT

First and foremost, Alhamdulillah praise to Allah that makes me strong to continue and finished my research. I would like to express my sincere gratitude to my supervisor Dr. Izharuddin Shah bin Kamaruddin for his continuous support in my Final Year Project research, for his patience, motivation, enthusiasm, and immense knowledge. His guidance has helped me in the research writing of the thesis. I could not have imagined having a better advisor and mentor for my research.

My sincere thanks also go to the Muda Agriculture Development Authorities (MADA) and the Department of Kedah Fisheries, especially for their consent and approval for me to conduct the research at Tasik Muda, Kedah. Not forgotten to all my supportive friends especially Mr Muhammad Izham bin Mispan, lecturers and faculty staffs, especially those from the Department of Aquaculture for their comments and supports.

Besides, I would like to thank my beloved wife, Mrs Nik Nur Syuhada binti Mohd Hasnan for her moral, spiritual and financial supports besides praying for my success and always be by my side. Not to forget my beloved parents, Mr Shaefe bin Saidin and Mrs Rohana binti Omar for their prays from the beginning of my life to see their son's success in this world and hereafter. Others, my beloved siblings, Mr Muhammad Faiz, Mr Muhammad Faiq Ikhwan, Ms Nur Izzati, Mr Muhammad Hafiz and Ms Nurul Izzah for their moral and financial support in supporting this research.

ABSTRACT

This study aimed to identify the basic socio-demographic backgrounds, catch-and-release behaviour and fish species preferences among anglers. This study was done at Tasik Muda, Kedah. All anglers that come to fish at Tasik Muda during study period were chosen to answer the survey and face-to-face survey was done. Four variables (attitude, subjective norm, perceived behaviour control and intention) were measured in the questionnaire, along with eight types of fish species that anglers preferred to fish. The data was collected based on a face-to-face on-site survey technique. The results show that most of the respondents were male (90.5%) with a mean age of 36.59 ± 8.80 years old. Most of them are self-employed anglers (45.8%) and a SPM holder (39.5%), with 77.1% are married. The angler's 'perceived behaviour control' was high (3.94 ± 0.78) towards catch-and-release behaviour and it was the main contributing factor that influences the 'intention' to perform catch-and-release fishing. Most of the anglers preferred snakehead (*Channa striata*) (4.54 ± 0.82), Malaysian mahseer (*Tor tambroides*) (4.65 ± 0.66), copper mahseer (*Neolissochilus soroides*) (4.51 ± 0.83) and hampala barb (*Hampala macrolepidota*) (4.47 ± 0.80) as their preferred species while fishing. This study provides some basic data and information about recreational anglers who involved in recreational fishing activity in Tasik Muda, Kedah.

ABSTRAK

Kajian ini bertujuan untuk mengenal pasti latar belakang demografik asas pemancing, tingkah laku tangkap-dan-lepas pemancing dan spesies ikan yang menjadi pilihan pemancing. Kajian ini telah dijalankan di Tasik Muda, Kedah. Kesemua pemancing yang datang untuk memancing semasa tempoh kajian dijalankan telah dipilih untuk menjawab kaji selidik ini secara bersemuka. Empat pemboleh ubah (sikap, norma subjektif, kawalan tingkah laku dan niat) telah diukur didalam kaji selidik berserta lapan spesies ikan yang menjadi pilihan pemancing. Keputusan menunjukkan kebanyakkan responden adalah lelaki (90.5%), dengan purata umur 36.59 ± 8.80 tahun, bekerja sendiri (45.8%), mempunyai sijil SPM (39.5%) dan 77.1% adalah pemancing yang telah berkahwin. 'Kawalan tingkah laku' pemancing juga adalah tinggi (3.94 ± 0.78) dan telah mempengaruhi 'niat' mereka untuk melakukan tangkap-dan-lepas. Kebanyakkan pemancing memilih haruan (*Channa striata*) (4.54 ± 0.82), kelah (*Tor tambroides*) (4.65 ± 0.66), tengas (*Neolissochilus soroides*) (4.51 ± 0.83), dan sebarau (*Hampala macrolepidota*) (4.47 ± 0.80) sebagai spesies pilihan mereka ketika memancing. Kajian ini memberikan data asas dan maklumat pemancing yang terlibat dalam aktiviti rekreasi memancing di Tasik Muda, Kedah.

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LIST OF ABBREVIATIONS AND SYMBOLS

1. sp. : species
2. SD : Standard deviation
3. SE : standard error
4. ANOVA : analysis of variance
5. TPB : theory of planned behaviour

CHAPTER 1

INTRODUCTION

Tasik Muda or known as Muda Dam can be categorized as a remote fishing site because it is located away from the city centre. Tasik Muda is located about 40 km from the nearest town which is the Sik town. Furthermore, anglers need to travel several hours by boat (about three to four hours) before they could access to the lake's best fishing spots. Some of the fish species targeted by the anglers are *Hampala macrolepidota* (hampala barb) and *Tor tambroides* (Malaysian mahseer).

However, some species of fish are prohibited to be harvested by the anglers in Tasik Muda. This is following to the legislation which was gazetted by the State Government of Kedah, known as *Kaedah-Kaedah Perikanan Sungai* (1991). There are some species that prohibited for anglers to harvest, where the fish need to be released back to the water if caught. These species include *Schelopages formosus* (arowana) and *Probarbus juilieni* (Jullien's carp).

There are groups of inland fishermen who depend on the dam either as subsistence or commercial fishermen. These fishermen supply fishes as a source of protein to the nearby community of Tasik Muda. Based on the statistic records from the Department of Fisheries Malaysia (DOF), there are about 50 fishermen who registered and licensed as a commercial fisherman, however, only 16 fishermen are truly active conducting the fishing activities. Other than that, there are about six fishermen who do not register as a commercial fisherman with the DOF and fishing solely for subsistence purposes. The DOF statistic records also indicated that more than 50 tonnes of freshwater fish species landed by the fishermen, annually. Some of the major species landed include; *Hemibagrus bleekeri* (river catfish), *Oreochromis sp.* (tilapia), *Osteochilus hasseltii*

(silver sharkminnow), *Barbonymus schwanenfeldii* (tinfoil barb), and *Cyclocheilichthys apogon* (red-eyed barb).

There is a high level of fish consumptions among recreational anglers in Malaysia especially in Tasik Muda, Kedah. Other than that, the basic socio-demographic backgrounds of the anglers are mostly unknown. Next, most anglers always focus on their fishing 'satisfaction' and 'fun' motives while fishing and less concern and aware about the condition of the fish stock and its conservation status.

The catch-and-release study is comprising of 'attitude', 'subjective norm', 'perceived behaviour control' and 'intention' of anglers which can lead to the behaviour of catch-and-release fishing. Catch-and-release behaviour is important because the behaviour can help preserve the ecosystem, where fish is released back into the water after being caught. However, sometimes, anglers do want to take some of the fish caught home, where this reflects to their 'consumptive orientation' level of fishing.

Some other issues also arise in Tasik Muda lately. It is reported that the population of some of the fish species are declining. Furthermore, fewer people visiting to Tasik Muda a few years back due to some unknown reasons. Therefore, this study could help the fisheries managers and the management agencies of Tasik Muda, by providing some basic information about the anglers who fish in the lake. Besides, this research could highlight the importance to educate anglers and to appreciate the natural environment, by maintaining its aesthetic qualities and attractiveness, to make sure that the anglers will keep visiting Tasik Muda in the future for fishing.

Overall, the main purpose of this study is to understand the basic socio-demographic backgrounds, catch-and-release behaviour as well as the fish species preferences among anglers in Tasik Muda, Kedah.

Therefore, the objectives of this study were:

1. to determine the basic socio-demographic backgrounds of anglers in Tasik Muda, Kedah.
2. to determine the catch-and-release behaviour of anglers in Tasik Muda, Kedah.
3. to determine species preferences among anglers in Tasik Muda, Kedah.

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