INCIDENTAL CATCHES OF MARINE ENDANGERED SPECIES IN KUALA TERENGGANU WATERS

NURUL SYAFIQA MOHAMMAD HATTA

FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
UNIVERSITI MALAYSIA TERENGGANU

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PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH
UNIVERSITI MALAYSIA TERENGGANU (UMT)
21030 KUALA TERENGGANU

1100091348		

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PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH

INCIDENTAL CATCHES OF MARINE ENDANGERED SPECIES IN KUALA TERENGGANU WATERS

By

Nurul Syafiqa Mohammad Hatta

Research Report submitted in partial fulfillment of

the requirements for the degree of

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DEPARTMENT OF MARINE SCIENCE
FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
UNIVERSITI MALAYSIA TERENGGANU

DECLARATION AND VERIFICATION REPORT
FINAL YEAR RESEARCH PROJECT

It is hereby declared and verified that this research report entitled:

Incidental catches of marine endangered species in Kuala Terengganu

by Nurul Syafiqa Mohammad Hatta, Matric No. UK22256 have been examined and all errors identified have been corrected. This report is submitted to the Department of Marine Science as partial fulfilment towards obtaining the Degree Bach. of Science (Marine Biology), Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

Verified by:

.....

Principal Supervisor

Name: Prof. Madya Dr. Saifullah A. Jaaman

Official stamp:

DR. SAIFULLAH A JAAMAN
ASSOCIATE PROFESSOR
DEPARTMENT OF MARINE SCIENCE
FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
UNIVERSITY MALAYSIA TERENGGANU (UMT)
21030 KUALA TERENGGANU

Date: 12/6/13

.....

Second Supervisor

Name: Prof. Madya Dr. Siti Aishah Abdullah

Official stamp:

PROF. MADYA DR. SITI AISHAH ABDULLAH
CHRISTINE A. OROSCO
PENYELARAS PROGRAM BIOLOGI MARIN
JABATAN SAINS MARIN
FAKULTI PENGAJIAN MARITIM DAN SAINS MARIN
UNIVERSITI MALAYSIA TERENGGANU (UMT)
21030 KUALA TERENGGANU

Date: 12/6/13

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TABLE OF CONTENT

TITLE PAGE	
THESIS QUALIFICATION AND VERIFICATION FORM	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
ABBREVIATIONS	ix
LIST OF SYMBOL	x
ABSTRAK	xi
ABSTRACT	xii
CHAPTER 1 INTRODUCTION	1
1.1 Introduction	1
1.2 Problem Statement	2
1.3 Research Questions	3
1.4 Objectives	3
1.5 Hypothesis	4
1.6 Justification	5
CHAPTER 2 LITERATURE REVIEW	6
2.1 Marine Endangered Species in Malaysia	6
2.2 Regulations and legislations on marine mammals, turtles and whale sharks in Malaysia	7
2.3 Status of marine endangered species	10
2.4 The global issue of incidental catches of marine endangered species	11

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by different gill nets

CHAPTER 3 METHODOLOGY 13

3.1 Study area 13

3.2 Material/Equipment 15

3.3 Data collection 16

3.4 Data management & analysis 18

CHAPTER 4 RESULT 19

4.1 Information about the respondents 19

4.2 Species of marine endangered species that caught incidentally in Kuala Terengganu waters 24

4.3 The mortality rate of marine endangered species according to season in Kuala Terengganu waters 27

4.4 The mortality rate of marine endangered species according to fishing gear and season in Kuala Terengganu waters 31

CHAPTER 5 DISCUSSION 38

5.1 Species of marine endangered species that caught incidentally in Kuala Terengganu waters 38

5.2 The mortality rate of marine endangered species according to season in Kuala Terengganu waters 42

5.3 The mortality rate of marine endangered species according to fishing gear and season in Kuala Terengganu waters 44

CHAPTER 6 CONCLUSION 46

REFERENCES 50

APPENDICES 53

CURRICULUM VITAE 64

LIST OF TABLES

No. of Table		Page
1.0	List of species of turtles, marine mammals and whale shark in CITES Appendices	7
4.1	The number of incidental catches of turtles, marine mammals and whale sharks by fishermen in a lifetime period	24
4.2	Average of incidental catch of turtles, dolphins, whales and whale sharks	26
4.3	The mortality rate of turtles, marine mammals and whale sharks according to season per year for all registered boats in Kuala Terengganu	30
4.4	The mortality rate of turtles, dolphins, whales, whale sharks and dugongs according to the fishing gears of all the registered boat in Kuala Terengganu	33
4.5	The mortality rate of turtles, dolphins, whales, whale sharks and dugongs according to the area of all the registered boats in Kuala Terengganu	36

LIST OF FIGURES

No. of Figures		Page
3.1	Kuala Terengganu maps	13
4.1	The age size of respondents (n=106)	20
4.2	The percentage of education level of the respondents (n=106)	20
4.3	The fishing experience of the respondents (n=106)	21
4.4	The percentage of respondents who answered 'Yes' and 'No' for the question 'is fishing your main income?' (n=106)	21
4.5	The percentage of fishermen who answered 'Greater', 'No change', 'Smaller' and 'Do not know' for the number of fish compared to last 10 years (n=106	22
4.6	The percentage of the fishermen who answered 'Better', 'No change', 'Worst' or 'Do not know' for the quality of water compared to last 10 years (n=106)	22
4.7	The Percentage (%) of Fishermen who answered 'More', 'No change', 'Less' or 'Do not know' for the area of fishing ground used compared to the last 10 years (n=106)	23
4.8	The percentage of fishermen who were captain or sailor (n=106)	23
4.9	The percentage of respondents who answered 'Increase', 'Decrease', 'No change' and 'Do not know' for the 'Number of marine mammals, turtles and dugongs that are caught incidentally at the current time compared to the time they became a fisherman' (n=106)	25
4.10	The number of turtles, dolphins, whales, whale sharks and dugongs	25

had incidentally caught by fishermen (n=106)

4.11 The percentage of respondents to the question of the number of turtles, dolphins, whales, whale sharks and dugongs by compared to the first year they became a fisherman (n=106) 27

4.12 The number of incidental catches of turtles, marine mammals and whale sharks according to season by fishermen in a lifetime period (n=106) 28

4.13 The number of incidental catches of turtles, marine mammals and whale sharks according to season by fishermen in a lifetime period 29

4.14 The percentage of respondents who used different type of fishing gears (n=106) 31

4.15 The number of turtles, dolphins, whales, whale sharks and dugongs incidentally caught by the fishermen in their lifetime period 32

4.16 The percentage of respondents who answered 'Yes' and 'No' for the question 'Did they used different fishing equipment for different area?' 33

4.17 The percentage of respondents who answered 'Yes' and 'No' for the question 'Did they know the area which turtles, marine mammals and whale sharks normally occur?'(n=106) 34

4.18 The percentage of respondents who answered 'Yes' and 'No' for the question 'Did the area of appearances of turtles, marine mammals and whale sharks change over time?'(n=106) 35

4.19 The frequencies of the number of areas of incidental catch of turtles, dolphins, whales and whale sharks in four division areas. 36

ABBREVIATIONS

df	degrees of freedom
km	kilometre
Q1	quarter 1
Q2	quarter 2
Q3	quarter 3
Q4	quarter 4
A1	area 1
A2	area 2
A3	area 3
A4	area 4
r	number of row
c	number columns

LIST OF SYMBOL

%	percentage
x^2	power of two
<	less than
>	more than
≤	less than or equal to
≥	more than or equal to
∑	sum

ABSTRACT

This study was conducted to determine the incidental catch of marine endangered species such as turtles, dolphins, whales, dugongs and whale sharks in Kuala Terengganu waters. This study has three objectives: 1) identify the species of marine mammals, turtles and whale sharks that are caught incidentally in fisheries in Kuala Terengganu waters, 2) investigate the mortality rate of marine mammals, turtles and whale sharks in fisheries according to season in Kuala Terengganu waters, and 3) investigate the mortality rate of marine mammals, turtles and whale sharks according to fishing gear and area in Kuala Terengganu waters. Interviews were conducted from October 2012 to March 2013, and 106 respondents were taken to represent 10% of the number boats registered under the Persatuan Nelayan Kawasan Kuala Terengganu (867 boats). The result shows that the species which caught incidentally in Kuala Terengganu waters are turtles, dolphins, whales and whale sharks. No of incidental catch of dugong is recorded. The frequency of incidental catches of turtles is higher than other marine endangered species in Kuala Terengganu. There is no significant difference in the mortality rate of endangered species during the northeast monsoon season (df=3, p=0. 05). For area factor, there is no significant difference in mortality rate of marine endangered species according to area (df=3, p=0. 05). Among the fishing gears used by fishermen, purse seine recorded the mortality of all marine endangered species except dugongs. Therefore, the development and implementation of conservation strategies such as public awareness program and surveillance authorities plays important roles in reducing the mortality rate of marine endangered species.

Tangkapan Sampingan Spesies Marin yang Terancam di Perairan Kuala Terengganu

ABSTRAK

Kajian ini dijalankan untuk menentukan tangkapan sampingan spesies marin yang terancam seperti penyu, lumba-lumba, paus, dugong dan jerung paus. Kajian ini mempunyai tiga objektif: 1) mengenal pasti spesies mamalia marin, penyu dan jerung paus yang ditangkap secara tidak sengaja dalam perikanan di perairan Kuala Terengganu, 2) menyiasat kadar kematian, penyu di perairan Kuala Terengganu, dan 3) mengkaji kadar kematian mamalia marin, penyu dan jerung paus mengikut peralatan menangkap ikan dan kawasan di perairan Kuala Terengganu. Temu bual telah dijalankan dari Oktober 2012 hingga Mac 2013, dan seramai 106 responden telah ditemu ramah untuk mewakili 10% daripada jumlah bot yang berdaftar di bawah Persatuan Nelayan Kuala Terengganu (867 bot). Keputusan menunjukkan bahawa spesies yang ditangkap secara tidak sengaja di perairan Kuala Terengganu ialah penyu, lumba-lumba, paus dan jerung paus.Tiada tangkapan sampingan bagi dugong yang direkodkan. Kekerapan tangkapan sampingan bagi penyu adalah yang paling tinggi berbanding dengan spesies marin terancam yang lain. Tidak ada perbezaan yang signifikan bagi kadar kematian spesies marin yang terancam ketika musim monsun timur laut ($df=3$, $p>0.05$). Bagi factor kawasan, terdapat perbezaan yang signifikan bagi kadar kematian spesies marin yang terancam mengikut kawasan ($df=3$, $p>0.05$).Pukat jerut mencatatkan kadar kematian daripada semua spesies marin terancam kecuali dugong. Oleh itu, pembangunan dan pelaksanaan strategi pemuliharaan seperti program kesedaran dan pengawasan pihak berkuasa memainkan peranan penting dalam mengurangkan kadar kematian spesies marin yang terancam