

dn: 7931

1100085153

Perpustakaan Sultanah Nur Zahirah Universiti Malaysia Terengganu (UMT)



1100085153

.

A study on maritime incidents in the study of Malacca / Nor Lela Sapari.

1.	PUSTAKAAN SULTANAH NU VERSITI MALAYSIA TERENG 21030 KUALA TERENGG 1110008	5153
	·	
	-	Į
		F .
	· .	
		1
		+
		+
		+
	· · · ·	
	54.	
		ł



HAK MILIK PERPUSTAKAAN SUUTANAH NUR ZAHIRAH UNT

A STUDY ON MARITIME INCIDENTS IN THE STRAITS OF MALACCA

¥.

By

Nor Lela binti Sapari

Research Report Submitted in Partial Fulfilment of The Requirement for the Degree of Bachelor of Science (Nautical Science and Maritime Transportation)

Department of Nautical Science and Maritime Transportation Faculty of Maritime Studies and Marine Science UNIVERSITI MALAYSIA TERENGGANU

2011



DEPARTMENT OF NAUTICAL SCIENCE AND MARITIME TRANSPORTATION 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:

A Study on Maritime Incidents in the Straits of Malacca by Nor Lela binti Sapari. Matric No. UK 14793 has been examined and all errors identified have been corrected. This report is submitted to the Department of Nautical Science and Maritime Transportation as partial fulfillment toward obtaining the Degree of Science (Nautical Science and Maritime Transportation), Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

Verified by:

Principal Supervisor

Lecturer Department of Maritime Management Faculty of Maritime Studies and Marine Science Universiti Malaysia Terengganu (UMT) 21030 Kuala Terengganu.

Official stamp:

Name:

Date: 24-4-271

......

Second Supervisor

Name:

Official stamp:

Head of Department of Nautical Science and Maritime Transportation

Name:

Official stamp:

CAPT. BORD RAIR DIN PADZIL, CHILT Extee Jobaton Soing Naulite dan Porgongtutan Merilia FAKULTI PENGAJIAN MARITIM SAN SAINS MARIN UNIVERSITI MALAYSIA TERENGGANU (I)' 21030 KUALA TERENGG

Date:

Date: 2-8/4/2011

ACKNOWLEDGEMENT

Alhamdulillah, in the name of Allah. I am grateful to thank for all persons who contributed to my final year project titling "A Study on Maritime Incidents in the Straits of Malacca" to partially fulfill the requirement of the Bachelor of Science (Nautical Science & Maritime Transportation) at Universiti Malaysia Terengganu. Firstly, I would like to impress my love and appreciate to my family members, especially to their moral and financial support to make this thesis success.

Secondly, is to my supervisor, Tuan Haji Abdul Rahim bin Ibrahim, for his invaluable advice, comments, guidance encouragement throughout this final year project. Not also forget, Captain Noor Apandi Osnin, as a final year project coordinator for Nautical Science and Captain Mohd Naim bin Fadzil who gave me a lots of advices and guidelines during my final year project. Without their help and guidance, I would have not been done my project on my own.

My special thanks go to Marine Department Peninsula Malaysia especially to Mr. Sharul bin Mat Ripin, Marine Officer of Marine Department Peninsula Malaysia, who help me during my data collection for my project. In addition I would like to thanks my beloved friends who help me in many ways and encouraged me throughout my project.

Finally, I would like to take this opportunity to express my heartfully thanks to everyone that helped me directly and indirectly to fulfill my final year project.

Sincerely,

(Nor Lela binti Sapari)

Table of Contents

Title	Page
Thesis Qualification & Verification Form	ĩ
Acknowledgement	ii
Table of Content	iii
List of Figure	vi
List of Table	vi
List of Appendices	vii
Abstract (In English)	viii
Abstract (In Bahasa Malaysia)	ix

Chapter 1: Introduction and Objectives

1.1	Background	1
1.2	Problem Statement	3
1.3	Objectives	3
1.4	Scope of Studies	4

Chapter 2: Literature Review

2.1	The Straits of Malacca the Busiest International Passage	6
2.2	Maritime Incidents	8
2.3	Factors on Maritime Accidents	12
2.4	Safety of Navigation and Environment Protection at	
	the Straits Of Malacca	14

2.4.1 Co-operative Mechanism		14
2.4.2 Traffic Separation Scheme		17
2.4.3 Vessel Traffic System		20
2.4.4 Marine Electronic Highway	÷.	21

2.5	Responsibility for Navigational Safety at the Straits of Malacca	23
2.6	Main Area on Maritime Incidents	25

Chapter 3: Methodology

3.1	Information Collection	28
3.2	Data Collection	29
3.3	Factors of Accidents	30
3.4	Location of Incidents	31
3.5	Email	31
3.6	Previous Cases or Case Study	31
3.7	Data Analysis	31

Chapter 4: Results

4.1	Type of Maritime Incidents along the Straits of Malacca	33
4.2	Factors in the Maritime Incidents along the Straits of Malacca	35
4.3	The Location of Maritime Incidents along the Straits of Malacca	36
4.4	The Type of Ships in Maritime Incidents along	
	the Straits of Malacca	38
4.5	Numbers of Maritime Incidents along the Straits of Malacca	
	from the Years; 2007-2010	39

Chapter 5: Discussion

5.1	Type of Maritime Incidents along the Straits of Malacca	41
5.2	Factors in the Maritime Incidents along the Straits of Malacca	42
5.3	The Location of Maritime Incidents along the Straits of Malacca	43
5.4	The Type of Ships in Maritime Incidents along	
	the Straits of Malacca	44
5.5	Numbers of Maritime Incidents along the Straits of Malacca	
	from the Years; 2007-2010	45
Chapt	er 6: Conclusion and Recommendation	46
Refere	ences	49

LIST OF FIGURES

PAGE

Figure 1.1	The Straits of Malacca	4
Figure 2.1	Traffic Separation Scheme Adopted by International Maritime Organization (IMO)	18
Figure 2.2	Propose Extension of Existing Traffic Separation Scheme (TSS) and Provision of Deep Water Route.	19
Figure 2.3	Area under Coverage by the Malaysian Vessel Traffic System (VTS)	20
Figure 2.4	Area of Hydrographic Survey for Marine Electronic Highway Demonstration Area.	22
Figure 2.5	High Risk Area along the Straits of Malacca	25
Figure 4.1	Percentage of Incidents Type along the Straits of Malacca	34
Figure 4.2	Percentages of Maritime Incidents along the Straits of Malacca Based on Location	37
Figure 4.3	The Number of Ships Type that Involved into the Maritime Incidents Along the Straits of Malacca	38
Fihure 4.4	Number of Maritime Incidents along the Straits of Malacca based on Years; 2007-2010	40

LIST OF TABLES

Table 2.1	Number of Ships Calling at Ports along the Straits of Malacca	8
Table 2.2	Reported Casualties by Type of Vessels, 1978-1994	10
Table 2.3	Contribution to Aids of Navigation Fund, the Straits of Malacca	24

LIST OF APPENDICES

APPENDIX 1	The Straits of Malacca Traffic, 2000-2009
APPENDIX 2	The Statistic Data of Maritime Incidents along the Straits of Malacca, 2007-2010
APPENDIX 3	Data Analysis for Maritime Incidents along the Straits of Malacca, 2007-2010

ABSTRACT

This study was conducted along the Straits of Malacca. The objectives are to identify the main factors and common locations of maritime incidents along the Straits of Malacca. The method used in this research is using the Microsoft Excel to identify the maximum number of factors and common location along the Straits of Malacca. Based on data analysis, Port Klang was identified as the common location that always involved in maritime incidents along the Straits. For the main causes of maritime incidents, human error was recognized as the common factor that contributes to the maritime incidents. This research basically helps to support any plan to make safety of navigation along the Straits of Malacca and the same time to prevent any marine pollution that can affect the marine life at the Straits. The data limitation make this research is only analyzed for period 2007 until 2010. For the future, the data must be analyzed from ten years before to make better and accurate result. The factors of maritime incidents also have to be more specific and variety. In fact, it will help to any plan on safety of navigation and environment protection in the Straits of Malacca.

Kajian Insiden di Laut di Selat Melaka

ABSTRAK

Kajian ini dijalankan sepanjang Selat Melaka. Objektif utama kajian ini adalah untuk mengenalpasti faktor utama dan juga lokasi yang biasa terjadi insiden di sepanjang Selat Melaka. Kaedah yang digunakan dalam kajian ini adalah dengan menggunakan Microsoft Excel untuk mengenalpasti nombor tertinggi pada faktor dan juga lokasi di sepanjang Selat Melaka. Berdasarkan data yang telah dianalisis, Pelabuhan Klang dikenalpasti sebagai kawasan utama yang kerap berlakunya kejadian marin. Untuk factor utama kejadian marin, kesilapan manusia telah dikenalpasti sebagai punca utama berlakunya insiden marin. Kajian ini sebenarnya membantu sebarang rancangan untuk memastikan keselamatan pelayaran sepanjang Selat Melaka dan dalam masa yang sama mengelak dari sebarang pencemaran marin yang boleh memberi kesan kepada hidupan marin di sepanjang Selat Melaka. Data yang terhad membuatkan analisis pada kajian ini tertumpu hanya dari tahun 2007 hingga 2010 sahaja. Untuk kajian yang akan datang, data perlu dianalisis untuk jangkamasa sepuluh tahun yang lepas untuk keputusan yang lebih baik dan tepat. Faktor insiden marin juga perlu lebih spesifik dan pelbagai, kerana dapat membantu sebarang rancangan untuk keselamatan pelayaran dan juga keselamatan persekitaran sepanjang Selat Melaka.