



UNIVERSITI PUTRA MALAYSIA

***A STUDY ON MARINE ACCIDENTS WITH PARTICULAR REFERENCE
TO EXPRESS PASSENGER BOATS IN SARAWAK***

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A STUDY ON MARINE ACCIDENTS WITH PARTICULAR REFERENCE TO EXPRESS PASSENGER BOATS IN SARAWAK

By

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ABSTRACT

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A study was conducted in Sarawak with the purpose of (1) analysing the accident records, reasons and accident patterns, (2) to survey and determine the safety factors of express passenger boats from the point of view of marine department personnel, public and boat passengers and (3) identifying the most common factors causing accidents on express passengers boats.

Records show that there are 60 registered vessels and 1,428 boats licenced in Sarawak, of which 688 of them are passenger boats actively operating daily. The types of marine accidents were usually collision, sinking, stranding, capsized, fire, explosion and others. For the period of 1996 to 2000, a total number of 318 marine accidents were recorded by Marine Department Sarawak, with the accidents averaging five to six cases per month.

The results of questionnaires distributed to three groups of people namely Marine Department personnel, members of the public, and boat passengers. show that the influencing factors in decending order are: enforcement. human behaviour, environments and equipments. They influence accidents on express passenger boats. On the other hand, seagoing express passenger boats show a different order of influencing factors as follows human, enviroments, enforcement and equipments.

The study shows that possibility of marine accidents occuring in the river or sea on express passenger boats are greatly influence by human and enforcement factors. The top four safety issues highlighted in the study are the serious problem of the Masters attitudes, their skill or competence, unchecked practice of carrying excess passengers and excess cargo.

It is strongly beleived that there is an urgent need to focus on training and developing safety culture on express passenger boat industry in Sarawak. Therefore proper training and education for express boat operators, particularly to upgrade their skill and competence. An urgent need as well is to educate the public on basic safety precaution when using water transport. Such education will certainly results in more positive attitude towards safety culture. In addition, users will be able to submit constructive suggestions on how to improve safety measures to the authority concerned for improvement.

ABSTRAK

KAJIAN MENGENAI KEMALANGAN LAUT DENGAN PENUMPUAN KEPADA BOT-BOT EKSPRES PENUMPANG DI SARAWAK.

Oleh

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Satu kajian telah dijalankan di Sarawak bertujuan (1) menganalisa rekod-rekod kemalangan, sebab-sebab dan corak kemalangan, (2) membuat survei bagi mendapatkan maklumat faktor keselamatan mengenai bot-bot ekspres penumpang dari pandangan kakitangan Jabatan Laut, orang awam dan penumpang bot, (3) mengenalpasti faktor paling lazim yang menyebabkan kemalangan ke atas bot-bot ekspres penumpang.

Rekod menunjukkan sebanyak 60 kapal berdaftar dan 1,428 bot lisen di Sarawak, daripada itu sebanyak 688 adalah bot-bot ekspres penumpang beroperasi secara aktif setiap hari. Jenis kemalangan laut seperti pelanggaran, karam, kandas, terbalik, terbakar, letupan dan lain-lain. Sepanjang tempoh 1996 hingga 2000, sejumlah 318 kemalangan laut telah di rekodkan oleh Jabatan Laut, dengan purata lima hingga enam kes berlaku dalam sebulan.

Hasil keputusan soalselidik daripada tiga kumpulan sasaran iaitu, kakitangan Jabatan Laut, orang awam dan penumpang bot telah menunjukkan pengaruh isu-isu keselamatan secara

keseluruhan ke atas kemalangan bot-bot ekspres penumpang dengan susunan seperti berikut:-penguatkuasaan, sikap manusia, alamsekitar dan peralatan. Manakala faktor-faktor berikut telah mempengaruhi isu-isu keselamatan secara khusus samada ke atas bot-bot ekspres penumpang di sungai atau pun di laut dengan susunan sikap manusia, alamsekitar, penguatkuasaan dan peralatan.

Kajian menunjukkan kemungkinan kemalangan yang berlaku samada di laut atau di sungai yang melibatkan bot-bot ekspres penumpang dipengaruhi besar oleh faktor-faktor sikap manusia dan penguatkuasaan. Empat isu utama yang telah di ketengahkan ialah masalah sikap juragan, tahap kemahiran, membawa lebih penumpang dan lebih kargo.

Satu tindakan segera harus diambil dengan memberi penumpuan kepada latihan dan pembangunan budaya keselamatan dalam industri bot ekspres penumpang di Sarawak. Justru itu, latihan dan pembelajaran yang sesuai perlu di adakan untuk mempertingkatkan tahap kemahiran dan kelayakan pengendali bot. Tindakan segera perlu di ambil untuk menyedarkan orang awam mengenai asas-asas keselamatan apabila menggunakan pengangkutan air. Pembelajaran ini di jangka akan menghasilkan sikap yang lebih positif terhadap masa depan budaya keselamatan pengangkutan air. Tambahan lagi pengguna-pengguna air akan dapat mengemukakan pandangan yang membina bagaimana untuk mempertingkatkan tahap pengukuran keselamatan kepada pihak berkuasa.

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TABLE OF CONTENTS.

	Page
ABSTRACT	ii
ABSTRAK	iv
ACKNOWLEDGEMENTS	vi
APPROVAL	vii
DECLARATION	viii
LISTS OF TABLES	xiii
LIST OF FIGURES	xv
CHAPTER.	
1. INTRODUCTION	1
1.1 Background	1
1.2 Statement of Problem	4
1.3 Objectives of Study	6
1.4 Expected Outcome of Study	7
1.5 Scope and Limitations	7
2. LITERATURE REVIEW	9
2.1 History and Geography of Sarawak	9
2.2 Rivers in Sarawak	10
2.3 Rajang River and Its Tributaries	15
2.4 Transportation of Passengers	18
2.5 Safety on Express Passenger Boats	20
	ix

2.6 Laws Relating to Marine Accidents and Investigations	25
2.7 International Legislations	26
2.8 National Legislations	28
2.9 International Regulations for Preventing Collision at Sea	29
3. RESEARCH METHODOLOGY	36
3.1 Introduction	36
3.2 Analysis Existing Marine Accidents Data	37
3.3 Safety Awareness Survey on Marine Personnel, the Public and Boat Passengers	39
3.4 Comparison of Official Data with Results of Study	40
4. RESULTS AND DISCUSSIONS	41
4.1 Analysis of Recorded Data	41
4.2 Survey Results	46
4.3 Combined Issues According to three groups of People	56
4.4 Safety Issues Categorised by four Major Factors	60
4.5 Combined Specific Safety Issues Affecting Seagoing and River-going Express Passenger Boats	63

5. SUMMARY AND CONCLUSION	67
5.1 Marine Accident Trends in Sarawak	67
5.2 General Safety Factors Influencing Accident on Express Passenger Boats	68
5.3 Safety Factors Influencing Accidents on Seagoing Express Passenger Boats	70
5.4 Safety Factors Influencing Accidents on River-going Express Passenger Boats	71
5.5 Comparison of safety Factors Influencing on Seagoing and River-going Express Passenger Boats	73
5.6 Conclusions and Recommendations	75
BIBLIOGRAPHY	80
APPENDIX 1 : TYPES OF PASSENGER BOATS IN SARAWAK	
APPENDIX 2 : NEWSPAPER CUTTING, PRESS STATEMENTS BY DATUK WONG SOON KOH. (Minister of Infrastructure Sarawak)	
APPENDIX 3 : IMPORTANT RIVERS IN SARAWAK	
APPENDIX 4 : NEWSPAPER CUTTINGS ON PASSENGER BOATS ACCIDENTS.	
APPENDIX 5 : OVERLOADING SCENARIO IN SARAWAK.	
APPENDIX 6 : EXPRESS BOATS IN ACCIDENTS.	
APPENDIX 7 : AID TO NAVIGATIONS.	

APPENDIX 8 : SCENARIO AT PASSENGER TERMINAL AND JETTIES.

APPENDIX 9 : SAFETY CAMPAIGN.

APPENDIX 10 : SEARCH & RESCUE (SAR) MARITIME AREA IN SARAWAK.

APPENDIX 11 : SAMPLE OF SURVEY FORM.

APPENDIX 12 : DISTRIBUTIONS OF POPULATIONS OF MAJOR TOWNS IN SARAWAK.

APPENDIX 13 : SURVEY RESULTS FROM 30 MARINE PERSONNEL.

APPENDIX 14 : SURVEY RESULTS FROM 30 PUBLIC MEMBERS.

APPENDIX 15 : SURVEY RESULTS FROM 30 PASSENGER BOATS.

LISTS OF TABLES.

	Pages
Table 1 : Major Navigational Rivers In Sarawak.	12
Table 2 : Number of Licence Boats in Sarawak.	18
Table 3 : Number of Enforcement Activities	22
Table 4 : Numbers of Cases and Amount of Fine.	22
Table 5 : Number of Passenger Boats in Sarawak.	42
Table 6 : Demand of Transportations Passengers.	42
Table 7 : Average Rate of Marine Accidents (1996 – 2000).	44
Table 8 : Types of Marine Accidents (1996 – 2000).	45
Table 9 : Types of Marine Casualties (1996 – 2000).	46
Table 10 : General Safety Issues on Express Passenger Boats According to Marine Personnel.	47
Table 11 : Specific Safety Issues on Seagoing Express Passenger Boats According to Marine Personnel.	48
Table 12 : Specific Safety Issues on River-going Express Passenger Boats According to Marine Personnel.	49
Table 13 : General Safety Issues on Express Passenger Boats According to Public.	50
Table 14 : Specific Safety Issues on Seagoing Express Passenger Boats According to Public.	51
Table 15 : Specific Safety Issues on River-going Express Boats According to Public.	52
Table 16 : General Safety Issues on Express Boats According to Passengers.	53
Table 17 : Specific Safety Issues on Seagoing Express Passenger Boats According to Passengers.	54

	Pages
Table 18 : Specific Safety Issues on River-going Express Passenger Boats According to Passengers.	55
Table 19 : Combined General Safety Issues on Express Passenger Boats According to three Groups of People.	57
Table 20 : Combined Specific Safety Issues on Sea-going Express Passenger Boats According to three Groups of People.	58
Table 21 : Combine Specific Safety Issues on River-going Express Passenger Boats According to three Groups of People.	59
Table 22 : Categorised General Safety Issues Safety on Express Passenger Boats According to three Groups of People.	62
Table 23 : Categorised General Safety Issues on Seagoing Express Passenger Boats According to three Groups of People.	64
Table 24 : Categorised General Safety Issues on River-going Express Passenger Boats According to three Groups of People.	66

LISTS OF FIGURES.

	Pages
Figure 1 : Rajang River and Tributaries.	16
Figure 2 : Average Rate of Marine Accidents (1996 – 2000).	44
Figure 3 : Bar Chart Comparison Safety Factors Involving Seagoing and River-going Express Passenger Boats.	74



CHAPTER ONE

INTRODUCTION

1.1 Background

In Sarawak shipping or river transportation provides the most popular mode of transportation between rural and urban areas. The reason is obvious, there is a lack of developed infrastructures for alternative transportation such as roads, railways or other modes of transportation. The river transportation is and will form the most economic and popular mode of transportation for the movement of people and goods from one place to another. It also provides cheap transport for bulk commodities to and from the hinterlands of the seaports or of large inland towns (Simon H.A , 1984).

Navigation safety in the Coastal and Riverine of Sarawak has become a “pet” subject for newspaper critics. The ordinary man has also become skeptical of the standard of safety in water transportation. These are common reactions because control and regulation in the riverine are disorganized. The number of marine accidents in Sarawak are largely due to the diverse nature of traffic, human error and the lack of law enforcement. In some cases marine accident is also affected by the lack of safety equipment on board and the geography and environment of Sarawak.

Sarawak has a 970-km coastline, facing the South China Sea and it has 55 navigable rivers.

It has a combined river length of 3,300 km (DHV Consultants Malaysia Sdn Bhd, 1992).

There are 32 rivers that flow into the South China Sea, which are very important for

navigation the movement of goods and people. Rajang River , which is 567 km in length, is the longest river in Malaysia. An estimated 688 passenger boats were licensed throughout Sarawak, and of there 294 (43 %) boats ply in the Rajang River and its main tributaries daily. They are engaged in transportation of passengers between major towns along the Rajang, Balleh, Igan and Oya rivers (Marine Department Sarawak, 2001) .

There are three types of passenger boats plying Sarawak water, normally used for transportation of passengers, i.e. Express Passenger Boat, Small Passenger Boat and Pleasure Passenger Boat . The types of express passenger boats in Sarawak is shown in Appendix 1.

1. Express Passenger Boats - the big boats ,which can carry more than twelve passengers on board. Normally the boats were designed with sufficient seating arrangements between 30 to 70 passengers fitted with on-board engine . The boats are equipped with sufficient and suitable safety equipments such as life-jacket, life buoy, fire extinguishers, toilet and audio-visual for passengers during the voyage. The boats are operated by qualified masters or 'juragan'. The mode of services is plying along the rivers or cross the sea with longer distance more than 50 nautical miles.

2. Small Passenger Boats - include speed boat or long boats which can carry less than twelve passengers. It depends on the size and the construction of the boats. Normally small passenger boats are fitted with out-board engine and have faster speed. Their trade of business is plying short distance within the river and coastal area. The level of safety equipments on board is limited and there are no toilet facilities and luggage compartments.

3. Pleasure Passenger Boats - boats are designed to carry passengers for leisure such as river cruise, sea cruise, sport fishing, diving and snorkeling activities. The capacity of passenger boats depends on size, design and the purpose of the boats. Some pleasure boats are fitted with modern navigation technology to accommodate their purpose.

With the increase in number of shipping activities, it is sometimes unavoidable that shipping accidents will occur. These incidents usually involve passenger express boats. The causes of such casualties are usually collision, sinking, stranding, capsized, fire, explosion and others. It is alarming to note that the statistics of marine casualties showed that the number of casualties is increasing yearly. Success in the industry has also brought with it tragedies and loss of lives. There has been a number of riverine accidents involving these passenger boats. Some of the causes could be attributed to the lack of safety measure on board the boats and poor visibility condition particularly in early morning services.

The situation warrants that urgent steps be taken to arrest the trend and put public confidence back on the use of passenger express boats. There are several government agencies that are entrusted to investigate shipping accidents. One such agency is the Marine Department and the department should be actively looking into the said problem. There are several factors, which contribute to these untoward incidents. Based on information from preliminary investigations, it was found that such incidents usually occurred due to poor voyage planning and negligence. Very often these unfortunate incidents resulted in injuries, loss of lives, damages to properties and environment.

1.2 Statement of problem.

The express boats is a common feature of riverine transportation throughout Sarawak and is an extremely popular form of travel.

On 8 th January 1991 at about 7.15 a.m, two express passenger boats Maju Song 2 and Jumbo Song 90 collided head-on at Rajang River, at Nanga Pak near Kanowit. Maju Song 2 was traveling with its full-load of passengers on board down river, while Jumbo 90 also with full load of passengers was traveling up river. As a result of the collision, Jumbo 90 sank and thirteen people on board died. The weather condition at the material time of incident was thick fog with a visibility of 30 – 60 meters. At the time of collision, both boats were believed to be traveling at speeds of 35 knots. (Wong Yuk Hien, 1991). A Marine Court of Inquiry was constituted to investigate the collision pursuant to Section 207 (1) The Merchant Shipping Ordinance 1960. The Marine Department of Sarawak has issued five guidelines for high speed express boats. The Department has urged new owners, charterers, builders and Classification Societies to comply with the requirements. Among the requirements are:- no passengers shall be carried on any deck which is below the loaded waterline, the freehold deck shall be the lowest deck on which passengers are carried and the load line regulation shall be complied and fitted with sub-division compartment and collision bulkhead.

According to Wong Soon Koh , safety has always been an important consideration in riverine transport as the absence or lack of safety could results in serious accidents involving substantial loss of lives and properties besides creating disruptions, chaos and the loss of public confidence. Sarawak recorded 16 riverine traffic accidents which claim 18 lives during the first 10 months of this year. Those killed in the accidents were not wearing

lifejackets. Inadequate on board safety equipments and boats operator apathy towards safety exacerbated the situation. (Wong Soon Koh, 1999a).

According to Wong Soon Koh , safety awareness must be promoted in earnest among river users as water transportation and aquatic sport are becoming more popular. It is important to inculcate safety discipline in public user to avoid river tragedies. If we want to continue prospering in riverine activities, then it is contingent upon us to ensure the safety of those people taking part at all times. (Wong Soon Koh, 1999b). Newspaper cutting on the press statements made by Ministry of Infrastructure Sarawak, Datuk Wong Soon Koh in local news paper regarding marine accidents are compiled in Appendix 2.

In addition, there is also a large number of unlicensed speedboats providing transport services for passengers that do not ply on regular schedule trips but mostly are for the charter services. The safety of passengers when traveling is most important and all those measures practically possible should be taken to reduce the chance of casualties if accidents occur.

It is quite a difficult task to make comprehensive study and recommendation capable of covering every risk and danger on marine accidents in Sarawak. There are about 60 registered vessels and 1428 boat licence were certificated by the Marine Department Sarawak (Marine Department Sarawak, 2001). Apart from that there are about 688 passenger express boats operating actively in Sarawak Territorial waters today.

The high level of maritime traffic in the Sarawak water, compounded by navigational difficulties, render shipping movement prone to marine accidents. Unfortunately, the cost is high. Apart from the losses due to ship damage, there has been loss of lives. For the period of

the year of 1996 to 2000, a total number of 318 accidents was recorded by Marine Department Sarawak, and the accident average five to six cases per month. There are about 1315 total of number of casualties in the same period of 1996 to 2000, with an average of 263 cases a year and an average of 18 lives lost and seven people missing a year.

1.3 Objectives of Study

In this study, it will cover the express passenger boats accidents in the rivers of Sarawak.

The aims of the study are as follows: -

- To analyse the accident record with the objective of finding the possible reasons and the accident pattern.
- To conduct the survey on the three group of people, i.e. marine personnel, member of the public and boat passengers . To ask their opinion on the factors contributing to safety on the express passenger boats.
- To analyse and to predict the most important factors contributing to the accident and suggest ways to reduce the accident rate.

1.4 Expected Outcome of Study.

The expected outcome from the study are:-

- To show the trend of marine accidents in Sarawak
- To understand the level of safety on express passengers boats in Sarawak
- To expose the perception of safety on express passenger boats by the three groups of people.

In general it is to tackle the issues regarding safety on express passenger boats in Sarawak.

The authority must look at ways and means to resolve the problem by taking into consideration the views and recommendations of the public. Furthermore, from the study it may look at the causes of accident on express passenger boats in Sarawak as a whole.

1.5 Scope and Limitation.

This study is to analyse the seriousness of marine accidents especially in regard to passenger boats operating throughout Sarawak. The term of reference is based on statistics on marine accidents for a period of five years recorded by Marine Department. The trend and pattern of marine accident throughout five years period is also analysed.

For the proposed study, about 90 persons who were directly involved in maritime industry were selected. A total of 90 questionnaires were given to 30 marine department personnel, 30 member of public and 30 passengers of express boats. Interviews and site inspections were

also conducted in Kuching, Sarikei, Sibul and Bintulu. All selected questionnaires were given to the people with experience using express passenger boats.

Further information was obtained from Marine Department's statistics, report of accidents investigation, magazines and articles. The primary documents such as records, newspaper cuttings, photographs, investigation records and charts were used for this study. The study also covers observations based on several wharves and jetties in selected places such as in Kuching, Sarikei, Sibul and Bintulu. Observations were also made on the boats schedule, pattern passengers flow, the safety aspect of passengers boarding and disembarking and general safety of the express passenger boats.

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