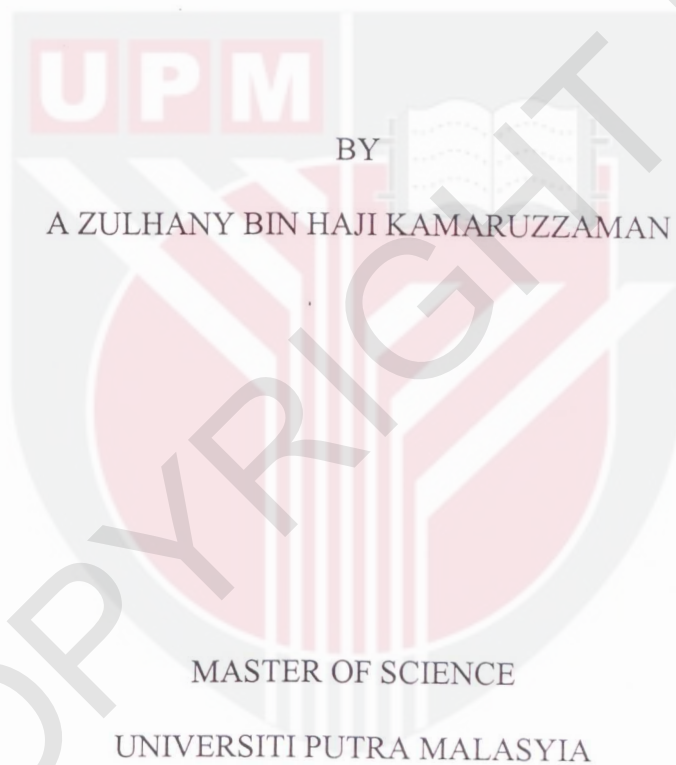


A STUDY ON DEPLOYMENT OF RESOURCES FOR SELANGOR PEAT  
FIRES OF 1998



BY

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## A STUDY ON DEPLOYMENT OF RESOURCES FOR SELANGOR PEAT FIRES OF 1998

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This study is concerned with deployment of resources during the peat fires of 1998 in Selangor namely in Banting (32 days), Sepang-KLIA (7 days), Klang Selatan (7 days) and Sabak Bernam (17 days). The first part of the study deals with equipment used and number of personnel involved, while the second part deals with psychological preparedness of Bomba personnel in handling the peat fires.

Klang Selatan deployed 11 personnel /day or 13 ha/person; followed by Banting 6.43 personnel /day or 5 ha/person; Sepang-KLIA 5.71 personnel/day or 1 ha/person and Sabak Bernam 3.24 personnel/day or 8 ha/person. There were 21 types of equipment used with descending order of usage with Klang Selatan 313, Sepang-KLIA 279, Banting 209 and Sabak Bernam 165 (66 tents). Cost per personnel per area is RM 1001.30 for Sepang-KLIA and Banting, RM 1192.7 for Sabak Bernam and RM 319.5 for Klang Selatan.

In the second part of the study, the psychological strength of Selangor Bomba personnel was assessed, using Ashken's (1993) questionnaires. The scoring for respective components in descending order are imager use, confidence, self talk use, arousal control, physical condition, attention control, commitment and physical arousal are 3.458, 3.272, 3.13, 3.005, 2.811, 2.59, 2.57 and 2.237, respectively. The total score of 23.071 is two

points less than “you made the cut”. The average performance of Bomba personnel for Peninsular Malaysia is 25.7. The respondents do not believe in drills for enhancing their performance. They were also offended by one question on drinking habits.

Lesson learnt from the peat fires is use of a unified command system during crisis has to be enhanced. Lesson learnt when adopting questionnaires from other countries is to understand the cultural differences before adapting these questions for Malaysian scenario.



Abstrak tesis dibentangkan kepada Senat Universiti Putra sebagai keperluan syarat bergraduat  
Ijazah Sarjana Sains

## KAJIAN TENTANG PENGGUNAAN SUMBER UNTUK KEBAKARAN HUTAN SELANGOR PADA 1998

oleh

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Julai 2000

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Kajian ini adalah berkaitan penggunaan sumber semasa kebakaran hutan di Selangor pada tahun 1998 yang melibatkan Banting (32 hari), Sepang-KLIA (7 hari), Klang Selatan (7 hari) and Sabak Bernam (17 hari). Bahagian pertama kajian ini adalah tentang kelengkapan dan anggota yang terlibat manakala bahagian kedua adalah mengukur tahap persediaan psikologi anggota Bomba yang terlibat.

Klang Selatan memerlukan 11 anggota Bomba/hari atau 13 ha/anggota; diikuti Banting 6.43 anggota Bomba/hari atau 5 ha/anggota; Sepang-KLIA 5.71 anggota Bomba/hari atau 1 ha/anggota dan Sabak Bernam 3.24 anggota Bomba/hari atau 8 ha/anggota. Terdapat 21 jenis kelengkapan yang telah digunakan dengan Klang Selatan 313 kelengkapan, Sepang-KLIA 279 kelengkapan, Banting 209 kelengkapan dan Sabak Bernam 165 kelengkapan termasuk (66 khemah). Kos untuk setiap anggota per kawasan adalah seperti berikut: RM 1001.30 untuk Sepang-KLIA dan Banting, RM 1192.7 untuk Sabak Bernam dan RM 319.5 untuk Klang Selatan.

Dalam bahagian kedua kekuatan psikologi anggota Bomba telah diuji dengan menggunakan soal-selidek Ashken (1993). Skor untuk komponen berkaitan adalah seperti berikut: penggunaan bayangan, yakin diri, penggunaan bual dengan diri sendiri, rangsang kawal, keadaan fizikal, kawalan tumpuan, komitmen dan rangsangan fizikal adalah

masing-masing 3.458, 3.272, 3.13, 3.005, 2.811, 2.59, 2.57 and 2.237. Jumlah skor adalah 23.071 yakni dua mata kekurangan daripada “Anda layak menjadi Responder”. Purata skor untuk anggota Bomba di Semenanjung adalah 25.7. Responden tidak yakin latih amal boleh membantu prestasi mereka. Mereka juga merasa terhina kerana ada satu soalan tentang minuman keras.

Apa yang dipelajari dari kebakaran berlarutan ini adalah perlu diwujudkan satu sistem komunikasi semesta untuk menangani krisis perlu ditingkatkan. Semasa mengalih bahasa soalselidik perlu didifikirkan masalah perbezaan budaya di Malaysia sebelum dibuat kajian.



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## CHAPTER 1

### INTRODUCTION

#### 1.1 Background

Selangor Darul Ehsan sprawls over 8,000 km<sup>2</sup> encompassing some of Malaysia's valuable real estates. Flanked by Perak in the north and Negeri Sembilan in the south, Selangor accommodates a population of about 2.3 millions in 1998 where most of her residents live in Petaling Jaya, Rawang, Subang Jaya, Damansara and Shah Alam (<http://www.selangor.gov.my>), (refer to Figure 1).

The economic strength of Selangor comes from industrial products, oil palm, rubber, padi and cocoa. The industrial area lies in the central region more popularly known as the Klang Valley. The northern coastal area of Sabak Bernam is coconut and padi lands. In between these areas, cocoa and oil palm are grown. Oil palm can also be found in the southern region up to Sepang.

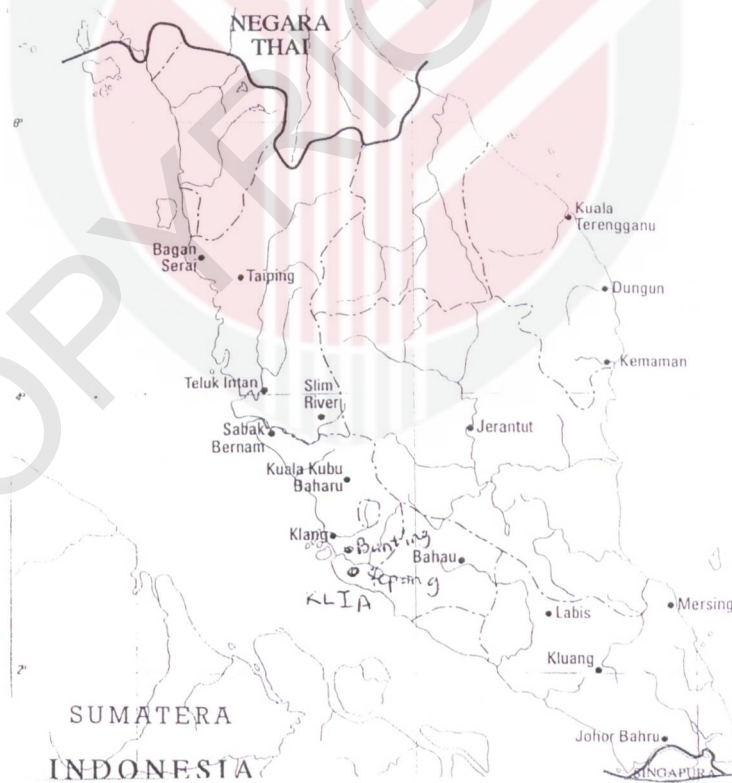


Figure 1 Map of Selangor

## 1.2 Forest Fire in Indonesia/Malaysia (1986-1998)

In 1982/83 one of the largest forest fires in this century raged for several months through an estimated 5 million ha of Borneo's tropical rainforest. The Indonesian province of East Kalimantan was the worst hit by the burning. Since then, fire has been a recurring feature of the islands of Borneo and Sumatra, burning large areas in 1986, 1991, 1994 and 1997 (Integrated Fire Management System/German Agency for Technical Cooperation, GTZ Project, 1997).

Since the 1986 fires, Indonesia has been at odds with neighboring Malaysia and Singapore, as the haze from these fires covered the South East Asian region for weeks; causing health problems, disruptions of shipping and aviation, culminating in the closure of airports. Economic losses and ecological damage were enormous. In 1991 Indonesia asked for international help through an international workshop, the Bandung Conference (Heinz, 1991). The outline of a "long-term Integrated Fire Management System for Indonesia" was agreed upon and the German Government through the GTZ committed itself to help buildup fire management capacities in East Kalimantan.

While the burning of fields and forest throughout Kalimantan and Sumatra has been an annual occurrence of trans-national concern, this season's fires coupled with the unusually dry conditions caused by El Nino have turned into an unmitigated catastrophe impacting both environment and human health. Throughout many regions outside Indonesia, particularly Sarawak, Brunei, Singapore and Kuala Lumpur a thick haze of soot and smoke has made life miserable and breathing dangerous. Thousands have been admitted to hospitals for respiratory problems, and deaths have also been reported (Schmidt, 1997).

## 1.3 Statement of Problem

In 1997 haze engulfed South East Asia (Malaysia, Singapore, Brunei and Indonesia) because of wide spread forest fires in this region. In 1998 the state of Selangor was also affected by forest fires which occurred in the Sepang - KLIA,

Sabak Bernam, Banting and Kelang Selatan areas. The fire took several months before it was put out (Jaafar Sidek, 1998).

The process of putting out the fires was performed by members of the fire fighters (Bomba) personnel, who came from the nearby fire stations. The psychological conditions of Bomba personnel were unknown but yet an important aspect in the determination of performance on duty.

#### 1.4 Research Objectives

The main objective of the study is to assess capabilities of the fire fighting squad so that lessons learnt can help conduct effective future deployment of resources for peat fire fighting. Specific objectives are as follows:

- (a) To compare the forest fires that had happened in the four areas of Banting, Sepang-KLIA, Kelang Selatan and Sabak Bernam in the state of Selangor in 1998.
- (b) To assess the psychological condition of some members of the Bomba personnel who took part in fighting peat forest fires.

#### 1.5 Scope and Limitation

The research work is restricted to fires in Selangor in 1998.

#### 1.6 Expected Outcome

This research shall benefit policy makers, fire fighting personnel and government officers from districts to design effective deployment strategies for handling peat fires.

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