

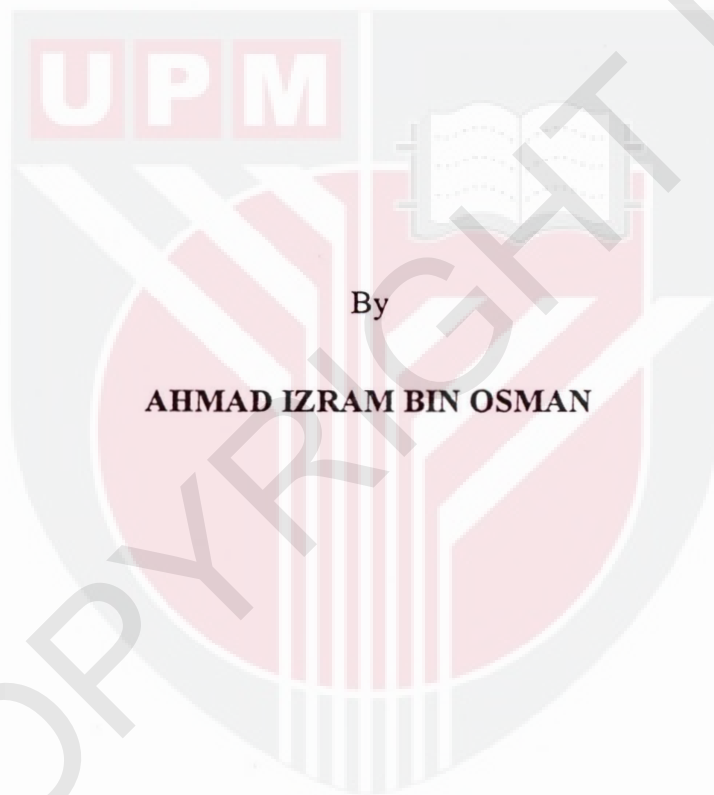


***EMERGENCY RESPONSE PREPAREDNESS FOR FOREST FIRE
USING THE INCIDENT COMMAND SYSTEM***

AHMAD IZRAM BIN OSMAN

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USING THE INCIDENT COMMAND SYSTEM.**



By

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**Project Submitted in Fulfillment of the Requirements for the
Degree of Master of Science in the Faculty of Engineering**

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Abstract of project paper submitted to the Engineering Faculty, Universiti Putra Malaysia in fulfillment of the partial requirements for the degree of Master of Emergency Response Planning.

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By

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NOVEMBER 1998

Supervisor : Dr. Fakhru'l-Razi bin Ahmadun

Faculty : Engineering

Most emergency response preparedness problems are not due to failure of the individual. More often, they are system problems. The usual organizational systems (procedures, management structures and designation of responsibilities) established by various organizations to cope with daily and routine emergencies are not well adapted for use in disasters.

Experience has shown that no single organizational resource will appropriately serve each and every disaster nor will a single organizational blueprint for emergency planning meet every need. The solution to an effective disaster response lies in the application of sound basic management concepts.

Although many systems exist for the command and control of resources in emergency incidents the United State Federal Emergency Management Agency has adopted the Incident Command System as its base for the application of concepts of incident command.

The Incident Command System can be adopted by the Fire and Rescue Department Malaysia as an Emergency Response Preparedness for forest fires since this system was originally developed for wildland fire fighting and this system can also be a model for emergency incident management systems to cater for all risks and aid all agencies involved in managing emergencies.

Abstrak bagi projek ini dipersembahkan kepada Fakulti Kejuruteraan Universiti Putra Malaysia dalam memenuhi sebahagian daripada keperluan Ijazah Sarjana dalam bidang Perancangan Respon Kecemasan.

**PERSEDIAAN RESPON KECEMASAN UNTUK KEBAKARAN HUTAN
MENGUNAKAN SISTEM ARAHAN TEMPAT KEJADIAN**

Oleh

AHMAD IZRAM BIN OSMAN

NOVEMBER 1998

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Fakulti : Kejuruteraan

Kebanyakan masalah kegagalan Persediaan Respon Kecemasan adalah disebabkan oleh kegagalan sistem itu sendiri dan bukannya individu terbabit. Kebiasaannya sistem bagi sesuatu organisasi seperti Prosidur, Struktur Pengurusan dan Senarai Tanggungjawab yang telah diwujudkan hanya boleh menampung setakat kejadian yang biasa dan kejadian yang berlaku seharian dan tidak mampu digunapakai jika berlaku sesuatu kejadian yang lebih besar ataupun bencana.

Pengalaman menunjukkan bahawa tiada sumber dari satu organisasi bersesuaian dengan setiap bencana yang berlaku dan tiada perancangan sesuatu

organisasi dapat memenuhi semua keperluan yang diperlukan. Penyelesaian kepada masalah respon kecemasan bergantung kepada penggunaan konsep asas pengurusan insiden. Walaupun pelbagai sistem wujud untuk kawalan dan pemerintahan ditempat kejadian namun Agensi Pengurusan Kecemasan Persekutuan Amerika Syarikat telah menerimapakai sistem ini sebagai pengurusan asas pemerintahan dan kawalan semasa menangani sesuatu kejadian.

Sistem Arahan Tempat Kejadian ini boleh diterimapakai oleh Jabatan Bomba dan Penyelamat Malaysia sebagai Persediaan Respon Kecemasan bagi Kebakaran Hutan kerana sememangnya sistem ini pada asalnya dibangunkan untuk melawan kebakaran hutan dan juga sistem ini boleh dijadikan model untuk Sistem Pengurusan Kecemasan bagi pelbagai risiko dan pelbagai agensi yang terlibat dengan kecemasan.

CHAPTER I

EMERGENCY RESPONSE PREPAREDNESS FOR FOREST FIRE USING THE INCIDENT COMMAND SYSTEM (ICS).

Introduction

Today, every business in the world should have some form of Emergency Response Preparedness. An emergency can happen in any situation and its occurrence will divert an organization from its usual operations, wasting time and financial resources. An emergency situation arises from a crisis – a turning point - and escalates in intensity.

Most organizations experience crises all the time. Most crises are kept from escalating to unmanageable proportions. However, an organization's effectiveness is truly tested by the few crises that grow into emergencies. In these situations, the implementation of well thought out Emergency Response Preparedness can mean the difference between success and failure (American Society For Industrial Security, 1997).

Kreps (1992) suggested the following principles as characteristic of preparedness process:

- Preparedness and improvisation are central foundations of emergency management.
- Preparedness is a continuous process.
- Preparedness is an educational activity.
- Preparedness is based on knowledge.
- Preparedness evokes appropriate actions.

As part of this overall program, the department needs to have an established Emergency Response Preparedness that provides the framework and structure to manage emergency events. Failure to do the necessary preparedness could seriously impact a department's ability to minimize loss of life and loss of assets, should an event occur.

An Emergency Response Preparedness for Forest Fire describes the actions to be taken by an organization to protect personnel, the public and assets from threats by this particular natural disaster. In developing an effective emergency response preparedness the Incident Commander anticipates possible threats and makes all the initial decisions ahead of time, so that they can focus their time and attention on the most important actions required in the event of an emergency. The Emergency Response Preparedness outlines specific steps to follow in the event of a real crisis situation and provides specific measures for recovery after the crisis has passed.

An Emergency Response Preparedness for Forest Fire is designed to prevent, any incident that might cause loss and to control incidents that cannot be prevented so that they cause a minimum of damage.

Emergency Response Preparedness can be applied to every possible situation, but a well thought out Emergency Response Preparedness can help the department to handle emergencies in an effective and intelligent way.

In summary, Emergency Response Preparedness involves deciding beforehand what to do in a real crisis situation, and what to do when the crisis occurs. An effective Emergency Response Preparedness would have described the process of getting a department to implement the Emergency Response Preparedness during a crisis and recover after the crisis has occurred.

Justification of The Project

The project has been carried out for the reasons given below:

- Forest Fire Fighting Management is important and the task has proven to be difficult during Forest Fire Fighting Operations in Indonesia and Malaysia (Sabah and Sarawak).
- There is no standard form of organizational structure on the field although Directive No. 20, National Security Council has a mechanism for mobilization.

Objective of The Project

In order to improve the future Management of Forest Fire Fighting in the country a study has been made on the Incident Command System (ICS) and the objective of this study is:

- To evaluate the suitability of the Incident Command System for Forest Fire Fighting Management.
- To determine whether the Incident Command System can be used by the Fire and Rescue Department Malaysia for Forest Fire Fighting.
- To determine whether the Fire and Rescue Department Malaysia is ready to use the Incident Command System.

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