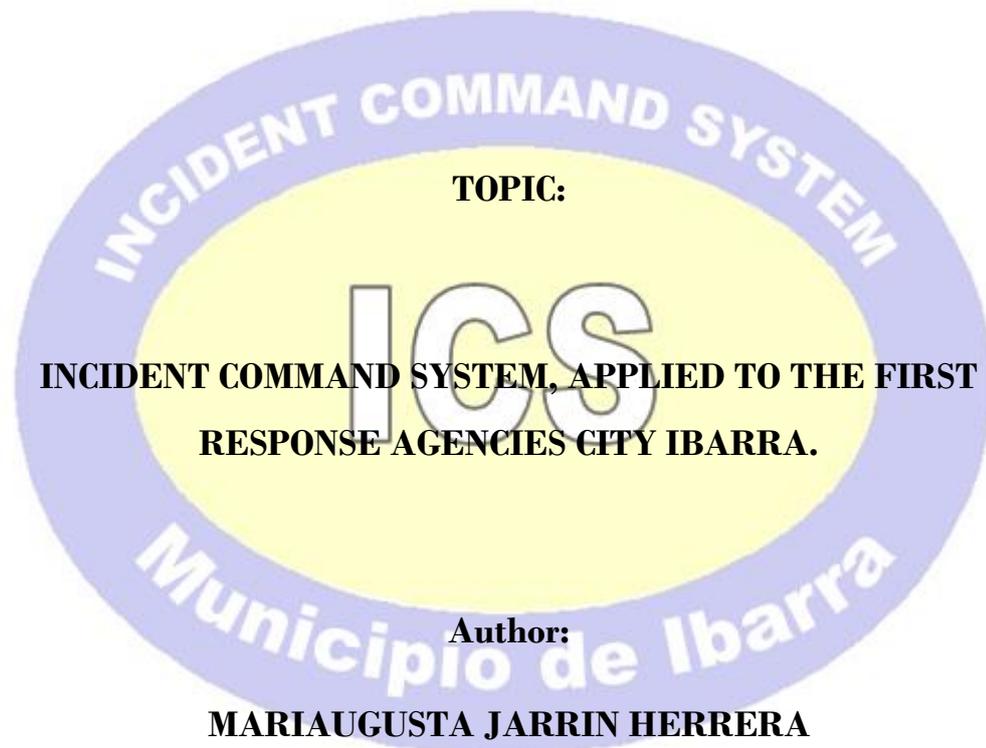


**UNIVERSIDAD TECNICA DEL NORTE**

**FACULTAD CIENCIAS DE LA SALUD.**

**PREHOSPITAL EMERGENCY TECHNOLOGY**



**Thesis for the degree of:**

**PREHOSPITAL EMERGENCY TECHNOLOGIST**

**Project Director**

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## **INTRODUCTION**

The Inadequate coordination of first responders institutions, duplication, delay in care of the incidents, has been dreaming of a draft joint and coordinated to improve service and responsiveness to the community.

Incident Command is a predefined organizational management model, with the responsibility of managing the resources to effectively achieve the objectives relevant to an event, incident or operational.

It is the combination of facilities, equipment, personnel, procedures and communications protocols, operating in a common organizational structure.

The Incident Command System searches institutions personnel as emergency committees, 911, fire, police, red cross, health, armed forces and other work under the same system, even in everyday small incidents.

The problem of Incidents detected in the city of Ibarra Vehicular Incidents are caused by high speed, alcohol, mechanical failures, and others, as well as fire, flood, channel settlements near rivers and streams by landslides in irregular settlements high risk, insecurity problems such as theft, assault, domestic violence, etc., have made you take the decision to create the Incident Command System, after a preliminary analysis and after taking as reference the success in your application in Guayaquil, and other countries such as Colombia, Mexico, United States, Costa Rica, Guatemala and Argentina.

## **OBJECTIVES**

### **GENERAL PURPOSE**

- Demonstrate the importance of creating an Incident Command System (ICS), in the city of Ibarra, to cope with disasters efficiency.
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### **SPECIFIC OBJECTIVES**

- Establish a system of organization, coordination, and resource utilization.
- Standardize processes for incident management and disaster scenes.
- Standardize Response Criteria for incident management and disaster emerging.

# CHAPTER I

## HISTORY AND BACKGROUND

Not only is it necessary adequately trained and equipped men but a command structure and defined performance systems that help make correct decisions in large scale. The situation in the Fire Services in Latin America is not far removed from the story of the battle of San Francisco, owners of equipment and men in sufficient quantities, but in front of large fires that requires a decision chained patterned structure, generally fail.

To overcome this disorder in 1970 in southwestern California developed the Incident Command System, was the result of several years to recognize failures in forest fires created a system that identified, united, integrated, defined and established language needs common among different government and private agencies that interacted in emergencies.

In this spectrum the SCl was one more piece of a structure even more. The (NIMS) National Interagency Incident Management System, defined the Incident Command System as an element associated with four areas that should be developed in the pre-pyramidal sinister. Training, qualification and certification, publications, technology support. I mean, we all know the system by which to act no matter what system they belong. A defining qualification and training standards and certifying

agency members are qualified to intervene and at what level of competence are then able to occupy positions within the SCI.

## **CHAPTER II**

### **DEFINITION OF INCIDENT COMMAND SYSTEM.**

"The Incident Command System (ICS) is the combination of facilities, equipment, personnel, protocols, procedures, and communications operating in a common organizational structure, with responsibility for managing the resources allocated to achieve effectively the objectives relevant to an event, incident or operation.

IBS is characterized by a flexible system organization and serves to address incidents of any size and complexity. It is standardized to allow rapid incorporation of personnel and other resources, from different institutions and geographies, to a common management structure effective and efficient. "

### **PRINCIPLES OF SCI**

Based on principles that ensure a swift, coordinated and effective use of resources. These principles are:

- Common Terminology
- Span of Control

- Modular organization
- Integrated Communications
- Consolidation plans in the Incident Action Plan (IAP)
- Control unit
- Unified Command
- Facilities with specific location and specific name
- Integrated resource management

The SCI is based on management functions that have long demonstrated its potential to improve the effectiveness and efficiency both in institutions and at the enterprise level.

## **COMMON TERMINOLOGY**

The SCI proposes to all institutions involved the use of a

Standard and consistent terminology.

The SCI sets out:

Common names for resources

Facilities with common name.

Functions and organizational system.

## **MODULAR ORGANIZATION**

The ICS structure is modular and should be developed according to the type of incident, its size and complexity. For each incident, the structural organization is adjusted as needed.

It is based on the time, size and complexity of the incident.

It grows from the bottom up in terms of the resources on the scene and scope of control.

Depending on the size and complexity of the incident may be necessary to establish several communications networks for the common use of the institutions of the SCI.

## **INCIDENT ACTION PLAN (IAP)**

Any incident, large or small, requires a Plan of Action. For most small incidents, the Incident Action Plan (IAP) is developed by the Incident Commander and communicated verbally to subordinates and other resources allocated. As incidents increase in size or complexity, and add other institutions and resources, it is important to document the vital information related to the PAI.

The Incident Commander is the one who sets the goals and strategies according to the needs of the incident and is guided by the policies and rules of the Institution.

## **UNIFIED COMMAND**

The Unified Command also serves the administrative principle of unity of command.

The concept of unified command means that the institutions involved, in agreement, contribute to the command process through:

Determining the overall objectives

Jointly plan and conduct activities integrated operations

Maximize the use of all resources allocated

Assign staff functions under a single Incident Action Plan (IAP).

## **FACILITIES WITH NAME LOCATION DETERMINED AND ACCURATE**

In incidents which have characteristics require a place for Incident Command and requires the participation of multiple institutions, there is the need to establish facilities for the various functions to be developed.

Some of the most common installations in an incident are:

- Command Post (CP): place from which serves as the command.
- Base (B): place from where you coordinate and manage logistics functions.
- Waiting Areas (E) where resources are concentrated while waiting to be assigned.
- In the vast geographical incidents, which require a large number of resources or those requiring highly specialized resources may be established other facilities.

## **INTEGRATED MANAGEMENT OF RESOURCES**

The application of this principle to consolidate control simple optimizing resource efficiency and personnel safety, reduce communications dispersed flow, accounting for the use of resources and use what is necessary.

## **CHAPTER III**

### **BASE STRUCTURE AND FUNCTIONS OF SCI.**

"When an incident requires the efforts of different institutions, whatever the size or complexity of the project or the number of participating

institutions, a coordinated effort is required to ensure an effective response through the safe and efficient use of resources.

The Incident Command System provides that structure. "

The Incident Command System is based on eight functions:

1. Incident Command
2. Planning
3. Operations
4. Logistics
5. Administration and Finance
6. Security
7. Public Information
8. Link

In everyday incidents small and easy to fix, all these functions can be assumed by a single person, the Incident Commander. In the case of incidents that demand a greater workload or specialized resources these can be delegated.

SCI structure has the ability to expand or contract to accommodate the needs of the incident.

All incidents, regardless of size and complexity, should have a single Incident Commander (IC). All information to be disclosed must be authorized by the IC.

Liaison: the contact, in the scene, for the other institutions that have been assigned to the incident.

## **INCIDENT COMMANDER RESPONSIBILITIES AND SECTIONS**

### **IC RESPONSIBILITIES**

The IC is responsible for assuming the command and set the PC, ensures the safety of staff and public safety. It also develops an appropriate organizational structure while maintaining the control range and control of resources.

The CI is responsible for coordinating the actions of the institutions that are incorporated into the system at the scene of the incident. The IC assumes the eight functions, as it loses its control range is delegating but not its responsibility.

## **OPERATIONS SECTION**

The Operations Section is responsible for the implementation of response actions. The main responsibilities of the head of the Operations Section are:

Direct and coordinate all operations, protecting the safety of the Section.

Assist the Incident Commander in the development of the objectives of the response to the incident.

Executing the Incident Action Plan (IAP).

Keep the IC about the situation and status of resources in operations.

## **PLANNING SECTION**

The functions of this section include collecting, evaluating, disseminating and using information about the development of the incident and keep track of resources. Prepare the Incident Action Plan (IAP), which defines the response activities and use of resources during an operational period. The Section Chief reports to the Incident Commander determines the internal organizational structure and coordinates Section.

## **LOGISTICS SECTION**

"It is responsible for providing facilities, services and materials, including personnel who will operate the equipment requested to attend the incident. This section is essential when operations are met in large areas and when they are long lasting. The functions of the Section are exclusive support to those who respond to the incident. For example, including a medical unit that provides care to responders to the incident and not the victims. "

The Section Chief reports to the Incident Commander determines the internal organizational structure and coordinates Section.

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## **SUBDIVISION OF SECTIONS**

### **RAMA**

Level structure with functional or geographical responsibility assigned by the IC, under the authority of a Section Chief, is set when the number of Divisions or Groups exceeds the span of control, or is expected to exceed the scope of control.

## **UNIT**

Level structure that serves to support the activities of Planning, Logistics and Finance / Administration.

Groups cover operating **specific functions**. As there are several institutions with competence in the incident that resources should be managed under their natural controls.

## **RESOURCES CATEGORIES**

Can be categorized in:

### **SIMPLE REMEDY:**

Is the equipment and its personnel complement that can be assigned to tactical action in an incident. With a leader and communications. It's a fixed or mobile, well signposted. On the PC you install the Incident Commander, Officers of the Command Staff and Section Chiefs.

### **WAITING AREA (E)**

Where resources are concentrated while awaiting their assignments.

### **AREA OF CONCENTRATION OF VICTIMS (ACV)**

Location set to perform classification, stabilization and transportation of victims of an incident.

The AVC should be installed quickly for emergency treatment.

The selected location should be:

A safe area free from threats

Near the scene, but not the wind, not taller than that of the incident and the associated risks.

## **OTHER FACILITIES THAT MAY BE PROVIDED IN AN INCIDENT.**

The most common are: Base Camp, heliport.

### **BASE (B)**

Place where the coordinate and manage logistics functions. It is the responsibility of the Logistics Section. Only one per incident basis.

### **CAMP**

Location within the general area of the incident, equipped and staffed to provide staff with a place for accommodation, food and sanitary facilities.

## **APPLICATION OF SCI**

"The SCI Feeks to Fire, Police, Red Cross, 911, Health, Emergency Committees, Armedforces and other groups working under the same system, using a common terminology with an organization defined and governed by standard procedures.

To the extent that these institutions apply these standardized procedures in dealing with everyday incidents, small and easy to fix, improve their preparation for working with the system in large-scale incidents.

Hazardous Materials Incidents.

Oil Spill Response.

Events planned, for example, celebrations, parades, concerts, public squares.

Operation massive temporary shelters.

**Incident:** Occurrence of natural causes or human activity that requires action by emergency services personnel to protect lives, property and environment. "

## **CHAPTER IV**

### **SITUATIONAL DIAGNOSIS OF INCIDENT COMMAND SYSTEM.**

The Canton Ibarra is an area of high vulnerability, with resources for care of incidents the same as not enough.

Is the number of personnel to train in SCI.

### **IMPLEMENTATION OF INCIDENT COMMAND SYSTEM IN THE CITY IBARRA**

"The work at the local level is based on the participation of institutions and civil society. In November 2007 took place the signing of the engagement letter for public, private and institutional representatives detailed below: Armed Forces, Police, Fire Ibarra, 9-1-1 Central Emergency, Red Cross Ecuador and the Provincial Board of Imbabura, Agreements between the Ministry of Health and the Municipality of Ibarra for forming the Incident Command System.

### **ORGANIZATIONAL STRUCTURE OF THE MUNICIPALITY OF SAN MIGUEL DE IBARRA INCIDENT MANAGEMENT**

Incidents to the attention of the body used to the attention and coordination is the Emergency Operations Center Cantonal headed by the Mayor of Canton, at the crossroads of all response institutions such as the Central Emergency Response Coordination and 9-1 -1, the National Police, the Fire Department, the Red Cross of Imbabura, the Mechanized Cavalry Group No 36 Yaguachi.

## **EXPERIENCE IN THE USE OF INCIDENT COMMAND SYSTEM IN THE MUNICIPALITY OF SAN MIGUEL DE IBARRA**

None as Incident Command, however there coordination experiences before, during and after emergencies arising in the canton of the institutions of first response: 911, Police, Fire Department, Red Cross, mainly and repeatedly with EMAP companies, EMELNORTE and ANDINATEL.

## **COMMUNICATIONS SYSTEM THAT EXISTS IN THE MUNICIPALITY OF SAN MIGUEL DE IBARRA FOR THE ATTENTION OF INCIDENTS**

The Central Coordination and Emergency 9-1-1, by the municipality of Ibarra, same that coordinates care interinstitutionally incidents within and outside the canton Ibarra, either by radio or by telephone

communication. A part of this system, each institution has its own system of communication.

Lack of a structure to plan in coordination between institutions.

Different organizational structures to respond in an emergency.

Lack of reliable information about the incidents.

Inadequate response time.

Inadequate and incompatible communications.

Differences in terminology between institutions.

Inadequate system of reference and counter-reference.

## **RECOMMENDATIONS**

Ibarra, as anywhere in the world, is immune to incidents of small and large scale, so that the proposed implementation of the Incident Command System, must continue to work, so that in the shortest possible time a reality in this city. It is important that first response agencies that make up the SCI, work together, coordination and in a selfless, always thinking of the welfare of the population Ibarreña, resulting in efficient and effective work, prioritizing resources and avoiding duplication efforts.

The institutions that are part of the health sector, are very important in the SCI, as the life of one or more patients, will depend on how quickly act pre-hospital first responders and hospital personnel who will work in coordination in receipt of such patients.