

**UNIVERSITI TEKNOLOGI MARA**

**IMPLICATIONS OF  
COMMUNICATIONS CHANNELS IN  
GOVERNMENT DISASTER  
MANAGEMENT OF THE  
EXTRATERRITORIALITY ON  
NATIONAL DEVELOPMENT**

**NOR AIN BINTI ZAINUDDIN**

Thesis submitted in fulfilment  
of the requirements for the degree of  
**Doctor of Philosophy**  
**(Communication and Media Studies)**

**Faculty of Communication and Media Studies**

**September 2025**

## ABSTRACT

In Malaysia, the effectiveness of communication channels employed by local authorities during natural disasters remains inadequately understood, posing challenges to effective disaster management. This study quantitatively examines the attributes of communication channels that influence policy development, planning, and management in urban and suburban areas, with a particular focus on back-channel communication as a representative of extraterritorial policy during transitions prompted by natural disasters, within the context of the National Development Structure Plan 2020. Utilizing a structured survey design, data were collected from a representative sample (400 Respondents) of residents across various urban and suburban regions in Malaysia. The survey assessed public attitudes towards communication policy attributes related to national development strategies and disaster factors. Statistical analyses, including regression modeling, were employed to identify and quantify the relationships between communication channel attributes and public perceptions of disaster management effectiveness. Preliminary findings indicate that successful communication policies are characterized by the physical and functional qualities of communication channels, security and comfort, and alignment with public preferences and needs. These attributes significantly influence the perceived effectiveness of disaster management strategies. The study underscores the necessity of a strategic communication policy approach for local authorities to effectively manage public safety during crises such as the COVID-19 pandemic. It is anticipated that this research will contribute to the enhancement of national development planning and management in Malaysia.

## ACKNOWLEDGEMENT

First and foremost, I express my deepest gratitude to Allah for granting me the strength and perseverance to embark on and successfully complete this challenging journey.

I am profoundly indebted to my supervisor, Professor Ts. Dr. Zulkifli bin Abd Latiff, whose unwavering guidance, insightful feedback, and constant encouragement have been instrumental throughout this research. Not forgetful, brilliant thanks to my second supervisor, whose help me and advise me for this thesis.

My sincere appreciation extends to the esteemed faculty members and staff of the university, whose support and provision of resources have been invaluable in facilitating my academic endeavors.

I am also grateful to my colleagues and friends for their camaraderie, assistance, and constructive discussions, which have enriched this research process.

This thesis is dedicated to the cherished memory of my beloved parents, Mr. Zainuddin and Mrs. , whose vision and determination to educate me have been the cornerstone of my achievements. I also honor my brothers, Redzuan, Zaidi, and Zabidi; my sister, Nor Aniz; and my younger brother, Azahar; along with all my sisters-in-law, nieces, and nephews, for their unwavering support and encouragement.

A special note of thanks goes to Maarten Kneiseler, whose inspiration and motivation have been a beacon throughout my journey. His encouragement and innovative ideas have significantly influenced my approach and determination to excel.

May this work contribute to the advancement of knowledge and the enhancement of national development, not only in Malaysia but across the ASEAN region and world. I am deeply honored to share the insights gained from this research with my family, the public, governmental bodies, and the nation. I take immense pride in being Malaysian.

# TABLE OF CONTENTS

	<b>Page</b>
<b>CONFIRMATION BY PANEL OF EXAMINERS</b>	<b>ii</b>
<b>AUTHOR'S DECLARATION</b>	<b>iii</b>
<b>ABSTRACT</b>	<b>iv</b>
<b>ACKNOWLEDGEMENT</b>	<b>v</b>
<b>TABLE OF CONTENTS</b>	<b>vi</b>
<b>LIST OF TABLES</b>	<b>ix</b>
<b>LIST OF FIGURES</b>	<b>xi</b>
<b>CHAPTER 1 INTRODUCTION</b>	<b>1</b>
1.1 Introduction	1
1.2 Background of Study	7
1.3 Statement of the Problem	14
1.4 Research Question	20
1.5 Research Objectives	21
1.6 Hypothesis Statement	21
1.7 Scope of the Study	22
1.8 Rational of Study	22
1.9 Definition of Terms	24
1.10 Conclusion	28
<b>CHAPTER 2 LITERATURE REVIEW</b>	<b>30</b>
2.1 Introduction	30
2.2 Conceptualizing the Emergence of Communication	30
2.2.1 Communication in Malaysia	39
2.2.2 Crisis Communication	47
2.2.3 Social Media Brings People Together	51
2.3 Global and Catastrophic Event	64
2.3.1 Disaster Management	71
2.3.2 Flood Delivery System in Malaysia	74

# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

A disaster happens when a hazard strikes or impacts a vulnerable community with limited capacity, resulting in property damage, loss, and severe disruption of community operations. A recent study titled "*When a disaster happens, we are ready: Location mention recognition from crisis tweets*" was published in June 2022 in the International Journal of Disaster Risk Reduction. This research highlights the challenge of lacking geolocation data in most crisis-related tweets, making it difficult to pinpoint the exact locations of events during disasters. As noted by Suwaileh et al., "the ability to recognize location mentions in crisis tweets is crucial for improving response strategies and delivering timely aid," demonstrating how advanced methods of location mention recognition can enhance the effectiveness of humanitarian efforts.

The ability to recognize location mentions in crisis-related tweets is essential for enhancing disaster response strategies and ensuring the timely delivery of aid. During emergencies, social media platforms like Twitter often serve as real-time information sources, where affected individuals share urgent updates and needs. Advanced methods for detecting and geolocating these mentions allow humanitarian agencies to better map crisis zones, allocate resources more efficiently, and reach impacted populations faster. According to Ofli et al. (2020), integrating natural language processing (NLP) and machine learning techniques into crisis informatics significantly improves the accuracy and speed of extracting geographic information from tweets. These technologies help bridge the gap between digital data streams and on-the-ground action, enabling more responsive and targeted interventions during natural disasters and humanitarian crises.

Rising global temperatures have been strongly associated with the increased frequency, intensity, and complexity of natural disasters worldwide. As climate change accelerates, the earth's atmosphere becomes warmer, leading to more extreme weather events such as floods, droughts, wildfires, and intense tropical storms. According to the United States Geological Survey (USGS, 2024), warmer temperatures increase atmospheric moisture, fueling stronger storms and heavier rainfall, while also intensifying heatwaves and drought conditions. Melting glaciers and rising sea levels