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Protecting After the Fact:

Reactiveness, Fragmentation and Disconnection in Canadian Hazard Governance

by

Juan Camilo Gil Gonzalez

A THESIS

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Abstract

Canadian emergency management is a multilevel governance area in which municipal governments have most of the responsibility to manage emergencies. However, the provincial government possesses most of the jurisdiction in emergency management, the federal government has most of the fiscal capacity, and social actors provide important resources and services to affected communities or municipalities.

Operationally, the emergency management system in Canada has an all-hazards approach that is divided into four policy phases: *mitigation*, *preparedness*, *response* and *recovery.* Despite this all-hazards approach, the system has typically been reactive rather than proactive, where the mitigation phase is under-emphasized. Academics and multilevel practitioners have constantly proposed a more proactive approach, but the system remains reactive, and attempts at more proactive policy have been unsuccessful, despite wide agreement on the need for change. I therefore investigate reactiveness in Canada from a multilevel governance lens, using the following research questions: *Why is Canadian emergency management still reactive? How do roles and interactions of multilevel governance actors factor into this reactive rather than proactive approach to emergency management?*

Using a novel multilevel survey of emergency management practitioners, I argue that one important source of the reactive approach in emergency management is due to fragmentation in the multilevel governance of this system, which prevents the implementation of a standardized mitigation (proactive) strategy. Furthermore, my empirical data shows extensive evidence of misperception and misunderstanding from survey respondents about actor roles and interactions in this system. I arrive at this conclusion from a comprehensive review of the Canadian emergency management literature, and from studying perceptions of key governmental and non-governmental emergency managers across Canada.

Dedication

This project is dedicated to two of the most beautiful and brightest souls I have known.

To my dearest friend, Ursula. I wish you were still here to celebrate the ending of an era in my academic journey. I deeply miss your wisdom and kind spirit, and I will never forget our conversations when I was just starting my graduate studies. You believed in me, and now I want to believe that someday, somehow, I will see you again.

To my father-in-law, Fernando. You were a force of nature, a hurricane that was extinguished by the negligent management of a pandemic. You are testament of why this field of study matters, although I wish you were not. We miss you dearly, and your witty but always real words that celebrated life in every occasion are always with me. I hope that someday, somehow, I hear you again.

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Chapter 1: Emergency Management in Canada

No place in Canada is immune to natural disasters. Within a span of just over thirty years, we have had major natural emergencies across Canada: wildfires in Alberta and British Columbia; ice storms in Eastern Canada; hurricanes in the Atlantic region; tornadoes and floods throughout the prairies and Ontario; and a historic snowstorm in Newfoundland and Labrador (PSC 2020(b)).

A steady increase in frequency and devastation of natural disasters has led to escalating costs to the Canadian state. The annual cost of Canada's federal disaster fund rose an average of $54 million between 1970 to 1994; $291 million between 1995 and 2004; $410 million between 2005 and 2014; and $430 million between 2016 and 2019 (Ward Feb 26. 2016; Rabson Jan 6. 2020; and Abedi Jan 22. 2020). This cost is expected to climb steeply, as the ongoing COVID-19 pandemic is already estimated to cost over $1 trillion[1] between 2020 and 2021 (Government of Canada 2020), and has already led to a historic federal deficit of $381.6 billion in 2020 (Aiello Nov 30. 2020). These types of emergencies also require vast organizational responses, such as the evacuation of over 125,000 residents from the 2013 Southern Alberta floods (*CBC* Dec 11. 2015), and of over 80,000 residents from Fort McMurray, Alberta during the 2016 wildfire (Todd May 8. 2016). There is no doubt that the management of emergencies is an essential area of Canadian public policy, with enormous stakes and consequences for society.

The Canadian emergency management system emerged out of the threat of nuclear attacks during the early stages of the Cold War (Henstra 2013). Early approaches had a militarized focus, as the government funded several initiatives to train local response agencies in the case of such attacks. This changed in the 1970s with the addition of peacetime emergency initiatives, which focused on emergencies that were not created by the security risks of the Cold War, such as natural disasters. At that stage, traditional emergency management consisted of preparedness and response approaches only (Ibid.).

Nevertheless, reacting to disasters after the fact should only be part of the formula to address emergencies, which should begin with proactive policies for disaster planning, avoidance and readiness (PSC 2017). It was not until the 1990s that an *all-hazard* focus was introduced, which

[1] This figure as of November 17, 2020. It is divided by costs of: (1) $ 324,922 billion for protecting health and safety measures, direct support measures, and tax liquidity support; and (2) $686,450 billion for the Business Credit Availability Program (BCAP), other liquidity support, and capital relief (Government of Canada 2020).

added comprehensive mitigation and recovery approaches (Henstra 2013). This was further emphasized after the September 11, 2001, terrorist attacks in the United States that prompted Canadian jurisdictions to formulate policy to protect infrastructure and other goods and services from both natural and human-caused disasters (Ibid.).

Operationally, emergency management in Canada now consists of an all-hazards approach with four policy phases: (1) *mitigation*: “to adapt to, eliminate, or reduce the risks of disasters”; (2) *preparedness*: “to be ready to respond to a disaster and manage its consequences”; (3) *response*: “to act during, immediately before or after a disaster”; and (4) *recovery*: “to repair or restore conditions to an acceptable level through measures taken after a disaster” (PSC 2017:7-8).

At the institutional level, Canadian emergency management is a “multi-sectoral” approach (Ibid.:15), known as *multilevel governance*, which is a “mode of policy making that involves complex interactions among multiple levels of government and social forces” (Horak 2012:339). These governmental and social forces are commonly referred to as *actors* in the emergency management academic literature and are therefore referred to as *actors* in this thesis. The roles and interactions of these actors are complex and are guided by the institutional framework of Canadian federalism (Henstra 2013).

1.1. The Puzzle

As discussed above, emergency management in Canada is a multilevel policy area with an all-hazards approach that is operationally divided into four policy phases: mitigation, preparedness, response, and recovery. However, despite the introduction of an all-hazards approach since the 1990s, nearly all observers agree that the Canadian emergency management system remains overwhelmingly *reactive* rather than *proactive* in its approach.[2] In practice, a reactive approach to emergency management focuses on responding to emergencies, such as on evacuation and search and rescue measures. Deviating from a reactive into a proactive approach would emphasize efforts to reduce risks and vulnerabilities in potentially affected communities, such as through “structural mitigation measures (e.g. construction of floodways and dykes) and non-structural mitigation measures (e.g. building codes, land-use planning, and insurance incentives)” (PSC 2019:17).

[2] See Chapter 2 for the Literature Review in this thesis.

Widespread recognition among governments at all levels of the need for a stronger emphasis on proactive disaster mitigation led to the creation of Canada's National Disaster Mitigation Strategy since 2005 (PSC 2005). The development of this 2005 directive was achieved through a recognition that "mitigation is a key element of emergency management which to date has received relatively little emphasis in spite of increasing disaster costs" (Ibid.:1). This lack of emphasis on risk reduction efforts by under-emphasising mitigation describes a reactive approach to Canadian emergency management.

To remedy reactiveness and implement a more proactive approach, the 2005 mitigation policy directive called for federal, provincial and territorial governments to improve "governing structures" to address "the current piecemeal approach to mitigation by concentrating informed decision-making in an effective framework" (PSC 2005:4). The document also called for improvement in four specific areas to create more robust mitigation strategies:

(1) "*Leadership and Coordination*", where FPT[3] senior officials "work collaboratively with all stakeholders[4] to promote and facilitate disaster mitigation initiatives within their own jurisdictions" (Ibid.:2).
(2) "*Public Awareness, Education and Outreach*", where FPT senior officials "work with multiple stakeholders to enhance public awareness of risks and mitigation opportunities" (Ibid.:3).
(3) "*Knowledge and Research*", by applying and promoting "scientific and engineering best practices in order to build a knowledge base for sustainable, cost-effective mitigation decisions that contribute to community resiliency" (Ibid.).
(4) "*FPT Mitigation Investments*" to "develop and leverage new and existing mitigation strategies and initiatives" (Ibid.:3-4).

Despite the governmental recognition since 2005 that the Canadian emergency management system should focus on a proactive approach, a 2008 report about emergency preparedness in Canada proved that the mitigation strategy did not change reactiveness bias in this system. The Standing Senate Committee on National Security and Defence showcased testimony from top municipal emergency management officers who complained about a notorious lack of funding for

[3] Federal, Provincial and Territorial.
[4] Non FPT, such as municipal, regional, or Indigenous authorities.

localized risk assessment and proactive hazard management (SSCNSD 2008). As explained by an emergency management officer:

> Emergency management goes beyond the need for equipment to respond. Federal/Provincial funding should contribute to the building of activity along the full spectrum of emergency management: prevention/mitigation, preparedness, response and recovery (including continuity of operations). (SSCNSD 2008:156-7)

Additionally, emphasis on reactiveness continues to be acknowledged more than a decade later by Public Safety Canada. The 2017 document, *An Emergency Management Framework for Canada, Third Edition*, states that "traditionally, emergency management in Canada has focused on preparedness and response", but it is now recognized that "risks, hazards and vulnerabilities" are properly addressed "through prevention and mitigation as well as recovery measures" (PSC 2017:8). The document adds that "greater attention or investment in prevention and mitigation can prevent disasters or significantly reduce the social, economic, cultural, and environmental costs and damages when events occur" (Ibid.).

The latest governmental report to acknowledge the problem of a reactive bias in Canadian emergency management is the *Emergency Management Strategy for Canada: Toward a Resilient 2030* document (PSC 2019). This report repeated what the *An Emergency Management Framework for Canada, Third Edition* document (PSC 2017) said about Canadian emergency management historically emphasizing response and preparedness over mitigation and recovery (PSC 2019:3). However, this latest report adds that a resilient community should "take proactive steps today to help reduce risks tomorrow" (PSC 2019:7), and that "the most effective EM[5] activities are proactive prevention/mitigation measures that are used to eliminate, reduce or adapt to risks" (Ibid.:17). This means that emergency management in Canada still focuses on response and under-emphasizes mitigation, despite the recognition from different levels of governments that mitigation is a crucial part of a robust emergency management framework, and that all stakeholders are committed to working together to support disaster mitigation in Canada since 2005 (PSC 2005).

In short, many government reports, and testimony from emergency management practitioners at all levels, repeatedly emphasize the need for a more *proactive* approach to

[5] Emergency Management.

emergency management. Yet these same reports and testimony suggest that the system remains *reactive* in character. This raises the two questions of my thesis:

Why is Canadian emergency management still reactive? How do roles and interactions of multilevel governance actors factor into this reactive rather than proactive approach to emergency management?

To explore these questions, my project takes into consideration the multi-phase characteristics of Canadian emergency management, while examining the roles and interactions of multilevel governance actors. To understand roles and interactions in this policy area, I sent an elite practitioner survey to key governmental and non-governmental actors asking about actor *involvement*, *importance* and *interactions* in this system. My data provides new evidence by incorporating a large-scale study of practitioner perceptions that complements the case study approaches that are common in the literature.

1.2. Thesis Outline

Chapter 2 provides a comprehensive literature review of the study of Canadian emergency management. I begin this chapter by identifying the past and current scholarship, considering the chronological and methodological progression of studies, and describe where my project fits in this literature. I continue Chapter 2 with a conceptual and operational description of emergency management and multilevel governance, which provides the conceptual basis of how we understand these concepts throughout this thesis. The following two sections in the chapter provide the current explanations for a reactive rather than proactive approach, which I synthesized into the *temporal* and the *fragmented multilevel governance* explanations. I identify the latter explanation as the more comprehensive for explaining reactiveness from a multilevel governance perspective, which argues that the current emergency management system is vertically and horizontally fragmented, preventing the standardization and application of an effective mitigation strategy. The final sections of Chapter 2 explain why it is important to study policy communities and provide my empirical and analytical framework for studying roles and relationships in emergency management.

Chapter 3 describes and explains my methodology. The backbone of this thesis is an elite practitioner survey sent to emergency managers from the public and social sectors across Canada. Chapter 3 explains my reasoning for this approach and describes my survey sampling frame and respondents. I then describe my survey instrument and explain how I use the quantitative and qualitative data gathered from my elite practitioner survey.

The next four chapters go over the empirics gathered from my survey. Chapter 4 provides brief but compelling evidence of the reactive rather than proactive approach to emergency management, as perceived by survey respondents. This chapter therefore serves as testament to the premises of my research questions introduced in the previous section.

Chapters 5 to 7 are structured based around my *involvement*, *importance* and *interactions* empirical framework. Chapter 5 focuses on actor *involvement*, and Chapter 6 looks at actor *importance*, providing the bulk of my analysis about actor roles in emergency management. Chapter 7 then provides empirical evidence about actor relationships by looking at *interactions*. My empirical data in these chapters supports the *fragmented multilevel governance* explanation. I find evidence of fragmentation in how local and regional actors are disconnected from the federal level, and how both provincial and federal actors are at fault for this fragmentation. Furthermore, this public sector fragmentation seems to create capacity gaps at the local level, which are theoretically expected to be covered by a strong social sector. Nevertheless, there is considerable uncertainty among respondents about the roles of CSOs[6] in emergency management.

Chapter 8 concludes the thesis. The first three sections in this chapter summarize my empirical study, and summarize three big-picture findings about Canadian emergency management: (1) the pervasiveness of the reactive approach; (2) governance fragmentation; and (3) inter-actor disconnect and misunderstanding in the policy community. I follow the conclusions from these sections by providing recommendations on how to improve emergency management in Canada from a governance perspective. Finally, I provide future research agendas for the study of Canadian emergency management, which is crucial for continuing protecting Canadians from disaster.

[6] Civil Society Organizations (CSOs) are non-governmental and non-private sector entities.

Chapter 2: The Study of Emergency Management in Canada

As noted above, emergency management in Canada is a multilevel policy area that employs an all-hazards approach, consisting of four policy phases: mitigation, preparedness, response and recovery. However, despite operating with an all-hazards approach since the 1990s, multilevel actors agree in that the mitigation phase has been and continues to be under-emphasized, while most of the focus is given to a reactive approach.

To understand this policy area, it is important to describe both its multilevel and its multi-phase character. This chapter therefore explores the most salient scholarship about Canadian emergency management governance, and what this literature says about the different actors and phases in this system. I emphasize current explanations for a reactive rather than proactive approach, and explain how multilevel governance fits within these arguments.

This chapter is divided into six sections prior to its summary. The first section shows the methodological trajectory of the Canadian emergency management scholarship since the late 1990s, and how my work fits within this scholarship. The second section describes the operational multi-phase and the institutional multilevel factors in the Canadian emergency management system. This section also introduces the two salient academic explanations for a pervasive reactive approach described in the following two sections. The *temporal explanation* is presented in section three, and section four describes the more complex *fragmented multilevel governance explanation*. The fifth section explains the importance of studying the policy community in this system. Finally, the sixth section provides an overview of my analytical and empirical frameworks.

2.1. The Scholarship of Canadian Emergency Management

The study of Canadian emergency management began to take shape in the late 1990s and early 2000s. This early scholarship, and most of the studies that followed since, consist of a mixture of institutional analyses and case studies.

Some of the earlier scholarship used cross-national comparative analyses, such as bilateral comparisons between emergency management policy in Canada and the Unites States (Newton 1997; Henstra and Sancton 2002; Henstra 2003; and McEntire and Lindsay 2012); or a multilateral comparison of hazard policy, such as that between Canada, the United States, Australia, New Zealand, South Africa and the United Kingdom (Henstra and McBean 2005). Other scholars took

a pan-Canadian focus, by studying how public policy was created, changed and implemented in Canadian federalism (Hwacha 2005; Graham and Stoney 2006; Henstra 2010; Henstra 2013; Juillet and Koji 2013; Young and Henstra 2013; Lindsay 2014; Raikes and McBean 2016: Stacey 2017; Thistlethwaite and Henstra 2017; and Lindsay 2018).

Another branch of research focused on the provinces as case studies, such as on Newfoundland (Catto and Tomblin 2013), Nova Scotia (Grieve and Turnbulll 2013), Alberta (Hale 2013), British Columbia (Stevens and Hanschka 2014), and Manitoba (Haque et al. 2019). More recently, some researchers have used cross-provincial comparative studies, such as between Alberta and Saskatchewan by Margot Hurlbert (2018); Alberta, Saskatchewan and Manitoba by Alasdair Morrison et al. (2018); and a comparison between all the ten provinces by John Lindsay (2018).

The implementation of empirical studies involving interviews and surveys are a relatively new endeavor in the scholarship of Canadian emergency management. Interviews have been the tool of choice for these types of studies, with different levels of analysis. Some examples include interviewing local, provincial/state and federal public officials from Canada and the United States (McEntire and Lindsay 2012); public provincial officials in Manitoba (Haque et al. 2019); and public, private and non-profit emergency managers in Ontario (Nirupama and Etkin 2012), and in Alberta, Saskatchewan and Manitoba (Morrison et al. 2018).

The use of surveys is noticeably absent from the scholarship on Canadian emergency management. I was only able to find one relevant article by Jonathan Raikes and Gordon McBean (2017), where the authors survey municipal public officials from Vancouver and the District of Maple Ridge, British Columbia. In this thesis, I offer a novel approach to the study of emergency management by systematically studying multilevel actors from a large-N survey.

2.2. Understanding the Multilevel Governance of Emergencies in Canada

In their 2006 book, *Rules, Rules, Rules, Rules: Multi-Level Regulatory Governance*, Bruce Doern and Robert Johnson define and conceptualize multilevel governance. They argue that multilevel governance "involves interacting, reinforcing, and colliding rule making and governance at the international, federal, provincial, and city/local community levels" (Ibid.:21). Multilevel governance thus "emerges from varied top-down, bottom-up, and negotiated processes

within the state, among states, among provinces and cities, and among economic and social interests" (Ibid.:22).

Emergency management in Canada is a multilevel governance area that involves dynamic and complex interactions between various governmental and social actors (Horak 2012). Operationally, Daniel Henstra and Gordon McBean define emergency management as a "range of policies and practices developed to prevent, manage and reduce the impact of disasters," and can be conceptually divided into four phases: mitigation, preparedness, response, and recovery (2005:304). In the below quote, Daniel Henstra briefly describes each of these four phases to help us better understand the current approach to emergency management in Canada.

> *Mitigation* involves implementing anticipatory measures to prevent or reduce the impacts of hazards, such as land-use regulations that prohibit residential construction on flood plains. *Preparedness* involves measures to increase a community's capability to respond effectively to emergencies, such as planning for the evacuation of residents who are mobility-impaired. *Response* policies, such as search and rescue protocols and emergency shelter arrangements, are adopted to strengthen operations during an emergency and to assist victims. *Recovery* plans address issues such as debris management and psychological counselling for victims and are meant to aid in restoring and rehabilitating a community after emergencies. (Henstra 2013:9-10)

These definitions of multilevel governance and emergency management are my conceptual foundation for this thesis. I understand emergency management as a policy area that functions under a multilevel governance system that addresses emergencies in four distinct but linked phases: mitigation, preparedness, response and recovery.

In its basic form, modern Canadian emergency management is initiated by the municipal and provincial governments that are directly affected by emergencies. It is influenced by provincial jurisdiction over emergency management and municipal governments, and it is also heavily financed by the federal government (AEMA 2016; Henstra and McBean 2005; and Young and Henstra 2013).

Legislation in this policy area derives from the separation of powers and responsibilities assigned by the constitutional mechanisms of federalism (Henstra and McBean 2005; Young and Henstra 2013; and Lindsay 2014). However, there are no constitutional provisions that govern emergency management, and the provincial jurisdiction over emergency management is indirectly

awarded to the provinces (Juillet and Koji 2013; Young and Henstra 2013; Raikes and McBean 2016 and 2017; and Lindsay 2014 and 2018).

Municipal and multi-municipal regional governments are provincial jurisdiction, and function under provincial legislation (AB-MGA 2000; BC-EPA 1996; Hale 2013; and PSC 2017). For this reason, the municipal level is relatively weak in Canada when compared to other governance systems from other advanced industrial nations (Young 2013:1; and OECD 2017). Furthermore, I noticed the close relationship between municipalities and regional entities in Canada while gathering contact information from regional actors for my survey, which showed me that regions are often administered by representatives from the municipalities that form the respective regional entity.

Finally, there are many types of non-governmental entities that are activated when dealing with a disaster. The actions of these organizations vary depending on their capacity and expertise, as well as in their origin, such as those created from ad hoc local/grassroots cooperation, from branches of major regional or international humanitarian organizations, or from faith-based groups (Newton 1999).

The governance dance between public and social actors in the multilevel policy area of emergency management is not only dynamic and complex, but it also tends to be reactive according to Public Safety Canada (2005, 2017 and 2019) and my own empirical findings (shown in Chapter 4). This reactive approach is also repeatedly emphasized in the academic literature (Newton 1997; Henstra and Sancton 2002; Henstra 2003; Henstra and McBean 2005; Hwacha 2005; Catto and Tomblin 2013; Lindsay 2014; Nair and Howlett 2017; Raikes and McBean 2017; Stacey 2017; Thistlethwaite and Henstra 2017; Morrison et al. 2018; and Haque et al. 2019).

Valeriah Hwacha categorizes the four phases as proactive mitigation, and reactive preparedness, response and recovery. The author perceives that unlike mitigation, “the other three pillars [or phases] are reactive and primarily seek to diminish the severity of impacts following the onset of an event or facilitate recovery efforts, rather than proactively reduce susceptibility to future harm" (Hwacha 2005:511). Furthermore, response is perceived to be the most salient out of the four phases in emergency management (Cigler 1988; Henstra and McBean 2005; Lindsay 2014 and 2018; and Morrison et al. 2018). Therefore, the three reactive phases led by response are more emphasized than the mitigation phase in Canadian emergency management.

There are two prevailing yet non-mutually exclusive explanations for the reactive rather than proactive approach to Canadian emergency management. The first argues that emergency management is reactive due to the temporal aspect of emergencies, while the second argues that the reactive approach is largely due to fragmentation within the multilevel governance of this policy area. The following two sections explore both explanations.

2.3. Reactiveness Due to Temporal Factors in Emergency Management

This explanation centres on the argument that natural disasters are sporadic and unpredictable (Hestra and Sancton 2002). This is problematic for the creation of a proactive approach to address emergencies, since about eighty percent of emergencies in Canada are due to sporadic "weather and weather-related hazards such as tornadoes, hurricanes, hail storms, blizzards, storm surges, ice storms and floods" (Hwacha 2005:509). Beverly Cigler (1988), Daniel Henstra and Andrew Sancton (2013) argue that this temporal factor creates a challenge for mitigation efforts since disasters are low probability/high consequence incidents that have low public and political visibility. This event-focused public visibility factor leads to lower policymaking attention during mitigation, but high policy attention in the response phase (Lewis 1988; Newton 1997; and Henstra 2003).

A common issue that arises from the low public visibility is the degree of political viability it creates for decision-makers. John Newton refers to this as "political currency", which he describes as "widespread public support (relative to other possible expenditures) and substantive political value (generally related to reelection)", which is "an influencing factor whatever the area of focus" where "the mitigation of natural hazards is no different" (Newton 1997:232). There is a higher degree of political currency in the response phase because it has the highest degree of immediate and visible effects of emergencies, which moves the public to pressure decision-makers to design and implement policy, and promotes more inter-governmental and inter-sector cooperation (Newton 1997; Henstra and Sancton 2002; Henstra 2003 and 2010; Catto and Tomblin 2013; Hale 2013; Morrison et al 2018; and Haque et al 2019).

In contrast, there is low political currency in the mitigation phase, since potential emergencies are not immediately visible or felt by the public to effectively promote proactive policy, and the lack of public acknowledgement disincentivizes policymakers to embark in policy development and entrepreneurship (Cigler 1988; Waugh 1988; Newton 1997; Haque 2000;

Henstra and Sancton 2002; Henstra 2003 and 2010; Nirupama and Etkin 2012; Henstra 2013; Hale 2013; Young and Henstra 2013; Stevens and Hanschka 2014; and Raikes and McBean 2017).

Furthermore, mitigation projects are costly and require long-term policymaking, which further discourages politicians to develop or introduce proactive policy (Cigler 1988; Hale 2013; and Lindsay 2018). John Newton (1997) argues that public expenditure for policy is dependent on public support and the degree of political value given to such policy. Daniel Henstra (2003) adds that although mitigation policy has been found to lessen the impacts of emergencies, the policy environment in Canada undermines this proactive approach, focusing instead on more immediate issues, such as taxation. Phil Graham and Christopher Stoney (2006) expand on this argument by explaining that "under the normal circumstances of competing priorities and a tight, results-based fiscal climate, it is difficult for governments to justify to the taxpayer large targeted expenditures to prepare for something that may never happen." (Graham and Stoney 2006:327). Mark Stevens and Steve Hanschka (2014) reiterate this point by arguing that municipalities are often reluctant to establish flood mitigation measures because they do not perceive sufficient incentives from the province for these projects, and local authorities do not see hazards with the same political value as other local concerns. Emdad Haque et al. (2019) arrive at a similar conclusion by arguing that because the government relies on taxpayers' money and is answerable to them, it tries to balance the budget and spend money on prioritized issues.

Therefore, the *temporal explanation* suggests that Canadian emergency management is reactive because emergencies – especially natural disasters – are sporadic and unpredictable, with high costs, low public visibility, and low political value for elected officials. Nevertheless, this argument is not fully satisfactory. Robert Young and Daniel Henstra allude to a gap in the *temporal explanation* by noticing that "at the national level, in any given period, the probability of an emergency occurring somewhere in Canadian space is very high. For every province, it is lower. For any individual municipality, it is much lower" (Young and Henstra 2013:206). This is an "intergovernmental paradox" where "emergencies are local…but the incentives to mitigate and prepare are lowest at the local scale" while senior governments "have a large stake in the efforts made at lower tiers" (Ibid.). This means that the higher levels of government, the ones that enjoy the largest jurisdictional and financial capacities, should have the larger interest in proactively addressing emergencies, but the approach remains reactive.

Furthermore, in 1997, John Newton noticed that when compared to the United States, the development of a mitigation strategy has been better south of the Canadian border because Americans suffer a larger prevalence of natural disasters and higher economic losses. He adds that in Canada, "either the commitment is made voluntarily, or a major disaster with unacceptable human and financial losses (i.e. Canada's first multibillion dollar loss) will underline the necessity of changes to our basic thinking about natural hazards" (Newton 1997:237). However, we have already experienced three multibillion dollar emergencies in Canada after 1997: the 1998 winter storm in Ontario, Quebec and New Brunswick estimated at $4.6 Billion; the 2016 Fort McMurray wildfire in Alberta that cost over $4 Billion; and the 2013 Southern Alberta flood estimated at $2.7 Billion (PSC 2020(b)).[7] Newton's (1997) prediction almost came true, since Canada's National Disaster Mitigation Strategy was developed in 2005 (PSC 2005), except for the part that the reactive approach to emergencies did not change either voluntarily or forcefully.

In sum, the lack of change from a reactive into a proactive governance approach can be partially explained by a temporal factor. Nevertheless, we also need a deeper institutional analysis of the emergency management multilevel governance system to better understand the reactive approach to addressing emergencies. This leads us into the second explanation: *multilevel governance fragmentation*.

2.4. Reactiveness Due to Multilevel Fragmentation Factors in Emergency Management

In her 1988 international study of emergency management policy, Beverly Cigler argued that disaster consequences were on the rise because "hazards grow at a faster rate than the structural solutions can be put in place" (Cigler 1988:49). This section therefore explores the academic explanations of a reactive multilevel governance in Canadian emergency management, by understanding the governance structure and factors that prevent a proactive approach.

The notion that there is regulatory fragmentation in emergency management is an ongoing theme in the international academic literature. In multilevel governance, the level of fragmentation is and has been multidirectional, as explained by William Waugh in 1988:

[7] Not including the estimated costs of the COVID-19 pandemic for 2020-2021, which as of November 17, 2020, already surpasses $1 trillion in individual, sub-governmental and business federal support (Government of Canada 2020).

> Vertical fragmentation due to the division of powers between the federal and state governments and the limited powers given to local governments by states make decisionmaking and program coordination awkward at best and ineffective at worst. Horizontal fragmentation due to the jurisdictional prerogatives of a multitude of agencies adds to the difficulties. (Waugh 1988:118)

In Canada, this multidirectional fragmentation is a major theme in emergency management scholarship for explaining the emphasis on reactiveness and the structural deficiencies in emergency management (Newton 1997; Henstra and Sancton 2002; Graham and Stoney 2006; McEntire and Lindsay 2012; Catto and Tomblin 2013; Grieve and Turnbull 2013; Juillet and Koji 2013; Young and Henstra 2013; Lindsay 2014; Stevens and Hanschka 2014; Raikes and McBean 2016; Stacey 2017; Lindsay 2018; Morrison et al. 2018; Haque et al. 2019). For example, Alasdair Morrison et al. argue that "flood risk management" (FRM) in the prairie region is characterized by "institutional fragmentation, lack of clarity of FRM roles and responsibilities, policy layering and competing mandates", which hinders its potential (Morrison et al. 2018: 44).

Robert Young and Daniel Henstra (2013) perceive that one of the issues with emergency management in Canada is that the three levels of government seem to be failing at different things, where municipalities are often adamant and conflicted to adapt good emergency policy, as well as horizontal cooperation and regionalization. The authors argue that the provincial level, despite often promoting good policy and education, is overprotective of its jurisdiction over emergency management, which separates the local and federal level. They add that the federal government is not only distanced by the provinces, but this level also disengages itself from local governance in emergency management, which should absolutely be a policy priority for Parliament Hill.

This *multilevel governance fragmentation* argument is more complex than the *temporal* explanation. Here, the main factor driving fragmentation is a lack of regulatory standardization across Canada that influences multilevel roles and relationships and creates federal disengagement, inter- and intra-provincial asymmetry, legislative and fiscal marginalization at the local level, and a fragmented policy community.

2.4.1. Legislative and Fiscal Marginalization at the Local Level

Municipalities generally "run the show" in emergency management (Lucas and Smith 2020:430), since they generally have the responsibility to manage emergencies (Graham and

Stoney 2006; Henstra and Sancton 2002; Grieve and Turnbull 2013; Juillet and Koji 2013; and Raikes and McBean 2016). However, municipalities lack jurisdictional authority vis-à-vis the provincial, territorial and federal levels (Stoney 2006; Graham and Stoney 2006; Henstra and McBean 2005; McEntire and Lindsay 2012; Hale 2013; Henstra 2013; Young and Henstra 2013; Lindsay 2014; Stevens and Hanschka 2014; Stacey 2017; and Lindsay 2018). In this system, "municipalities feel marginalized, undermined and underprioritized in the FTP [Federal, Territorial and Provincial] framework, despite them being in charge of the public safety of the majority of Canadians" (Juillet and Koji 2013:38-44). Municipalities are therefore regarded as "partners", despite their importance, along with other crucial actors such as Indigenous communities and social forces (PSC 2017).

This marginalized responsibility creates a conundrum for municipalities, where they are highly accountable to their residents for the outcomes of emergencies while having highly constrained authority over the policies and frameworks related to those situations (Graham and Stoney 2006). This is problematic, as the knowledge about emergencies comes primarily from local experts, who are knowledgeable about the different vulnerabilities present in each region. Consequently, different vulnerabilities may require different types of actions according to the types of hazards that are common in their area, such as forest fires, floods, hurricanes, etc. (Graham and Stoney 2006). However, these actors lack the necessary jurisdiction to adequately implement frameworks tailored to their local vulnerabilities and hazards (Hale 2013).

Furthermore, municipalities must develop effective emergency management approaches within provincial policy parameters that may or may not be applicable to local emergency-related needs (Henstra 2013; and Stevens and Hanschka 2014). However, local politicians "have the capacity to leverage media profiles, electoral mandates, implementation responsibilities, and even infrastructure ownership" to influence municipal involvement in public policy (Sayers and Alcantara 2018 in Lucas and Smith 2019:272). Additionally, professional emergency managers from larger urban centres have certain autonomy to make local or regional policy changes, as long as they stay within provincial regulatory and budgetary parameters (Young and Henstra 2013), which are often reactive by design.

A lack of fiscal capacity at the local level is another persistent problem for effective emergency management. Daniel Henstra argues that municipalities "operate with very tight budgets and face a wide range of demands from local residents, so they must selectively allocate

resources to a limited set of problems" (Hestra 2013:5). However, some large municipalities have substantial capacity to *act* when faced with disaster, employing a variety of civic tools, and involving local, provincial, regional, national, and even international social entities (Ibid.). This reflects an unequal system where large-urban centres are more capable of protecting their residents than small towns or rural areas.

Additionally, much of the funding available for cities in the multilevel system comes from the federal level, which is funneled through, and mostly controlled by the provincial level. This is problematic given that municipalities have the knowledge on how to deal with their local hazards, but this knowledge is disconnected from the fiscal capacity of the federal government (Graham and Stoney 2006; Henstra 2013; Juillet and Koji 2013; and Stevens and Hanschka 2014).

In short, the marginalized delegation of responsibility forces the local level to manage emergencies within a context of highly constrained policymaking authority. Furthermore, the Province channels and filters resources from the federal to the local level, disconnecting local knowledge and vulnerability from federal fiscal capacity. The mismatch of high responsibility and constrained jurisdictional and fiscal capacity, combined with inter-municipal asymmetry in the capacity to address emergencies, challenges the development of a successful standardized Canadian mitigation strategy.

2.4.2. Inter- and Intra-Provincial Fragmentation

The provinces have a particular set of powers when dealing with emergencies. Each provincial jurisdiction has its own emergency legislation, which states how to act when faced with a municipal, multi-municipal, or province-wide emergency (Lindsay 2018). These statutes ensure that emergency plans are established, maintained and implemented at both the provincial and municipal levels (Ibid.). They also function in conjunction with other provincial statutes and regulations that influence the management of emergencies, such as municipal affairs, land use, and natural resource management (Ibid.).

Besides legislation, each province has different approaches for dealing with emergencies, as well as different agencies, and different degrees of private and civil sector involvement (Haque 2000; Graham and Stoney 2006; Lindsay 2014 and 2018). Therefore, provinces not only have jurisdiction, but there are differences in the emergency management approaches and legislation

across provinces (Haque 2000; Graham and Stoney 2006; Lindsay 2014 and 2018; and Hurlbert 2018), further preventing a pan-Canadian standardized emergency management framework.

Provincial governments also face challenges internally, as differences in regional/local population density and economic capacity, as well as in urban, small town and rural relations hinder the effort of a unified approach (Hale 2013). Inter-governmental involvement, cooperation and coordination approaches within provinces can also be difficult, given the complexity of intra-provincial regulatory and governance mechanisms (Ibid.). Additionally, provincial efforts can be affected by the forms of legislation that relate to the different types of municipalities or sub-provincial regions (Ibid.).

This horizontal disconnect creates another shortcoming in the Canadian emergency management system, where there is also significant horizontal asymmetry in the capacity to manage emergencies, based on the differing capacities of municipalities (Henstra 2010; Catto and Tomblin 2013; and Hale 2013). Robert Young and Daniel Henstra argue that "there is considerable variation in response and recovery capacity between larger, urban municipalities and smaller, rural ones, and agreements to coordinate resources between communities are lacking in many regions" (Young and Henstra 2013:201). This is critical since a failure in coordination and cooperation may create unequal responses to disasters or an inability of some municipalities to provide public safety (Ibid.). It also creates pressure on provincial governments to provide proper measures and coordination to ensure municipalities are equipped with the right tools to deal with emergencies (Ibid.).

Robert Young and Daniel Henstra argue that provincial officials encourage regionalization and "inter-municipal partnerships", "but the extent to which these partnerships have been developed has varied" (Young and Henstra 2013:194). For example, Geoffrey Hale found that "Alberta's highly decentralized municipalities make regional EM[8] coordination a major challenge…this problem has been recognized by AEMA[9] officials, who are actively promoting greater regional coordination through a combination of incentives, persuasion, and examples, especially in rural areas" (Hale 2013:158). There is therefore a challenge to promote horizontal cooperation and regionalization among municipalities. According to Catto and Tomblin (2013),

[8] Emergency Management
[9] Alberta Emergency Management Agency (AEMA)

this horizontal disconnect prevents policy innovation among regions or within provinces, such as that for a mitigation strategy.

2.4.3. A Distanced Federal Level

Because of provincial jurisdiction in emergency management, the federal government is usually only peripherally involved. Federal responsibilities have been outlined by the Emergency Preparedness Act from 1985 and the Emergencies Act from 1988, and are now guided by the Emergency Management Act from 2007 (Graham and Stoney 2006; and Lindsay 2018). These Acts divide federal involvement into different federal agencies that work under different legislation, such as those that oversee public health, natural disasters, and defense-related situations (Graham and Stoney 2006). These bodies of legislation allow Ottawa to act on emergencies that are considered national in scope, as well as those that require international efforts (PSC 2017).

Sections 4, 5 and 6 of the 2007 federal Emergency Management Act outline the responsibilities of the Minister of Public Safety and Emergency Preparedness when coordinating efforts with the provinces. These sections highlight the duty of the Minister to prepare, maintain and conduct federal emergency plans and exercises. They also highlight the supportive role of the federal government, whereby "a [federal] government institution may not respond to a provincial emergency unless the government of the province requests assistance or there is an agreement with the province that requires or permits the assistance" (F-EMA 2007: S.6(3)). Furthermore, Section 4(1)(f) states that the Minister coordinates "the activities of [federal] government institutions relating to emergency management with those of the provinces – and supporting the emergency management activities of the provinces – and through the provinces, those of local authorities." This speaks to a constraint on the federal government intervening within provincial jurisdiction, where the federal level takes a "hands off approach to provincial emergencies" (Graham and Stoney 2006:344), following the basic jurisdictional mechanisms of Canadian federalism, and situating the Province as the middle ground between federal and local authorities.

According to federal legislation, one of the main functions of the federal government in Canadian emergency management is to support the provinces financially. Public Safety Canada provides the funding formula that guides the financial assistance given to the provinces (See Table 2.1), which is adjusted annually for inflation (PSC 2020(a)). This formula shares the expense of

provincial emergencies according to how much each emergency costs per capita, where the higher the cost, the higher the contribution by the federal government.

Table 2.1 – Cost-Sharing Formula Comparison Between 2015 and 2020

Eligible provincial expense thresholds (per capita of population) as of January 31, 2015	Eligible provincial expense thresholds (per capita of population) for January 1 to December 31, 2020	Government of Canada share (percentage)
First $1	First $3.19	0%
Next $2	Next $6.39	50%
Next $2	Next $6.39	75%
Remainder	Remainder	90%

(PSC 2020(a); and PSC 2020(c))

Along with financial assistance, the federal government is also in charge of providing the Canadian armed forces for domestic emergencies. The army is mobilized to the provinces according to Part VI of the National Defense Act (F-EMA 2007: S.4(1)(h)), which requires a consultation between the Minister of Public Safety and Emergency Preparedness, and the respective provincial attorney general (F-NDA 1985: Part VI, S.278). However, as stated both in S.4(1)(j) of the 2007 federal Emergency Management Act (F-EMA 2007), and Part VI, S.277 of the 1985 National Defense Act (F-NDA 1985), the provinces request or approve both financial and military assistance to cope with emergencies, reflecting the jurisdictional constraint on the federal level previously mentioned.

According to John Newton (1997), mitigation approaches have been historically undermined in Canada due to the federal government's lack of control over the jurisdiction of emergency management, which prevents a nation-wide framework that works with municipalities. The idea that the distribution of powers in Canadian emergency management is counterproductive because it prevents the development of a centralized federal standardized framework, such as that for a mitigation strategy, is shared by many scholars (Henstra and Sancton 2002; Graham and Stoney 2006; McEntire and Lindsay 2012; Catto and Tomblin 2013; Grieve and Turnbull 2013; Hale 2013; Juillet and Koji 2013; Young and Henstra 2013; Stevens and Hanschka 2014; Stacey 2017; and Morrison et al. 2018).

Luc Juillet and Junichiro Koji (2013) argue that this jurisdictional system may be the largest constraint for effective emergency management that not only distances the municipal and federal

levels from each other, but also disrupts communication and collaboration between these two governmental levels during emergencies. This is the case because the provincial governments are a jurisdictional bottleneck over emergency management that is disruptive for the system.

There are exceptions to the jurisdictional constraint on the federal government, only in the event that an emergency exceeds the provincial capacity to ensure public safety (Graham and Stoney 2006:344), or when the Governor in Council of Canada determines “a provincial emergency to be of concern to the federal government” (F-EMA 2007: S.7(c)), where the federal government would have to intervene to ensure the emergency is addressed properly. Although these exceptions may sound broad and ambiguous, this scenario is unlikely given that the provinces often manage a robust and highly controlled system for dealing with emergencies, which protects their jurisdiction.

2.4.4. Public-Social Sector Fragmentation

The description of inter-governmental roles and interaction from the previous three sections reflect the division of powers that complicates the multilevel governance of emergency management, concentrating regulation in provincial authority, marginalizing municipalities, and distancing the federal level. Nevertheless, since Canadian emergency management is a multilevel governance area, non-state actors are also influential in this policy area (Newton 1999; Haque 2000; Henstra and Sancton 2002; Henstra 2010 and 2013; Catto and Tomblin 2013; Grieve and Turnbull 2013; Juillet and Koji 2013; Young and Henstra 2013; Lindsay 2018; and Haque et al. 2019).

The involvement of non-governmental entities in emergency management is perceived to be supportive and cooperative to the public sector, and its involvement is often carried out “on behalf of municipal governments or the provincial government, either on a voluntary or a contractual basis” (Young and Henstra 2013:200). Therefore, social entities are an important actor in the emergency management policy community in Canada. This importance is highlighted by Daniel Henstra when explaining that “policy solutions” are formulated by a “relatively exclusive” policy community and network composed of “municipal, provincial and federal practitioners, policy analysts, private-sector participants such as consultants and infrastructure managers, representatives of non-governmental humanitarian agencies such as the Canadian Red Cross and

the Salvation Army, as well as academics and some interested members of the public" (Henstra 2010:249).

The regulatory complexity and overreliance on provincial powers and local responsibility may exacerbate the need for social forces to act in the Canadian emergency management system. Jack Lucas and Alison Smith (2019) explain that the private and third sectors, otherwise known as social forces (see Horak 2012; and Young and Hestra 2013), usually function locally "but can also span scales or jurisdictions themselves" (Lucas and Alison Smith 2019:273). In fact, some case studies found in the Canadian literature paint a picture of social forces supporting the public sector, such as in the provision of goods and services on behalf of the local level by non-governmental organizations that cover regional, national or international scales (Graham and Stoney 2006; Catto and Tomblin 2013; Grieve and Turnbull 2013; Hale 2013; Juillet and Koji 2013; and Hurlbert 2018). However, not all scholars provide an explanation for the existence of these gaps, but when provided, they attribute this gap to factors mentioned in this *fragmented multilevel governance explanation*: the lack of a federal standardized framework, and to the disconnect between the fiscally and legislatively marginalized municipality from the fiscally capable federal level (Graham and Stoney 2006; Grieve and Turnbull 2013; and Juillet and Koji 2013).

The vertical governmental interaction and capacity issues are addressed by Gloria Simo and Angela Bies (2007) in their study of cross-sector collaboration during the disaster management of Hurricane Katrina in the United States. The authors argue that cross-sector collaboration emerges to "compensate for weakness in one sector" (Simo and Bies 2007:139). In their case study, that "weakness" arose from "overwhelming [federal level] administrative failures" in the provision of "daily" and "basic" services to the affected people, creating a capacity gap that was filled by non-profit entities (Ibid.:139). It is worth noting that jurisdiction over emergency management resides at the federal level in the United States, hence in this study the jurisdiction in charge is dropping the ball. Wendy Gomez and Ryan Bullock (2012) add to this discussion by analyzing public-social sector relations regarding public sector capacity gaps. The authors argue that social actors are legitimized to act within state jurisdiction by the civil sector when the public sector is absent, or fails to address challenging issues, and non-governmental organizations can fill that capacity gap.

From a public policy lens, the necessity of the social sector covering a public sector capacity gap is attributed to the shrinking of the welfare state after the introduction of New Public Management in the 1980s and 1990s in the Western world (Howlett 2000; Brinkerhoff 2002;

Brinkerhoff and Brinkerhoff 2002; Considine 2003; Baines 2004; Swyngedouw 2005; Jacobs 2008; Phillips 2011 and 2016; Phillips and Smith 2011; and Smith and Phillips 2016). Erik Swyngedouw (2005) describes the role of some civil society organizations as non-state *quasi-institutions* after the proliferation of New Public Management policies that delegated public goods and services into the civil sector. Malcolm Grieve and Lori Turnbull provide an example of this role, when describing the Canadian Red Cross behaving as a quasi-institution in Nova Scotia, by undertaking a "quasi-government" role from a formal contract with the Province (Grieve and Turnbull 2013:80). Nevertheless, Geoffrey Hale (2013) found that although non-governmental emergency services are often less costly than those provided by the public sector, these services are insufficient to effectively cover large-urban centres.

Despite the apparent importance of social actors, this member of the emergency management policy community has not been studied with the same rigour as its public sector counterparts. Perhaps this is the case due to the jurisdictional relations and institutional complexities of the system as previously described in this chapter. Nevertheless, the literature vaguely suggests an additional regulatory fragmentation that disrupts the interaction between public and non-state actors within the emergency management policy community. Emdad Haque argues that the provincial "command-control type of disaster management" prevents effective cooperation and involvement from other governmental levels and from non-governmental stakeholders (Haque 2000:243). Some scholars describe the role of civil society organizations in federal policy dynamics as substantial (Henstra 2010; and Juillet and Koji 2013), while others describe these organizations as having little influence over provincial policy development (Grieve and Lori Turnbull 2013; Hale 2013; and Young and Henstra 2013). In their study of Newfoundland and Labrador, Norm Catto and Stephen Tombling found that "huge gaps in local government and social capacity remain across the province, and they are reflected in different views on centralization versus decentralization and state versus civil-society experiments in public policy" (Catto and Tombling 2013:95). The authors add that a salient issue in Canadian emergency management is that there is no legislative framework governing CSOs. Therefore, the non-governmental sector is simultaneously used, marginalized, disorganized, and misunderstood in emergency management, showcasing an additional dimension of fragmentation that impacts the policy community in emergency management.

2.5. The Importance of Policy Communities in Canadian Emergency Management

As previously shown in this chapter, the study of the emergency management system has been compartmentalized by regions and levels of analysis. There is, however, a gap in the study of large-scale inter-governmental and inter-sector roles and relations in the policy community of this multilevel governance area. This gap is also inherent to the study of Canadian public policy as acknowledge by Grace Skogstad, where she argues that "there needs to be much more attention given to interactive relationships between policy networks and functional federalism in a context of multi-level governance" in Canada (Skogstad 2005:13). Despite this gap, the explanations provided by the literature about the performance of the system are strong, with an impressive degree of agreement among scholars. Although the temporal account is logical and highly applicable to elected officials, it fails to fully explain the reactive behaviour of the policy community. Hence, the multilevel fragmentation account provides an additional and comprehensive explanation for the current performance and reactive approach in Canadian emergency management.

Nevertheless, the current literature is in its infancy of implementing survey studies that could provide insider perceptions about the roles and relations of actors in emergency management. The importance of studying members of policy communities, along with their perceptions, is growing in the public policy scholarship. Grace Skogstad (2005) argues that we can better understand the "implementation of government programs and the delivery of public goods and services" by studying policy communities (Ibid.:12). Michael Howlett and Richard Walker (2012) add that by understanding variations in the behaviours and attitudes of policy workers, we can better understand institutional variations in governance. Michael Ford and Douglas Ihrke (2019) agree in that the perceptions of decision-making members from governing bodies, along with the governed when the citizenry is influential, are essential when understanding governance.

In this thesis, I follow this policy community approach. My empirical framework consists of a novel approach that considers the perceptions about actor roles and interactions from public and social sector emergency managers. This is important because, despite the institutional fragmentation suggested by the literature, Canadian emergency management is a specialized policy system involving a policy community of professionals and bureaucrats (Henstra 2010; and Young and Henstra 2013).

2.6. The Empirical and Analytical Framework

If we revisit the literature reviewed above, we can see that there are two important policy dimensions to be considered in this policy area. The first dimension involves the four policy phases: mitigation, preparedness, response, and recovery. The second dimension involves the different actors involved in emergency management. My thesis therefore focuses on the governance of emergency management across both actors and phases.

To make sense of this complex multilevel governance environment, I focus on three components of governance in each of the four phases: actor *involvement*, actor *importance*, and actor *interaction*. I define actor *involvement* as the degree of participation each actor has in emergency management. Actor *importance* is the significance or influence each actor has or should have in emergency management. Finally, actor *interaction* refers to the relationships between actors in emergency management, and the degree of eagerness these actors perceive in working with each other. This framework allows us to understand how actors see their own and others' roles and relationships in the system, and how they think others perceive their roles and relationships.

2.7. Chapter 2 Summary

This chapter presented a detailed review of the literature on emergency management. Here, we learned that case studies and institutional analyses have been the methods of choice for studying this policy domain, but interview and survey research is beginning to take front stage in this field of study. Theoretically, the literature reviewed agrees with the premises of my research questions in that emergency management in Canada is and has always been reactive. This literature shows us two salient explanations for reactive emergency management: (1) a *temporal* factor that reflects the sporadic nature of emergencies; and, (2) a *multilevel governance fragmentation* factor that considers regulatory decentralization, non-standardization, asymmetry and marginalization, which lead to public sector gaps at the local level, as well as policy community fragmentation.

My work focuses on the *multilevel governance fragmentation* explanation for reactive policy. I test this explanation using a *triple-I* empirical framework that studies actor *involvement*, *importance,* and *interactions*. The next chapter explains my methodology in depth, and how this methodology fits within my empirical and analytical framework.

Chapter 3: Data and Methods

My empirical goal in this thesis is to test the pervasiveness of reactiveness and multilevel governance fragmentation in Canadian emergency management by studying perceptions of elite practitioners from this sector. To accomplish this goal, I rely on a large-N mixed-methods survey that asked public and non-governmental emergency managers about their own and others' roles and interactions in this policy area.

In this chapter, I provide an overview of how my survey was designed, directed, and used for this project. I describe my survey sampling frame, mechanics, and applicability, while considering the strengths and weaknesses of a survey approach.

3.1. Why A Survey Approach?

When designing my empirical research, I sought to accomplish three goals: (1) employing a novel empirical approach; (2) gathering a large number of responses from experienced actors that would provide a broad comparative picture of the policy domain; and (3) having actors provide their own perceptions of governance and performance in the policy domain.

The methodological tools that I had at my disposal were case studies, interviews, surveys, or a combination of these tools. With regards to a combination of the tools, my project and graduate degree did not have the length nor the resources to embark in such a large task. Consequently, I chose a single methodological tool for my empirical project.

A case study approach would enable in-depth analysis, as I would have focused on how a specific emergency was managed. However, this empirical tool has been widely applied to the study of Canadian emergency management. Case studies would have also failed to provide a broad comparative picture of this field, a goal of my research.

Interviews would also have provided valuable in-depth data. Unlike case studies, this empirical tool has been seldomly used in Canadian emergency management research. However, like case studies, interviews would not have allowed for broad comparisons given my limited time and resources, which would have had restricted my study to a local, regional, or provincial level of analysis at best.

I was therefore motivated to employ a survey approach. A Large-N survey project has not been implemented in the study of Canadian emergency management, which provided originality.

Also, a Large-N survey with a mixture of quantitative and qualitative questions was the most convenient way to reach a large number of professionals across different governmental and non-governmental entities, while collecting the richest possible data from the field I wanted to study.

By using a survey approach, I felt I would be best equipped to contribute to the literature on Canadian emergency management by providing new and original empirical data. My survey was submitted and approved through the University of Calgary Research Ethics Board (REB), Certificate Number: REB18-1664.

3.2. Choosing the Sampling Frame

When designing my survey, my goal was to contact municipal, regional, provincial, federal, and CSO[10] actors in the Canadian emergency management policy area. For both theoretical and practical reasons, I chose to focus on decision-making practitioners with expert knowledge about this system. I considered *decision-making* here in terms of day-to-day activity in the emergency management field. I was thus interested in the responses from emergency sector senior management as well as experienced practitioners, such as coordinators, supervisors, team leads, specialists, and the like. This was useful for finding potential participants who were not part of emergency management-specific agencies or organizations, such as Public Safety Canada or the Canadian Red Cross. They were chosen according to their job title, which had to be related to an emergency management position within their respective agency/organization.

The decision to focus on emergency management specialists and practitioners was motivated in part by a theoretical interest in perceptions from genuine experts. I wanted to gather the knowledge and expertise of people that had professional training and experience in the emergency management field. Elected officials were therefore disqualified from my sampling criteria, given that they are not necessarily trained nor experienced in emergency management. Furthermore, the timeframe for elected officials that work in this field, among other policy areas, is often limited by cabinet shuffles and electoral cycles. Although still being potentially affected, emergency managers are not exclusively conditioned by these political and electoral cycles, and these professionals and bureaucrats are the people that control the closed and specialized emergency

[10] Civil society organizations (CSOs) encapsulate all the organizations that are not part of the public and private sectors, such as non-governmental organizations (NGOs), non-profit organizations (NPOs), charities, etc.

policy community (Henstra 2010; and Young and Henstra 2013). Due to these factors, I chose to only include practitioners in my survey.

My decision was also motivated by practical considerations, such as the potential interest of these actors to be involved in my survey. After having informal conversations with practitioners from various levels of government, I learned that there was a significant amount of interest from public and social practitioners in the emergency management field to participate in academic studies. This was especially the case for municipal and regional actors in this field.

Another practical consideration had to do with the availability and utility of potential participants. After conducting preliminary research for my survey's sampling frame, I realized that it was possible, although not easy, to gather the contact information from the public and social actors I chose to study. I omitted the private sector from this study because connecting with private sector practitioners proved extremely difficult in my preliminary sampling research. I also chose to omit a study of the three territories after an inquiry into the amount of practitioner contact information that I would have been able to gather.

The only province that I omitted from my study was Quebec because I lack the French language skills to undertake a proper study in that province. Lastly, I omitted a study of Indigenous, First Nations and Métis actors because I do not have the expertise to study this area. I hope that my research provides a framework for an Indigenous politics scholar to carry out a similar study.

Acquiring contact information for potential respondents was not an easy task. This was especially the case for municipal, regional and CSO actors, whose email addresses were often buried on websites, or not directly available. The only municipalities and regional districts with systematically available contact information were in British Columbia and Alberta because the provincial ministries that have oversight over local governments in both provinces provide a contact database of their respective municipalities and regions. Other than the municipal and regional contacts from those two provinces, the availability of contact information was a hit and miss, often requiring multiple inquiries and follow-ups.

Gathering the contact information from provincial and federal actors was an easier task. Apart from Ontario, most provincial governments provide easily accessible directories. The federal government follows suit to some extent, by providing the names and job description of most of its employees. Many Public Safety Canada officials were listed in the federal database, but there were

no e-mail addresses available for these individuals. Nevertheless, I was able to contact Public Safety Canada and gather the contact information of its employees.

3.3. Sampling Frame and Respondents

My survey was designed and disseminated through Qualtrics. I distributed my survey via e-mail to 1042 potential respondents between the second week of January and the second week of February 2019. There were 65 bounced emails, which reduced my sampling frame to the following 977 participants: 209 officials from 90 municipalities; 108 regional officials from British Columbia, Alberta, Saskatchewan and Ontario; 261 officials from 9 provincial governments; 298 officials from 24 federal agencies; and 101 practitioners from 25 civil society organizations (see Table 3.1).[11]

Table 3.1 – Comparison of Sampling Frame and Response Rate

Actor	Number of Individuals Invited	Percentage of Individuals Invited	Number of Completed Surveys	Percentage of Completed Surveys	Response Rate
Municipalities	209	21%	53	31%	25%
Regional Entities	108	11%	25	15%	23%
Provincial Governments	261	27%	52	31%	20%
Federal Government	298	31%	20	12%	7%
Civil Society Organizations	101	10%	19	11%	19%
TOTAL	977	100%	169	100%	17%

Out of all the potential participants, 229 consented to participate in the survey. Out of those participants, 169 completed at least 50 per cent of the survey, which amounts to a 17 per cent participation rate (see Table 3.1). My survey's response rate falls short of the response rates found in other Canadian political science studies, such as 44 per cent in Howlett and Walker (2012), 32 per cent in Lewis (2013), 24 per cent in Lucas and Smith (2019), 27 per cent in Walgrave and Joly (2018), and 53 per cent in Wilson (2016). However, these studies were conducted by experienced

[11] See Appendix A for a more detailed breakdown of my sampling frame.

scholars, who enjoy a larger status and name recognition than that of a graduate student, as well as more resources and extended time frames for carrying out their research.

Looking at Table 3.1, we can see that there is a stark difference in the response rates of federal participants and the rest of the participants. With regards of the municipal, regional, provincial and CSO respondents that completed my survey, all these respondents had a higher response rate than the overall average of 17 per cent. The opposite is true of the federal response rate, which is less than half of the overall average.

When we look at the "Percentage of Completed Surveys" column from Table 3.1, notice that there is municipal and provincial over-representation, and regional, federal and CSO under-representation in my survey. The literature reviewed in Chapter 2 showed us that provincial governments hold jurisdiction over emergency management, municipal governments are responsible for managing emergencies, the federal level is distant and disengaged in this system, and CSOs function to support the local level. The higher representation of municipal and provincial actors in my survey therefore reflects municipal responsibility and provincial jurisdiction in the governance of emergency management.

In retrospect, I realized that I sent my survey to many potential participants from federal agencies that may not have been knowledgeable or interested in my survey's topic. At the federal level, inter-governmental and inter-sector roles and relations in emergency management are a Public Safety Canada domain. I also realized that I have an over-representation from Calgary-specific CSOs, which is not the case for the other cities found in my sampling frame.[12] This slight over-representation should be kept in mind in the analysis below.

3.4. Survey Structure and Questions

I designed the survey to focus on expert perceptions about actor *involvement*, *importance*, and *interactions* in Canadian emergency management.[13] After consenting to participate in the survey, the respondents navigated through eight distinct survey sections. The first section asked the respondents to provide their length of experience in years, and to choose their sector (governmental level or CSO).

[12] See Appendix A for a complete breakdown of my sampling frame.
[13] See Appendix B for a complete version of my survey.

The second section contained questions about the respondents' general perceptions about the Canadian emergency management system, including its current performance, and their familiarity with the system. These questions provided further information about the degree of expertise of the respondents, as well as a general sense of the performance of this system, revealing patterns about actor and policy phase perceptions.

Sections three to six focused on each of the four emergency management phases and provided the bulk of my data. Each section asked a forced-choice question and two open-ended questions about roles in one of the four policy phases (see Figure 3.1). These questions focused on the degree of *involvement* and *importance* each actor is perceived to have, as well as the perceived degree of proactiveness versus reactiveness in emergency management.

Figure 3.1 – Example Questions from Sections 3 to 6: Actor Roles in Mitigation (Section 3)

Q8. In your opinion, how involved are the following actors in the mitigation phase of emergency management? [forced-choice question]

	Extremely involved	Very involved	Moderately involved	Slightly involved	Not involved	Not sure
Municipal Government	○	○	○	○	○	○
Regional Entity	○	○	○	○	○	○
Provincial Government	○	○	○	○	○	○
Federal Government	○	○	○	○	○	○
Civil Society Organizations	○	○	○	○	○	○

Q9. Which **governmental actor(s)** do you think are the most important in the mitigation phase of emergency management? Why? [open-ended question]

Q10. Which **civil society organization(s)** do you think are the most important in the mitigation phase of emergency management? Why? [open-ended question]

The seventh section asked the respondents about actor *interactions* in the emergency management system. I asked a set of forced-choice questions about the interests of each actor to interact with one another. The questions were bidirectional, asking each actor about their eagerness to interact with other actors, and about the eagerness of other actors to interact with them (see Figure 3.2). The data from this section is valuable for understanding inter-actor relations, whether inter-governmental or inter-sector, in emergency management.

Figure 3.2 – Example Questions from Section 7: Municipal Actor Interactions

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Q20. In your opinion, how interested are the following actors in the input and expertise of the **municipal sector** in emergency management? [forced-choice question based on chosen actor = Municipal]

	Extremely	Somewhat	Not at all	Not sure
Regional Entity	○	○	○	○
Provincial Government	○	○	○	○
Federal Government	○	○	○	○
Civil Society Organizations	○	○	○	○

Q21. If given the opportunity, how eager is the **municipal sector** to work with each of the following actors in emergency management? [forced-choice question based on chosen actor = Municipal]

	Extremely	Somewhat	Not at all	Not sure
Regional Entity	○	○	○	○
Provincial Government	○	○	○	○
Federal Government	○	○	○	○
Civil Society Organizations	○	○	○	○

The last section had two open-ended questions, asking respondents about how the Canadian emergency management system could improve in general, as well as how inter-governmental and inter-sector relations could improve in this system. These concluding questions provided an extension on the analysis of the performance, roles, and relationships questions from the survey, as respondents provided reasons for possible gaps or shortcomings in the system, and recommendations for improving the system as well.

3.5. Organizing and Measuring Roles and Relationships Data

My data organization and visualization followed the same *roles* and *relationships* themes used to structure the bulk of my survey, which provided both qualitative and quantitative data from the different actors studied in this project. This allowed me to draw findings and insights about actor roles and relationships from most questions, despite the focused themes of the survey.

3.5.1. Qualitative Data

The actor *importance* and actor *interaction* sections had the open-ended questions that provided the qualitative data in my survey (see Appendix B). I used an inductive coding process for organizing qualitative data, which consisted in repeatedly reading and qualifying the responses into a small number of coding themes. I organized all the open-ended responses into Excel

spreadsheets, which allowed me to code the patterns found in the responses to find qualitative patterns and relationships, as well as to find quantifiable values in the data.

In the case of *importance* qualitative data, the respondents provided perceptions about what public and social actors are important in particular emergency management phases and why. The first coding I did for this data was to find the frequency that each actor was mentioned in each response. I created an Excel spread sheet to quantify the number of times each actor was mentioned in each response by creating different columns for each actor and giving actors a number "1" in their column when they were mentioned by a participant (see Table 3.2 for examples). I then added all the 1's from each actor-specific column to find the "sum total" of the times they were mentioned.

Table 3.2 – Example Coding of the Frequency Actors Were Mentioned as Important from the Qualitative Data (Q9 for Public Actors, and Q10 for Social Actors)

Respondent Cohort	**Experience in Years**	**Q9 - Which governmental actor(s) do you think are the most important in the mitigation phase of emergency management? Why?**	**Municipal**	**Regional**	**Provincial**	**Federal**
Municipal	15	local government: understand risk and consequence in their region	1			
Municipal	12	Provincial - Coordination of federal funding; identification of risks and exposures, support for local government agencies			1	
Sum Total of Times Mentioned			1	0	1	0

Respondent Cohort	**Experience in Years**	**Q10 - Which civil society organization(s) do you think are the most important in the mitigation phase of emergency management? Why?**	**Specific CSO named?**	**Large**	**Regional**	**Local**
Municipal	15	Red Cross: mandated	CRC	1		
Municipal	12	CRC - Canadian red Cross - active in Emergency Social Servicing to address post-disaster management and care	CRC	1		
Sum Total of Times Mentioned				2	0	0

I created three different versions of *importance* data spreadsheet for coding the reasons why actors are important across the four phases, where each spreadsheet built upon the coding of the previous version. As I progressed through the different versions, I was able to filter and refine the

themes I found in the responses, and ended up coding each theme with a double letter code that made it easy to locate using the *find* tool from Excel. I ended up with clear and distinct themes that explained why particular actors were important in particular phases (see Table 3.3 for examples). I then counted the times these themes showed up in the responses to provide a quantifiable analysis of these responses, and organized these themes based on the times they appeared in the responses. Some examples of public actor importance themes and their coding are: "Distance to Affected Area" (code: DI); "Knowledge and Expertise" (code: KN); "Operational Support for Local Level" (code: SL); and "Funding and Resource Provision" (code: FU). Responses were slightly different for social actor importance, which included themes and coding such as "Mandate" (code: MD), and "Resource Provision" (code: RS).

Table 3.3 – Example Coding of the Reasons for Actor Importance from the Qualitative Data (Q9 for Public Actors, and Q10 for Social Actors)

Respondent Cohort	Experience in Years	Q9 - Which governmental actor(s) do you think are the most important in the mitigation phase of emergency management? Why?	Reason for Municipal Importance	Reason for Regional Importance	Reason for Provincial Importance	Reason for Federal Importance
Municipal	15	local government: understand risk and consequence in their region	DI, KN			
Municipal	12	Provincial - Coordination of federal funding; identification of risks and exposures, support for local government agencies			FU, KN, SL	

Respondent Cohort	Experience in Years	Q10 - Which civil society organization(s) do you think are the most important in the mitigation phase of emergency management? Why?	Specific CSO named?	Reason for Large CSO Importance	Reason for Regional CSO Importance	Reason for Local CSO Importance
Municipal	15	Red Cross: mandated	CRC	MD		
Municipal	12	CRC - Canadian red Cross - active in Emergency Social Servicing to address post-disaster management and care	CRC	RS		

The process for organizing and coding actor *interaction* qualitative data was very similar to that employed for actor *importance* data. However, the actor *interaction* only looked at the reasons for improving relationships in the system, which only required to do the qualitative and

quantitative analysis of the suggestions provided by respondents, without the need to quantify the number of times actors were mentioned in these suggestions.

For this data, I also moved through three different versions of spreadsheets, each building upon the previous, while filtering and refining themes through the data management progression (see Table 3.4 for examples). Once I had coded responses with themes, I proceeded to count the prevalence of these themes to provide a hierarchy of suggestions for improving relationships in emergency management. Some example themes about improving intergovernmental interactions are: "Create or Improve Frameworks/Standardization" (code: FR); "Better Understand Roles" (code: UR); "Increase Top Down Support" (code: TD); "Increase Partnerships" (code: PA); and "Increase Operational Capacity" (code: CA). Likewise, some example themes about improving public-social sector interactions are: "Create or Improve Frameworks/Standardization" (code: FR); "Increase Municipal Control" (code: MC); and "Provide More Funding" (code: MF).

Table 3.4 – Example Coding of the Suggestions for Improving Actor Interactions from the Qualitative Data (Q31 for Intergovernmental Relations, and Q32 for Public-Social Sector Relations)

Respondent Cohort	Experience in Years	Q31 - In your opinion, how could intergovernmental relations improve in emergency management?	Suggestions
Municipal	15	Clarity around roles and responsibilities. Consistent understanding of roles and responsibilities, EM, etc., between all levels of government, non-profits, private sector and industry.	FR, UR
Municipal	22	Have provincial and federal governments get more involved in training and sending experts to emergencies instead of just relying on sending financial aid.	TD, PA, CA

Respondent Cohort	Experience in Years	Q32 - In your opinion, how could the relationship between governments and civil society organizations improve in emergency management?	Suggestions
Municipal	12	We are presently working with the CRC to establish coordinated and reality based response protocols	FR
Municipal	20	Let the local municipalities determine which civil society organisations they need to work with and then the province and federal government could offer incentives through the local municipality to extend to those organisations.	MC, MF

3.5.2. Quantifiable Data

I used Excel spreadsheets and pivot tables to organize the quantifiable data from my survey. I visualized this data by creating tables, such as for the sampling frame and response rate, and from

a variety of bar graphs that allowed comparative analyses of the responses gathered from these questions.

The quantifiable responses from the forced-choice questions were analyzed from multiple average aggregate and actor-focused exclusionary approaches. The multiple average aggregate approach was used to represent overall perceptions, where the individual averages from each actor were added to provide an overall average. For example, the perceptions about municipal involvement in mitigation from Question #8 (see Figure 3.1) had the following individual averages out of 4: municipal respondent average of 2.9; regional respondent average of 2.4; provincial respondent average of 2.3; federal respondent average of 2.7; and CSO respondent average of 2.5. I added all those individual averages and divided that total by 5 (respondent-cohorts), which gave me an overall average of 2.6 out 4.

The own-vs-other perceptions were analyzed from an actor-focused exclusionary approach that separated the average perceptions provided by an actor from the aggregate average perceptions of the other actors. Let's take Question #8 (see Figure 3.1) once again as an example, where we are now looking at the own-vs-other perceptions about municipal involvement in mitigation. In the first step, I separated the municipal average of 2.9 (own perception) from the averages of the rest of the respondents (other perceptions): regional = 2.4; provincial = 2.3; federal = 2.7; and CSO = 2.5. In the second step, I added the averages from the other respondents and divided this sum by 4 (respondent-cohorts), which gave me an overall 'Other Respondents' average of 2.5. This approach produced the own (2.9) versus other (2.5) perceptions about municipal involvement in mitigation.

It is important to note that due to the nature of my empirical study, I did not employ any sort of statistical testing for my survey respondents. I sent the survey to a select group of elite and expert practitioners, where a randomized sample would not be applicable. In other words, as compared to the general Canadian population, the people that received my survey have particular knowledge about the topic I am studying. Instead of testing statistical significance for this elite and expert respondent group, I looked for robust and meaningful patterns that repeated across their different responses to my survey questions.

By combining the data gathered from my forced-choice and open-ended questions into quantitative and qualitative analytical tools, I ensured a mixed-methods approach to my Large-N study of emergency management in Canada.

3.6. Chapter 3 Summary

My survey approach allowed me to gather valuable data across policy actors and policy phases in emergency management. In a policy perspective, this study focuses on the four different policy phases used in contemporary Canadian emergency management, as well as the salient public and social actors found in this multilevel governance area. My survey reached out to a large population from these public and social actors, with a good response rate, who provided a general sense of the system, as well as quantifiable and qualitative perceptions about roles and relationships in the system.

Therefore, considering the policy dimensions, respondent representation, and analysis and measurements employed, my empirical project provides a solid foundation for a Large-N mixed methods approach to studying Canadian emergency management. This project supplies a broad view of the system from the perspectives of public and social actors, and an opportunity for these actors to expand their views into personalized responses that provide depth to my study.

Chapter 4: The Operational Approach in Canadian Emergency Management

In this chapter, I investigate the current perceptions from governmental and non-governmental practitioners about the functioning of the different policy phases in Canadian emergency management. The data here provides clear evidence for the *reactive* rather than *proactive* interpretation of emergency management in Canada.

Revisiting the academic literature reviewed in Chapter 2, we can expect that Canadian emergency management has a reactive rather than proactive approach. Therefore, we can expect that the three reactive phases would be more emphasized than the mitigation phase. We should also see perceptions of higher performance and involvement in the reactive phase than in mitigation.

4.1. A Reactive Rather Than Proactive Approach to Canadian Emergency Management

As shown in Figures 4.1 and 4.2, the empirical data from my survey supports the argument that emergency management in Canada currently functions under a reactive approach. Figure 4.1 shows the average perceptions from governmental and non-governmental practitioners about the performance of the Canadian emergency management system. The black columns represent the average perceptions from all my survey participants, while the coloured[14] columns represent average responses from municipal (blue), regional (orange), provincial (green), federal (yellow), and CSO (grey) survey respondents.

Figure 4.1 reveals three important patterns about the perceived performance of emergency management. First, when we look at the "Combined Responses" (black bars), we can see that all these scores are relatively low, with response being the only phase that is anywhere near the *good* ranking. This pattern is also reflected in each of the coloured graphs. Second, by looking at the different rankings across the four phases in all of the six graphs, we can see a hierarchy in the perceptions of performance, where response is perceived to be the best performing phase, followed by preparedness, then by recovery, and last by mitigation. Third, there is overwhelming agreement

[14] The colour representation by "actor" shown in this paragraph (municipal (blue), regional (orange), provincial (green), federal (yellow), CSO (grey), and combined (black)) is consistent throughout this thesis.

among my survey participants, where the pattern of phase performance rankings is strikingly similar among all the six graphs from Figure 4.1.

Figure 4.1 – Perceived Performance of the Canadian Emergency Management System by Policy Phase

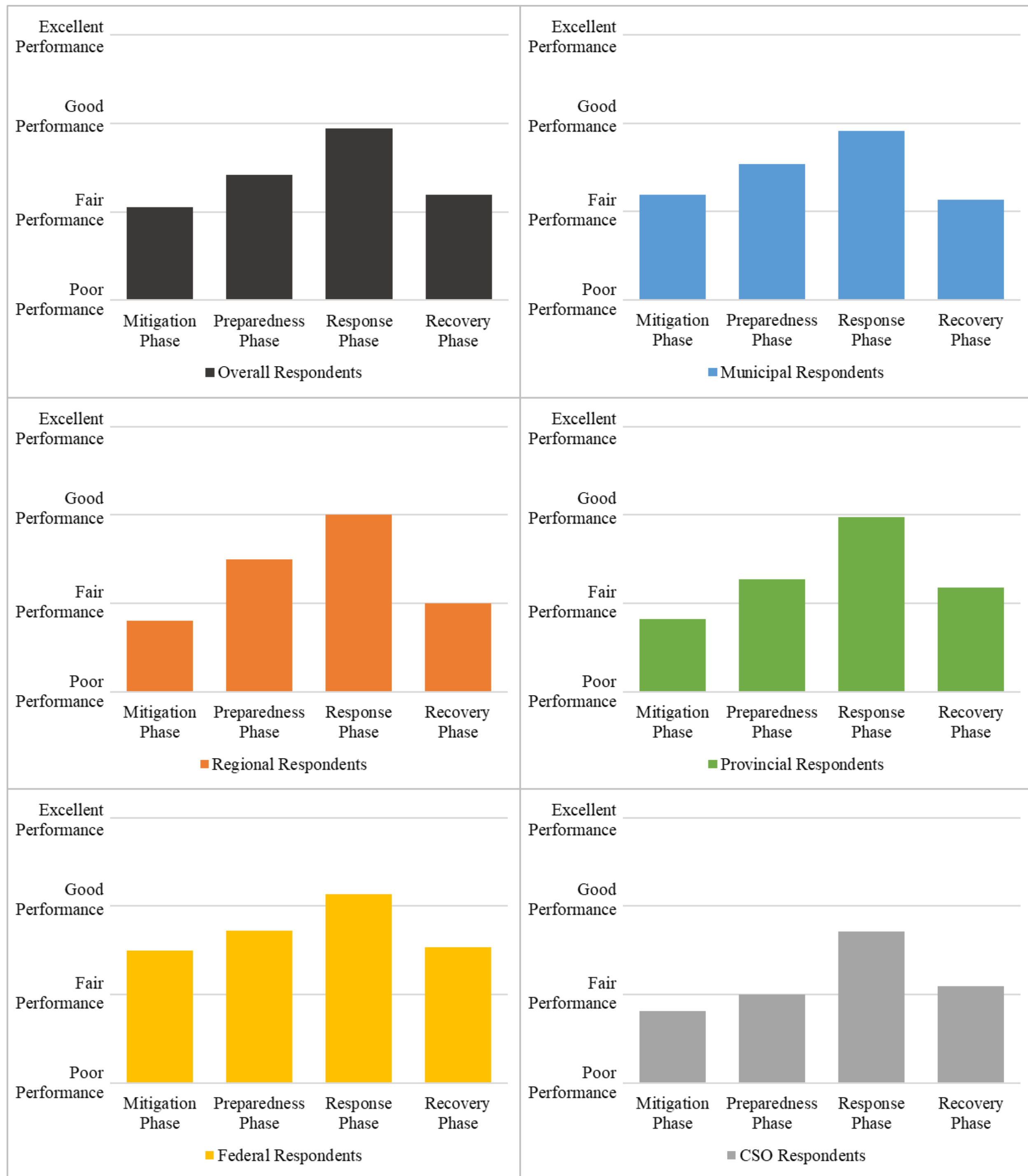
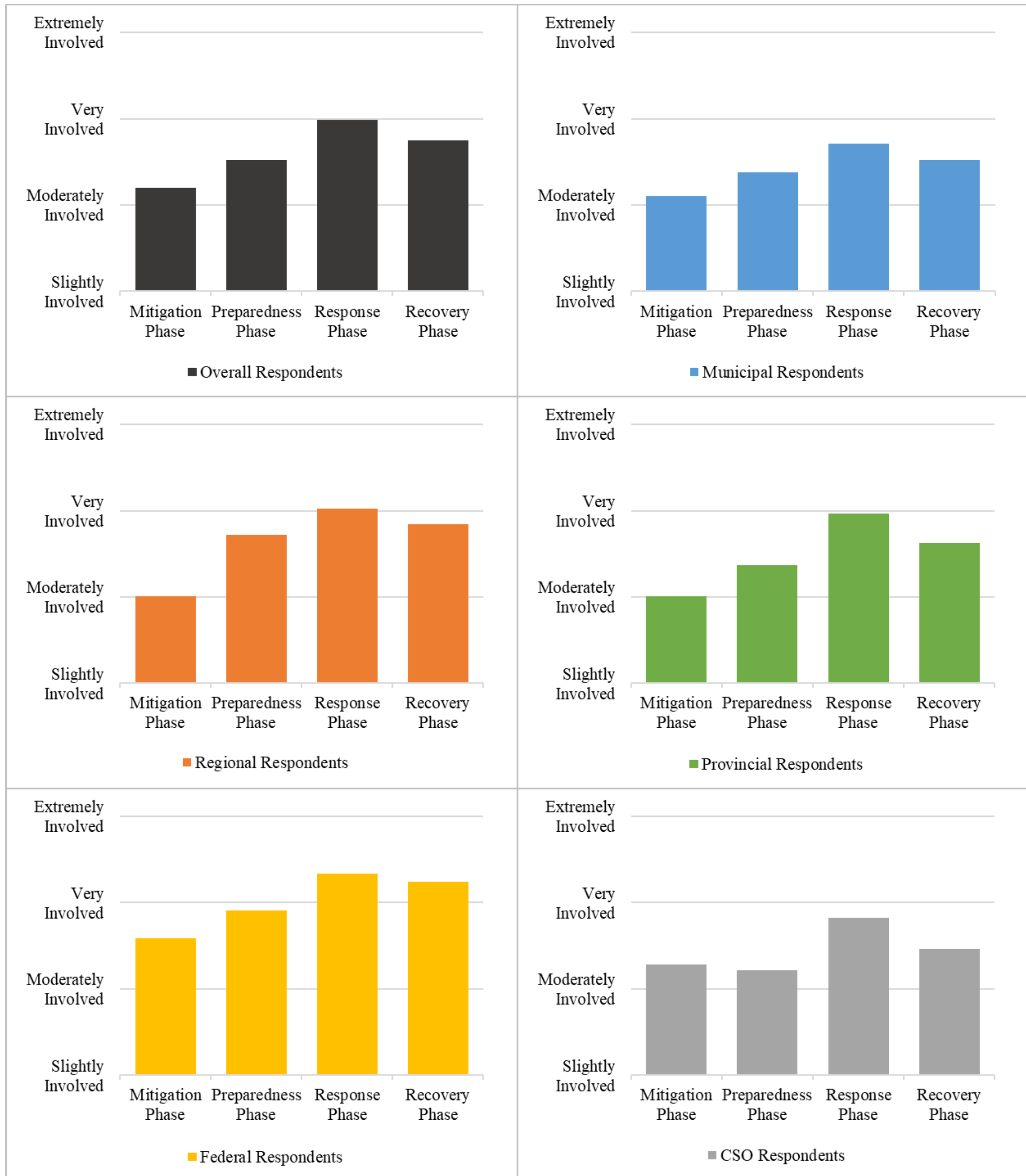


Figure 4.2 – Perceptions About Actor Involvement by Emergency Management Phase



In terms of actor involvement in emergency management, Figure 4.2 shows the average perceptions about the participation of all actors during each emergency management phase. Like

in Figure 4.1, the black shaded columns represent the average perceptions from all my survey participants, while the coloured columns represent each of the different perceptions from municipal (blue), regional (orange), provincial (green), federal (yellow), and CSO (grey) survey respondents. Notice that the scale in Figure 4.2 does not include the *not involved* ranking but begins with *slightly involved*, since all the average perceptions were at least in the *moderately involved* ranking.

Figure 4.2 illustrates four patterns of actor involvement in each phase of emergency management. First, notice that for the most part, all the average scores from all actors are in the *moderately involved* scale across all phases. Second, there is a clear hierarchy of involvement from all actors by phase, where the response phase has the highest participation, followed by recovery, then by the preparedness, and finally mitigation. Third, we can see that all my survey participants generally agree in how public and civil emergency managers are involved in the system. Last, all the previously mentioned findings, as well as the scores provided in Figure 4.2 closely resemble the findings and patterns seen in the perceptions about performance from Figure 4.1.

The salient takeaway from Figures 4.1 and 4.2 is that Canadian public and social emergency managers agree about how the system is working. Emergency management in Canada is perceived to be performing at a mediocre level with scores ranging between the poor and good scales. More importantly, we can see a clear hierarchy in perceptions about performance and involvement that emphasizes response rather than mitigation. These findings tell us that emergency managers perceive a reactive emergency management system in Canada. Furthermore, this reactive approach is working well for the response phase, moderately well for the preparedness and recovery phases, and not well for the mitigation phase. This provides current empirical evidence about the reactive rather than proactive governance of Canadian emergency management, which I investigate and attempt to explain in this project through the study of actor roles and relationships.

4.2. Chapter 4 Summary

The empirical data in this chapter showed that despite the complexity of multilevel governance in Canadian emergency management, perceptions of performance are widely shared. This congruency is visible in the overall average perceptions about performance and actor involvement, which support the prevailing views from the emergency management literature that describe the approach to emergency management as reactive rather than proactive in Canada (Newton 1997; Henstra and Sancton 2002; Henstra 2003; Henstra and McBean 2005; Hwacha

2005; Catto and Tomblin 2013; Lindsay 2014; Nair and Howlett 2017; Raikes and McBean 2017; Stacey 2017; Thistlethwaite and Henstra 2017; Morrison et al. 2018; and Haque et al. 2019). There, we saw that the response phase has the highest perceived performance and involvement, while the mitigation phase has the lowest perceived performance and involvement, and the recovery and preparedness phases are in the middle. This congruency supports the literature about Canadian emergency management that describes this policy area with a reactive rather than proactive approach.

The next three empirical chapters take a closer look at the perceptions about the roles of different public and social actors involved in this multilevel governance policy area, and provides an institutional analysis of Canadian emergency management to further understand the reactive rather than proactive approach to addressing emergencies.

Chapter 5: Public and Social Actor Involvement in Canadian Emergency Management

This chapter provides a closer look at practitioner perceptions about the roles of key governmental and non-governmental actors in Canadian emergency management. I show that emergency management actors generally agree about overall actor involvement. Municipalities are seen as the most involved actor, followed by regional, provincial, CSO, and federal actors. However, when we investigate the involvement scores more carefully, I find that all respondent-cohorts[15] tended to inflate their involvement scores. Furthermore, the own-versus-other involvement rankings show us some disagreement between intra-provincial (municipal and regional), CSO, and provincial actors, as well as a disconnect between intra-provincial and federal actors.

In this chapter, we will see some evidence of how the distribution of powers and responsibilities in Canadian federalism prevents a centralized and standardized emergency management framework, as argued in the *fragmented multilevel governance* explanation.

5.1. Expectations from the Literature

In the previous chapter, I showed that emergency management professionals perceive the system to be reactive rather than proactive. I expect to see the same patterns of actor involvement: higher involvement in the response phase, followed by either the preparedness or recovery phases. On the other hand, due to the undermining of a proactive approach, we should expect significantly lower involvement scores in the mitigation phase when compared to the other three phases.

Based on the *fragmented multilevel governance* explanation, we should expect the involvement of actors to reflect the distribution of powers and responsibilities found in Canadian emergency management. There, the municipal level should be the most involved actor across all policy phases due to its delegated responsibility to manage emergencies, followed by the provincial level that enjoys most of the jurisdiction over the system. The role of CSOs and regional entities are more dubious, given the lack of standardization that characterizes the social sector, as well as the lack of standardization of regionalization across provinces. Nevertheless, I expect regional entities to be viewed as moderately involved because of their relationship with

[15] Municipal, regional, provincial, federal, and CSO respondent-cohorts.

municipalities. I also expect CSOs to be perceived as moderately involved because of their role in supporting municipalities. Finally, I expect the federal level to be the least involved, given its distanced and disengaged role in a provincially dominated jurisdiction.

5.2. Overall Views About Actor Involvement

Figure 5.1 shows average perceptions about actor involvement across the four emergency management phases. Once again, each actor is distinguished by a particular colour, and overall averages are shaded black.

Figure 5.1 – Perceptions About Actor Involvement by Emergency Management Phase and Actor

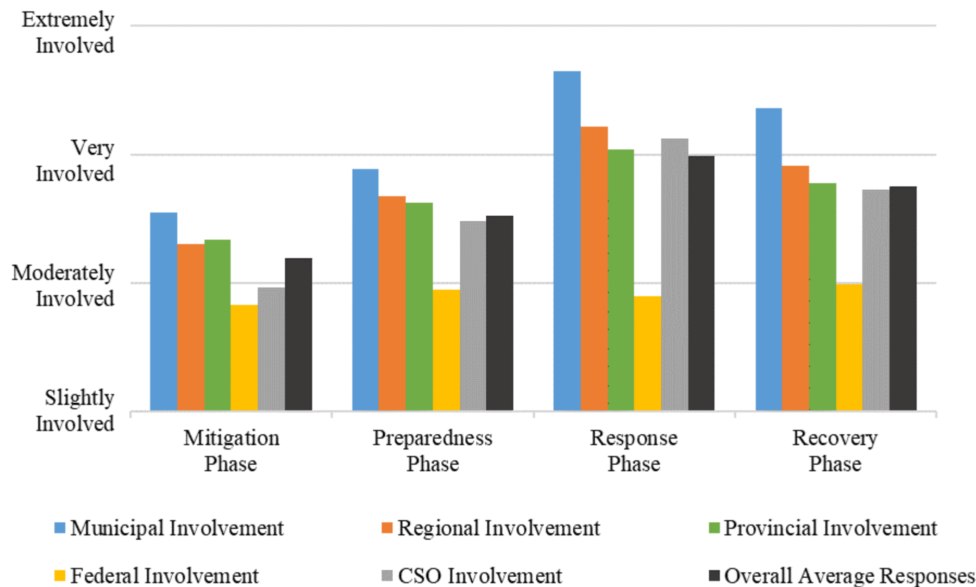
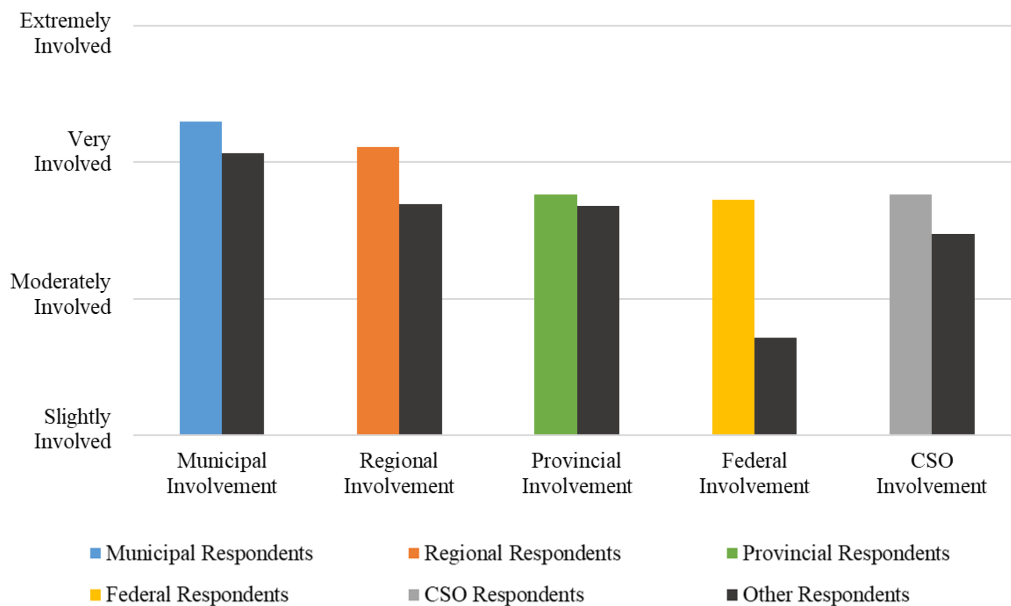


Figure 5.1 reveals a hierarchy of perceived involvement by actor, where municipal governments are perceived to be more involved than any other actor. The second and third places in this hierarchy are filled by regional entities and provincial governments. In the fourth spot we find CSOs with similar involvement scores to those of regional and provincial actors. Finally, we have the federal government that is perceived to have the lowest overall involvement, with all its scores situated within the *slightly involved* scale. These distinctly lower and different federal government scores will be an important and recurring pattern throughout this thesis.

Figure 5.2 compares actors' own perceptions with the perceptions of the rest of the respondents. The black shaded bars represent the average perceptions of *other* respondents in the survey. If we take *Municipal Involvement* as an example, the blue bar represents municipal actor responses only, while the black shaded bar excludes municipal views and represents the combined average perceptions of the rest of the respondents (regional, provincial, federal and CSO). This calculation is replicated in all the five coloured-black bar groups, providing a better comparison between specific actor own-versus-other perceptions on involvement.

Figure 5.2 – Own-Versus-Other Views About Involvement by Actor



The differences in rankings from Figure 5.2 tell us a story about how my survey participants perceive each other's roles. We can see five distinct patterns. First, when we look at all the five coloured-black bar groups, we see that all the respondent-groups perceived their involvement to be higher than what other respondents perceived them to be. Second, when we look at the black bars, we see that regional and provincial actors are perceived to be equally involved by other respondents, with CSO actors following very closely. Third, it is clear that municipal actors are the most involved in emergency management; municipalities are the only actor with scores above the *very involved* ranking in both "own" and "other" responses. Fourth, the most closely aligned own-versus-other perception is that of provincial involvement. Finally, the federal government was

given the lowest scores by other respondents and has the highest own-versus-other perceptual difference.

While Figure 5.1 showed us that not all the actors are involved to the same degree with a clear hierarchy across the policy phases, Figure 5.2 showed us that each of the actors studied in my survey perceived themselves to be more involved than that perceived by the rest of the respondents. Nonetheless, given the diversity of involvement scores across the phases and the disparity among overall own-vs-other perceptions, a closer look at own-vs-other perceptions by policy phase is necessary to better understand involvement in emergency management.

5.3. Own-Versus-Other Perceptions on Involvement by Phase

This section looks at the own-vs-other perceptions about actor involvement in each of the four emergency management policy phases. In each graph, the respondent's own perception is marked by a horizontal black line, while other actors' perceptions are plotted in bars. This allows us to compare how actors' see their own involvement to how their peers see their involvement.

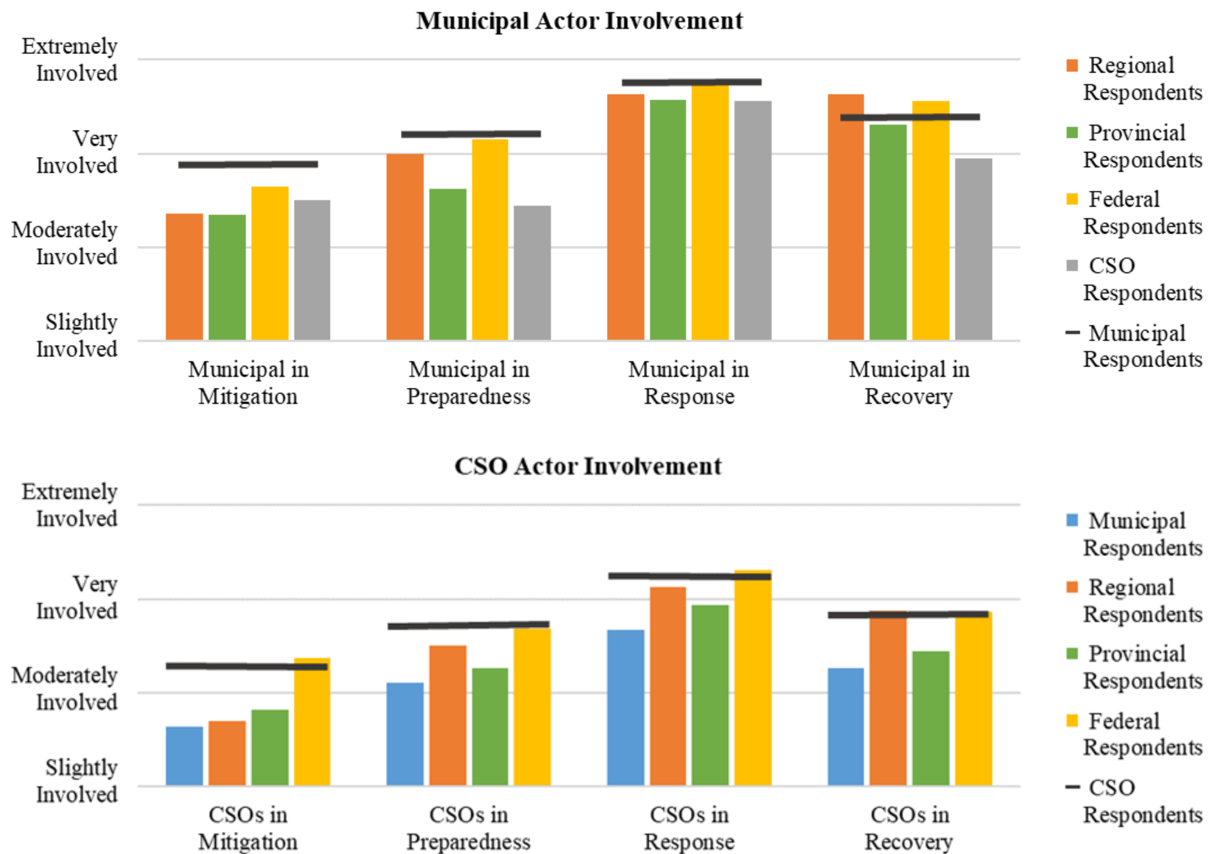
5.3.1. Municipal and CSO Involvement

Figure 5.3 shows interesting similarities and contradictions about the perceptions of municipal and CSO involvement in emergency management. We can see that there is a similarity between the scores given to both actors in the own-versus-other perceptions by phase and actor. There, we can see that municipal and CSO responses were most different from the perceptions of other respondents first in mitigation, followed by preparedness, then by recovery, and finally by response. In terms of differentials by actor, both municipal and CSO responses were most aligned with the perceptions of federal respondents, followed by regional, and then by provincial respondents. Finally, both municipal and CSO respondents provided the furthest perceptions from each other's views.

We can draw three interesting findings from Figure 5.3 that can be explained through the *fragmented multilevel governance* lens. First, it is not surprising that the response and recovery phases had the most aligned perceptions, and the mitigation phase had the most different perceptions between other and municipal/CSO respondents. This is due to the reactive approach to emergency management discussed previously in this thesis, where the provisions of essential goods and services are more necessary during the response and recovery phases, which are provided by

municipal and CSO actors. On the other hand, the mitigation and preparedness phases require proactive legislative mechanisms from which municipalities and certainly CSOs are marginalized, despite municipalities being perceived to be the most involved in all the phases (see Figure 5.1).

Figure 5.3 – Differentials Between Own and Other Views About Municipal and CSO Involvement by Phase



Second, it is interesting that both municipal and CSO respondents provided the lowest involvement scores for each other, given that the main role of CSOs is to support municipalities to prepare for, respond to, and recover from emergencies (Newton 1999; Haque 2000; Henstra and Sancton 2002; Henstra 2010 and 2013; Catto and Tomblin 2013; Grieve and Turnbull 2013; Juillet and Koji 2013; Young and Henstra 2013; Lindsay 2018; and Haque et al. 2019). However, the literature on emergency management provides examples where public and civil actors often step into conflict due to both actors competing for provincial or federal resources, or by CSOs acting as quasi-institutions and undermining municipal responsibility over emergency management

(Grieve and Turnbull 2013). The reciprocal lower scores from Figure 5.3 may provide evidence of such conflict between local authorities and non-governmental actors, which will be further investigated in this thesis.

Finally, beside the municipal and CSO responses about each other, it is interesting that provincial respondents consistently provided the third lowest scores for both municipal and CSO involvement, given that the Province delegates the responsibility of emergency management to municipalities, and allows CSOs to provide essential goods and services from a contractual basis (Young and Henstra 2013). If we go back to Figure 5.2, which showed us that provincial perceptions are the closest to the overall average of the rest of the respondents, we can argue that provincial perceptions about municipal and CSO involvement are the most accurate, compared to the inflated views of municipal and CSO actors that resemble that of federal respondents.

5.3.2. Regional Involvement

In terms of regional actor involvement, Figure 5.4 shows that regional responses were most different from the perceptions of other respondents first in preparedness, followed by recovery, then by response, and finally by mitigation. In terms of differentials *by actor*, regional responses were most aligned with the perceptions of federal respondents, followed by municipal, then by provincial, and last by CSO respondents.

Figure 5.4 – Differentials Between Own and Other Views About Regional Involvement by Phase

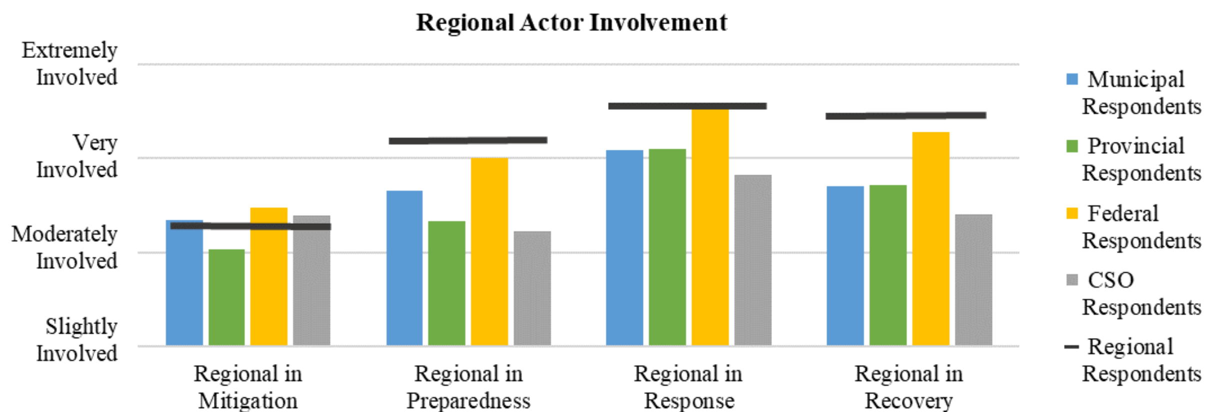


Figure 5.4 provides interesting findings that can be explained through the *fragmented multilevel governance* lens. When we look at this figure, it is interesting that CSO respondents provided the lowest scores, resembling the CSO versus municipal perception differentials seen in Figure 5.3. This suggests that there is some sort of disagreement between CSO and regional entities as well, perhaps related to a competition of resources, as suggested between municipal and CSO actors.

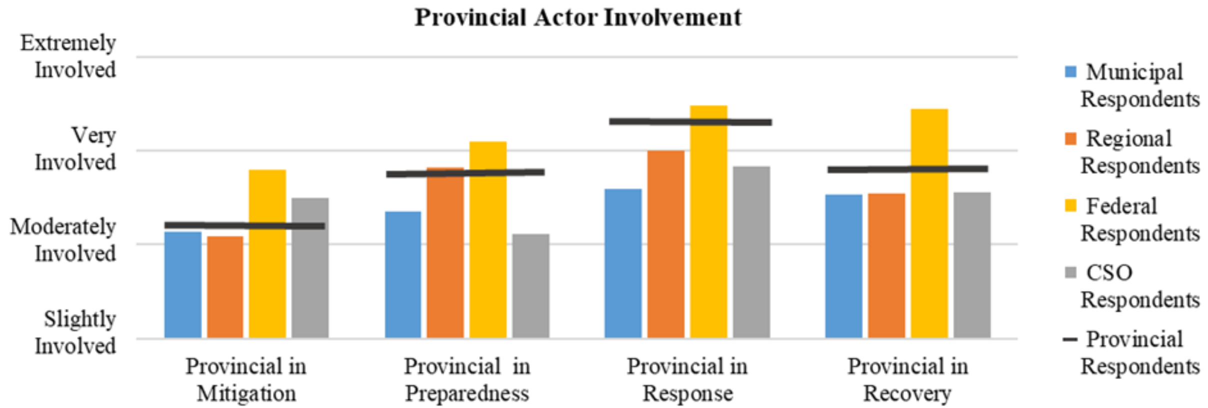
Another interesting finding is that the Province consistently provided the lowest scores from a governmental actor, given that the Province delegates responsibility of emergency management to both municipal and regional entities. This is not surprising since regional entities work closely with municipalities and are therefore subject to the same legislative marginalization from the provincial jurisdictional and fiscal capacity bottleneck, which seems to create disagreement between provincial and intra-provincial governmental levels. We can also find evidence about this disagreement since, like municipal and CSO responses (see Figure 5.3), regional responses were the closest to those of federal survey participants. This, as suggested before for municipal and CSO views, shows that regional respondents provided protective and inflated responses to the likes of the consistently higher federal views seen throughout this thesis.

5.3.3. Provincial Involvement

Figure 5.5 shows that own-versus-other perceptions about provincial involvement have the highest differential *by phase* in response, followed by preparedness, then by recovery, and last by mitigation. We can also see that federal respondents had the most different responses to that of provincial participants, followed by CSOs, then by municipal, and last by regional respondents.

It is worth noting that self-versus-other differences in the provincial plot do not resemble those differentials from the rest of the respondents (see Figures 5.3 to 5.6), where the most different perceptions about provincial involvement come from a consistent exaggeration by federal respondents, rather than by undermining involvement as seen in the scores of other actors. Here, federal respondents consistently rated provincial involvement to be higher than the views of provincial and the rest of the participants by a large margin. It is also worth noting that both CSO and, particularly, municipal respondents had lower perceptions about provincial involvement in preparedness, response, and recovery. Out of all the responses, regional views were the closest to the views of provincial respondents.

Figure 5.5 – Differentials Between Own and Other Views About Provincial Involvement by Phase



It is not surprising that provincial own-versus-other views are not very different when compared to the views of other actors, since they have the closest overall scores as seen in Figure 5.2. This can be explained from the jurisdictional bottleneck that the province has over emergency management. Despite the provinces delegating responsibility to lower levels of government, provincial emergency management agencies control jurisdiction and funding, which gives provincial actors a more accurate view of the system. This also explains the consistently higher perceptions from federal respondents, since the provincial jurisdictional bottleneck distances the federal level from intra-provincial emergency management (Juillet and Koji 2013), where as far as federal authorities are concerned, the Province must be highly involved within its own jurisdiction of this policy area. On the other hand, the lower perceptions from the rest of the respondents in response, recovery and preparedness are the result of the delegation of responsibility from the province to municipalities, which clouds the participation of provincial authorities in the eyes of intra-provincial actors.

By comparing the mitigation scores from provincial and regional involvement from Figure 5.4, we can argue that there is an important relationship between provincial and regional roles in mitigation. There seems to be a good understanding of these actors' roles in this phase, where the region could function as a stepping-stone between municipal and provincial relations, given the geographical extension of mitigation projects. On the contrary, we can see that municipal and CSO respondents tended to undermine provincial involvement the most. This further supports my

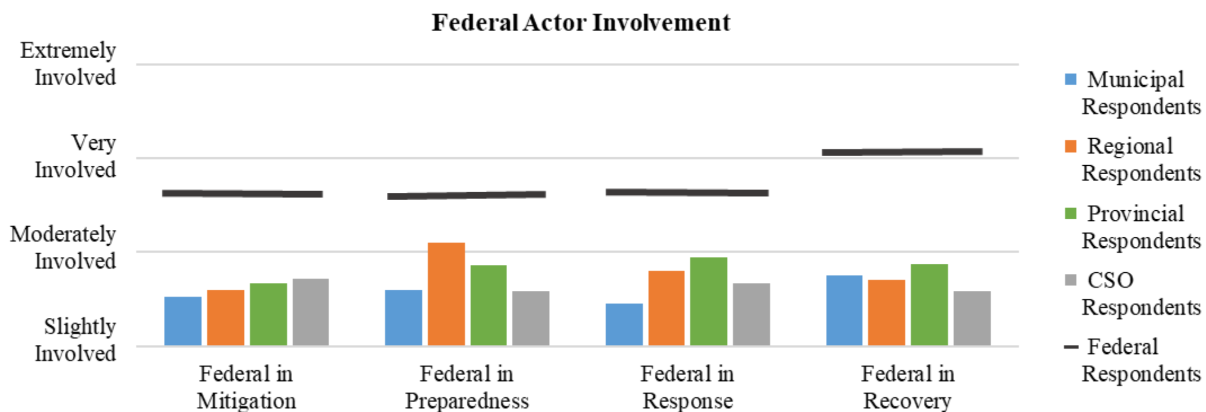
argument from Figure 5.3 that there is a disagreement created by provincial authority and its ownership of decision-making and resource distribution, which antagonizes the responsibility and the need of access to resources from municipal and non-governmental entities.

5.3.4. Federal Involvement

When we look at the own-versus-other perceptions about federal involvement (Figure 5.6), we can immediately see a striking pattern: all the other respondents' views are considerably lower than the perceptions of federal respondents.

Despite the high contrast between the own and other views about federal involvement, we can also see differential hierarchies by phase and by actor. The highest perception differential about federal involvement *by phase* is found in recovery, followed by mitigation, then by response, and last by preparedness. In the case of differentials *by actor*, we can see that municipal respondents had the most different views, followed by CSO, then by regional, and last by provincial respondents.

Figure 5.6 – Differentials Between Own and Other Views About Federal Involvement by Phase



The patterns from Figure 5.6 provide two interesting findings that can be explained from the *fragmented multilevel governance* lens. First and not surprisingly, federal own-versus-other views are very different, reflecting the very deviant overall scores from federal respondents seen so far in this chapter. The large difference in own-versus-other perceptions is due to the federal government's disengagement and distance in the Canadian emergency management system,

which is symptomatic of the provincial jurisdictional bottleneck in this system. This creates a lack of understanding of the system from federal actors, and how these actors are perceived to fit in the system, since the province disrupts federal and intra-provincial relations in emergency management.

Second, it is interesting that the highest differentials came from the recovery and mitigation phases, or the most capital-intensive phases (LaPlante 1988; Lindsay 2014; and Thistlethwaite and Henstra 2017). Federal involvement should be high in these phases because this governmental level has the highest fiscal capacity among all the actors involved in Canadian emergency management. However, the fact that other actors did not perceive the federal level to be as involved as it perceives itself to be, suggests a gap in the provision of capital to effectively mitigate and recover from emergencies.

This would also be the case for the response phase that is contingent to the capacity of municipal and non-governmental actors to provide goods and services to affected communities. In fact, the highest differences in perceptions *by actor* are with municipal and CSO respondents in the response phase, as these two actors are the primary suppliers of essential goods and services during and after emergencies (Young and Henstra 2013). This shows a gap in the provision of fiscal capacity from the most fiscally capable actor, the federal level, to the actor that has the highest responsibility, the municipality, and the most supportive actor in the provision of essential goods and services, the CSO. Hence, the provincial jurisdictional bottleneck not only disrupts communication and knowledge, but also separates responsibility from the largest fiscal capacity in emergency management.

5.3.5. Unsure Perceptions About Involvement

The columns in Table 5.1 display the "unsure" perceptions of each actor, and the rows divide these "unsure" perceptions by actor involvement in each phase. The colour gradient in this table captures the degree of doubt about actor involvement, where darker coloured cells reflect higher proportions of "unsure" responses.

When considering governmental actor involvement, municipal and federal respondents had minor to non-existent doubts about the involvement of other governmental actors. This was almost the case for provincial respondents, who had slightly higher doubts about regional and federal involvement in all phases, especially in mitigation. Regional respondents, however, showed a

moderate amount of doubt about federal involvement, where 10 per cent of regional respondents were unsure of federal participation in all phases. CSOs had some minor doubts about regional involvement in response, and federal involvement in preparedness and recovery. However, almost a fifth of CSO respondents had doubts about regional participation in recovery, giving it the highest rate of doubt about any governmental actor involvement.

Table 5.1 – Percentage of Respondents That Were "Not Sure" About Specific Actor Involvement

Unsure About the Involvement of:	Municipal Respondents	Regional Respondents	Provincial Respondents	Federal Respondents	CSO Respondents
Municipal in Mitigation	0%	0%	3%	4%	0%
Municipal in Preparedness	0%	0%	2%	0%	0%
Municipal in Response	0%	0%	0%	0%	0%
Municipal in Recovery	0%	0%	0%	0%	0%
Regional in Mitigation	2%	0%	6%	4%	0%
Regional in Preparedness	3%	0%	3%	0%	0%
Regional in Response	2%	0%	4%	0%	6%
Regional in Recovery	3%	0%	4%	0%	18%
Provincial in Mitigation	0%	0%	0%	0%	0%
Provincial in Preparedness	0%	0%	0%	0%	0%
Provincial in Response	0%	0%	0%	0%	0%
Provincial in Recovery	2%	0%	0%	0%	0%
Federal in Mitigation	0%	10%	5%	0%	0%
Federal in Preparedness	0%	10%	3%	0%	6%
Federal in Response	0%	10%	2%	0%	0%
Federal in Recovery	2%	10%	2%	0%	6%
CSOs in Mitigation	15%	10%	22%	21%	0%
CSOs in Preparedness	20%	30%	17%	17%	0%
CSOs in Response	13%	30%	13%	11%	0%
CSOs in Recovery	14%	30%	9%	18%	0%

The numbers change drastically when we move into the "unsure" perceptions of non-governmental actors. There is significant doubt among governmental actors about CSO involvement, despite CSOs being perceived to be more involved than the federal government in all phases, and as involved as regional and provincial actors during the preparedness, response and recovery phases (see Figure 5.1). Table 5.1 shows us that 13 to 20 per cent of municipal actors, 10 to 30 per cent of regional actors, 9 to 22 per cent of provincial actors, and 11 to 21 per cent of federal actors had doubts about CSO participation in emergency management.

Furthermore, when asked in my survey about how CSOs are involved in the emergency management system,[16] 38 per cent of respondents said that CSOs involve themselves, 32 per cent said that they are involved by the affected community, and 31 per cent said that they are involved by governmental actors. In contrast to the idea that CSOs are given delegated powers from New Public Management policies to cover a public sector gap (Swyngedouw 2005), this finding suggests that in Canadian emergency management, social actors are covering a public sector gap from an inherent role given to these entities rather than by a directive from the public sector. This suggests that social actors have a significant degree of agency to act in Canadian emergency management, which could reflect the moderate misunderstanding and lack of regulatory standardization from the public sector.

In sum, Table 5.1 shows that the most well-understood actors are the provincial governments that hold jurisdiction and the municipal governments that are responsible for managing emergencies. However, 10 to 30 per cent of public sector respondents were not sure of how CSOs are involved across the four policy phases of emergency management. This creates a conundrum for emergency management where social actors have a significant degree of involvement and agency to act in emergency management but are also moderately misunderstood by the public sector, supporting the argument of a fragmented policy community.

5.4. Chapter 5 Summary

This chapter showed us that although there is overall agreement in perceptions about actor involvement, there are also interesting patterns of misperception and disagreement. Five important

[16] See "Q30" in Appendix B (Survey Design).

findings from the inter-actor perceptions are: (1) there is a disconnect between federal responses and the responses of the rest of the actors, especially about federal involvement; (2) every actor inflated their own involvement, and this perceptual inflation would be even higher if federal views were similar to those of other actors; (3) intra-provincial and provincial actors underestimate each others' involvement, suggesting important disagreement between these actors; (4) local and CSO actors underestimate each other's involvement, and (5) there is a high degree of misunderstanding about CSO involvement in emergency management.

The patterns and findings presented in this chapter can be interpreted through the *multilevel fragmentation argument* found in the Canadian emergency management literature. The very different perceptions from federal respondents about actor involvement reflect the description of a distant and disengaged federal role by the literature (Graham and Stoney 2006; Grieve and Turnbull 2013; and Juillet and Koji 2013), which is a novel finding about Canadian emergency management.

There is high involvement of intra-provincial and social actors, despite the literature suggesting the marginalization of municipalities, a lack of regionalization, and a lack of social sector regulatory standardization. This suggests that municipal actors have the largest role to play in emergency management but are burdened with the responsibility to manage emergencies through a highly constrained regulatory decision-making power. The role of multi-municipal regions and CSOs is not standardized in emergency management leading to a highly perceived yet misunderstood involvement.

The provincial bottleneck over regulation, knowledge and capacity may be reflected in the evidence of provincial versus intra-provincial disagreement, as well as of local and CSO actor disagreement. There seems to be a capacity gap at the local level driven by the provincial jurisdictional bottleneck, that requires CSO involvement, but that also suggests competition between local and non-governmental actors. Furthermore, the extent of CSO involvement is questionable as it is shrouded in doubt from a lack of social sector regulatory standardization.

In sum, public and social actor involvement is driven from the distribution of powers and responsibilities in Canadian federalism that prevents a centralized and standardized emergency management, including the standardization of a national mitigation framework. The next chapter explores the perceptions from my survey participants about public and social actor *importance* in emergency management to further test the *multilevel fragmentation* argument.

Chapter 6: Public and Social Actor Importance in Canadian Emergency Management

Chapter 4 provided the broad empirical evidence for a reactive rather than proactive emergency management system. Chapter 5 provided a closer empirical study of governmental and social actor roles by analyzing *involvement* in this system, which supported the argument that *fragmented multilevel governance* is an important source of the reactive approach in emergency management.

This chapter looks at a different dimension of actor roles by studying perceptions about *actor importance* across the four policy phases of emergency management. I provide a quantitative and qualitative comparative analysis between the perceptions of the five actors studied in this thesis. My *importance* data in this chapter provide a mixture of empirical and normative perspectives from practitioners. As we will see, perceptions about involvement and importance do not necessarily match, providing interesting insight about the roles of different actors in emergency management.

6.1. Expectations from the Literature

We should expect similar findings about actor *importance* to those about actor *involvement* based on the *fragmented multilevel governance* explanation. This is due to the distribution of powers and responsibilities in the system, where municipal actors should be the most important player in the system overall, with the rest of the actors following in importance to various degrees.

In the case of governmental actors, municipal authorities are expected to be the most important actor across the four policy phases due to their responsibility to manage emergencies. Provincial and regional importance scores should be similar, based on the *involvement* scores from Chapter 5. However, the Province could be perceived as more important than regional entities because of its regulatory jurisdiction in the system. Regional actor importance should vary across the four phases, based on the degree of support this actor provides to municipalities. Finally, the federal level should have mixed importance scores across the policy phases, and we should expect that this importance is tied to the provision of fiscal capacity in this system.

In terms of non-governmental actors, their importance should be contingent on the degree or capacity to support municipalities, to cover a public sector capacity gap, or to effectively provide

goods and services to affected communities. Here, large/national/international CSOs, such as the Canadian Red Cross, are expected to be perceived as more important, since these organizations enjoy a larger capacity to address emergencies, sometimes acting as quasi-institutions (Grieve and Turnbull 2013). Local/grassroots and regional organizations should be considered important due to their proximity and connection to the affected community, but perhaps not to the extent that large-capacity CSOs may be perceived.

6.2. Comparative Views About Governmental Actor Importance

Figure 6.1 and Table 6.1 show the perceived importance of governmental actors in each of the phases of emergency management. The bars in figure 6.1 represent the frequency each governmental actor was mentioned as important in my survey across the four phases. There are four columns, each representing an emergency management phase, as labeled at the bottom of the figure. The rows represent respondent perceptions, as described in each of the six titles. For example, if we look at actor importance in the mitigation bars from the "Overall Respondent" titled graph, we see that municipal actors were the most mentioned, followed by provincial, then by federal, and last by regional actors. Therefore, overall respondents perceived actor importance in the mitigation phase in this hierarchy: (1) municipal actor; (2) provincial actor; (3) federal actor; and (4) regional actor.

Table 6.1 builds upon the quantitative analysis of Figure 6.1 by providing the three most important reasons for governmental actor importance within each of the four policy phases. As in Figure 6.1, the reasons for actor importance were gathered based on how many times each reason was mentioned in the open-ended questions from my survey. I gathered these reasons based on themes I picked up from participant responses, such as "Distance to Affected Area" or "Funding and Resource Provision" (see Table 6.1). I then organized these reasons based on the amount of times these themes were mentioned. This table therefore provides a qualitative view of governmental actor importance in Canadian emergency management.

Figure 6.1 – Governmental Actor Importance by Emergency Management Phase

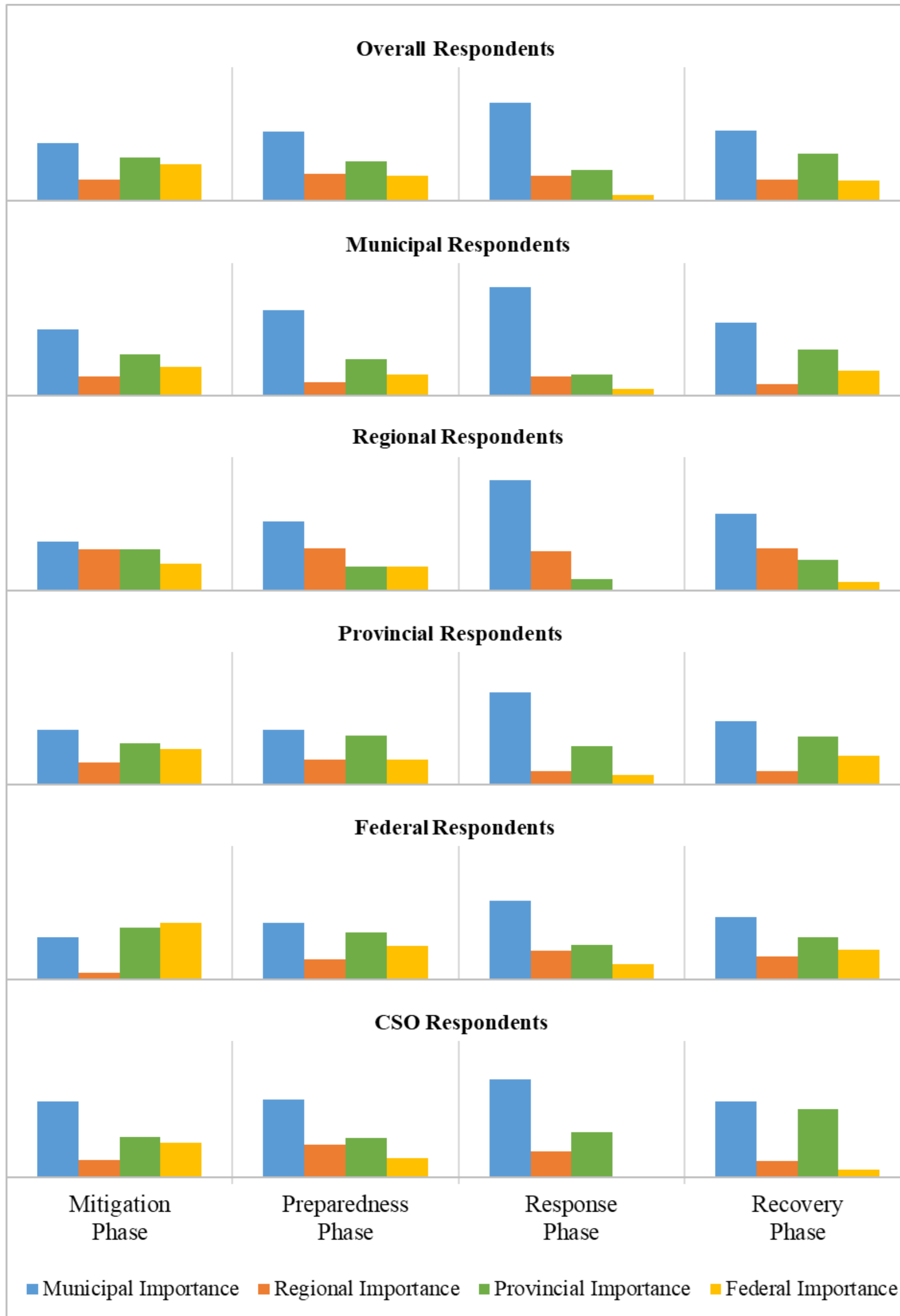


Table 6.1 – The Three Most Important Public Actor Roles During Each of the Four Emergency Management Phases

	Reasons for Municipal Importance	Reasons for Regional Importance	Reasons for Provincial Importance	Reasons for Federal Importance
In Mitigation	1. Distance to Affected Area 2. Responsibility to Manage Emergency 3. Knowledge and Expertise	1. Foster Cooperation and Coordination 2. Distance to Affected Area 3. Knowledge, Expertise, and Responsibility to Manage Emergency	1. Funding and Resource Provision 2. Foster Cooperation and Coordination 3. Regulation and Leadership	1. Funding and Resource Provision 2. Foster Cooperation and Coordination 3. Leadership
In Preparedness	1. Distance to Affected Area 2. Responsibility to Manage Emergency 3. Knowledge and Expertise	1. Foster Cooperation and Coordination 2. Distance to Affected Area 3. Responsibility to Manage Emergency	1. Regulation 2. Responsibility to Manage Emergency 3. Foster Cooperation and Coordination	1. Regulation 2. Leadership 3. Foster Cooperation and Coordination
In Response	1. Responsibility to Manage Emergency 2. Distance to Affected Area 3. Knowledge and Expertise	1. Operational Support for Local Level 2. Responsibility to Manage Emergency 3. Distance to Affected Area	1. Operational Support for Local Level 2. Funding and Resource Provision 3. Responsibility to Manage Emergency	1. Operational Support for Local Level 2. Foster Cooperation and Coordination 3. Funding and Resource Provision
In Recovery	1. Responsibility to Manage Emergency 2. Distance to Affected Area 3. Foster Cooperation and Coordination	1. Responsibility to Manage Emergency 2. Distance to Affected Area 3. Foster Cooperation and Coordination	1. Funding and Resource Provision 2. Regulation, and Operational Support for Local Level 3. Responsibility to Manage Emergency	1. Funding and Resource Provision 2. Foster Cooperation and Coordination 3. Operational Support for Local Level

6.2.1. Municipal Importance

If we take an actor-focused view for Figure 6.1, we can see that the perceived importance scores given to municipalities are very high compared to the other three actors, which is consistent with the higher involvement scores given to the local level in Chapter 5. The reasons provided to

explain the high degree of municipal importance are also consistent among the responses provided by my survey participants (see Table 6.1). In the planning phases of mitigation and preparedness, the local level was perceived to be most important first because of its proximity to the potentially affected areas, and second because it has the responsibility to manage hazards. In the more active phases of response and recovery, the reasons are flipped where responsibility comes before distance in the hierarchy of local level importance factors. The third most important factor is the knowledge and experience from municipal authorities, followed by the role of these actors to foster cooperation and coordination with other governmental and social actors.

These findings align with the literature about Canadian emergency management. Municipalities are overwhelmingly perceived to be the most important actor because they have the responsibility over emergency management as delegated by the Province (Graham and Stoney 2006; Henstra and Sancton 2002; Grieve and Turnbull 2013; Juillet and Koji 2013; and Raikes and McBean 2016). Furthermore, municipalities know and understand their community and geography better than other governmental levels. Because of this responsibility and localized knowledge, the local level must be prepared and ready to deal with emergencies, provide an effective response, and bring its community back to normal after an emergency (Graham and Stoney 2006; Henstra 2013; Juillet and Koji 2013; and Stevens and Hanschka 2014). Therefore, municipalities are perceived to be particularly important because they are the closest to hazards, and because they are given the responsibility to manage such hazards from a knowledgeable role. In fact, according to my data, municipalities are especially important in response, where the most important role of other governmental actors is to provide operational support to the local level.

6.2.2. Regional Importance

There is also some consistency in the perceptions about regional importance in emergency management. We can see that regional entities are perceived to be slightly important in all phases with similar low scores within every respondent-focused graph in Figure 6.1. However, the reasons for regional actor importance are less consistent across the policy phases (see Table 6.1). The most consistent importance role for these actors is to foster cooperation and coordination in the planning phases of mitigation and preparedness. The distance to affected areas and the responsibility to manage emergencies are also important roles, but respondents provided different hierarchies for these roles. This makes sense given the proximity regional entities have to the local

level, and their coordination role in the planning phases of mitigation and preparedness (Catto and Tomblin 2013; Hale 2013; and Young and Henstra 2013).

In contrast to municipal actors, the importance and involvement relationship is not consistent for regional actors. We can see a discrepancy when we compare regional actor importance from Figure 6.1 to involvement from Figure 5.1, which showed us that regional entities are less involved than municipalities, and as equally or more involved than provincial actors in all phases. In other words, multi-municipal regional entities are perceived to be very involved but not very important. This discrepancy suggests that respondents perceive regional actors as less relevant, or perhaps these actors are not given the credit they should be given according to their degree of participation in emergency management. Another salient reason could be that regional entities are not perceived to be as important because their role in emergency management is not standardized as suggested by Robert Young and Daniel Henstra (2013), Geoffrey Hale (2013), and Norm Catto and Stephen Tombling (2013). This potentially creates a problem for drafting and implementing a successful regional mitigation strategy, where the region is irrelevant, disorganized, or underused.

6.2.3. Provincial Importance

Despite regional and provincial actors being perceived as more or less equally involved in Chapter 5, the Province was perceived to be considerably more important than the region in mitigation, preparedness, and recovery. This was especially the case in the mitigation and recovery phases, which are interestingly the most capital-intensive phases (LaPlante 1988; Lindsay 2014; and Thistlethwaite and Henstra 2017); the phases that require the most funding from provincial and federal actors (see Table 6.1); and the phases that were given the lowest performance scores in my survey (see Figure 4.1). This raises the question of whether regional entities are not needed to be as involved based on their lower importance scores, or whether regional entities are stepping in to cover a gap left open by the Province.

I argue that the latter would be the case, since regional actors are perceived to be as involved as provincial actors in a system that is controlled by provincial jurisdiction. This is supported by the open-ended responses from Table 6.1 that position funding, resource provision and regulation as the most important provincial actor roles. To reflect the current regulatory system in Canadian emergency management, the Province should be both more involved and more important than

regional entities in my survey responses, which is not the case. Therefore, this finding suggests that the provincial actor is underperforming its role in emergency management based on its lower perceived involvement to its higher perceived importance ratio.

6.2.4. Federal Importance

In Figure 6.1, federal actors are particularly perceived to be very important in mitigation, a planning and capital-intensive phase. However, this importance is not reflected in the perceived *involvement* of federal actors we saw in the previous chapter, which is consistently mediocre across all phases. Furthermore, the federal level is perceived to be moderately important in preparedness and recovery, which are planning and capital-intensive phases, respectively. However, this perceived importance also contrasts with the low *involvement* scores given to federal actors in these phases.

This shows how the federal level is needed to play a higher role in the planning phases of mitigation and preparedness, where "leadership" is suggested to be an important role for federal actors (see Table 6.1). The federal level is also needed to play a higher role in the capital-intensive phases of mitigation and recovery, in which survey participants perceived that funding and resource provision was the most important role of federal actors (see Table 6.1). This also shows that a distant and disengaged federal government contributes to a gap in capacity building for municipalities (Graham and Stoney 2006; Grieve and Turnbull 2013; and Juillet and Koji 2013), from a lack of federal leadership in the planning phases, and ineffective capacity building in the capital-intensive phases.

6.2.5. Public Sector Actor Importance

In sum, Figure 6.1 shows that the municipal level is perceived to be the most important actor across the four policy phases due to its proximity to affected areas and its responsibility to manage emergencies, which is compatible with the actor involvement findings from Chapter 5. In contrast, regional actors are perceived to be moderately important across all phases, despite being perceived to be as involved as provincial actors in Chapter 5. Nevertheless, regional entities seem to be important to foster cooperation and coordination.

When we further compare the perceived *importance* to the perceived *involvement* of governmental actors, we find that there is a disconnect in the capacity to address emergencies,

where the important roles from provincial and federal actors of providing funding, resources, regulation and leadership are not being carried out according to the involvement these actors are perceived to have in all or certain policy phases. This therefore suggests that a public sector capacity gap, which affects the responsibility and capacity of municipalities to manage emergencies (Graham and Stoney 2006; Grieve and Turnbull 2013; and Juillet and Koji 2013), can be attributed to shortcomings in the roles of provincial and federal actors.

Despite all actors being perceived to have certain strengths and weaknesses, the need for these actors to cooperate and coordinate was a salient theme in Table 6.1. This foreshadows an issue with inter-governmental relations in emergency management, which is investigated in Chapter 7.

6.3. Comparative Views About Social Actor Importance

Figure 6.2 looks at the quantified perceived importance of large, regional, and local non-governmental actors in emergency management. Figure 6.2 follows the same column/row approach seen in Figure 6.1, and the bars from Figure 6.2 represent the frequency each non-governmental actor was mentioned as important across the four policy phases.

When we look at non-governmental perceived importance, we can see that respondents overwhelmingly mentioned large CSOs (see Figure 6.2), such as the Canadian Red Cross and the Salvation Army, in their responses. In fact, the Canadian Red Cross was mentioned overwhelmingly in the open-ended questions, to the point that this organization almost embodies the notion of the non-governmental entity. These large CSOs were perceived to be the most important across all the four phases of emergency management (see Figure 6.2).

In second place we find community/local CSOs, such as ad hoc neighbourhood volunteer groups and local food banks, which on average, gathered a little more than a quarter of the perceptions about non-governmental importance. These community/local CSOs were perceived to be particularly important in the recovery and mitigation phases. It is worth noting that non-governmental survey participants provided slightly higher importance scores for large CSOs in the preparedness and response phases, and much higher scores in the mitigation phase that undermined community/local CSO involvement in this phase. Regional non-governmental entities, such as the Alberta NGO Council and the NGO Alliance of Ontario, were perceived to be the least important CSOs, with slightly lower scores than community/local CSOs.

Figure 6.2 – Non-Governmental Actor Importance by Emergency Management Phase

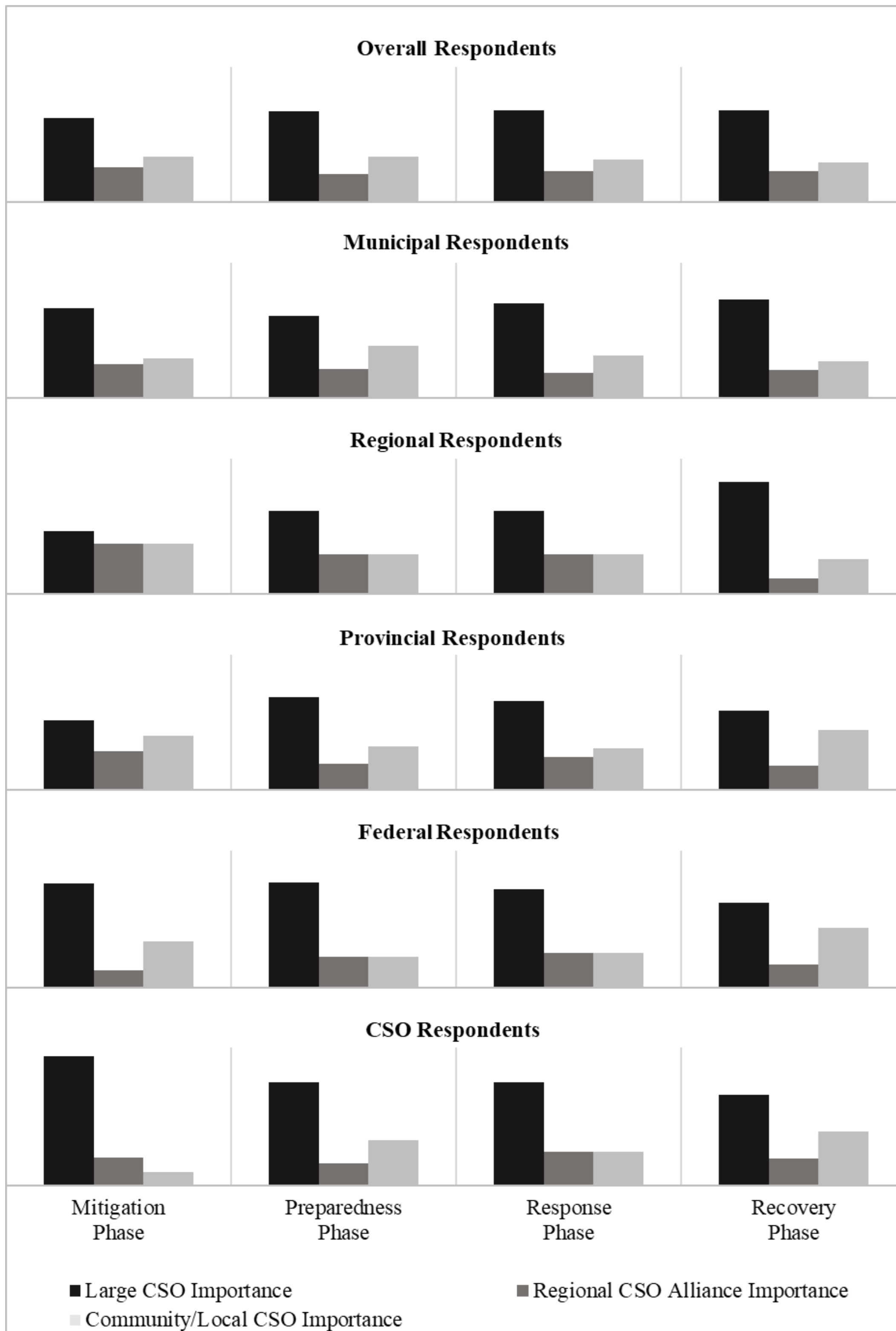


Table 6.2 – The Three Most Important Social Actor Roles During Each of the Four Emergency Management Phases

	Reasons for Large CSO Importance	Reasons for Regional CSO Importance	Reasons for Local CSO Importance
In Mitigation	1) Educating the Public 2) Resource Provision 3) Knowledge and Expertise	1) Educating the Public 2) Resource Provision 3) Distance to Affected Area	1) Educating the Public 2) Distance to Affected Area 3) Resource Provision
In Preparedness	1) Educating the Public 2) Resource Provision 3) Public Trust, Credibility, and Distance to Affected Area	1) Educating the Public, and Foster Cooperation and Coordination	1) Distance to Affected Area 2) Educating the Public 3) Knowledge and Expertise
In Response	1) Resource Provision 2) Mandate, Knowledge and Expertise 3) Operational Support for Government	1) Foster Cooperation and Coordination 2) Resource Provision	1) Resource Provision 2) Distance to Affected Area 3) Knowledge and Expertise
In Recovery	1) Resource Provision 2) Knowledge and Expertise 3) Mandate	1) Resource Provision 2) Cover a Public Sector Gap	1) Resource Provision 2) Distance to Affected Area 3) Operational Support for Government

Figure 6.2 provides three important findings about the perceived non-governmental importance. First, the dominance of large CSOs in this figure shows the supportive role that is perceived to be as important from non-governmental organizations in emergency management. These large CSOs have the most capacity out of the social sector, and are professionalized in that field, often with local, regional, national, and international extensions and connections that focus on emergency management. Furthermore, these organizations are the most visible, commonly appearing in the media during emergencies, and are mentioned in governmental and third-party

emergency communications and reports (SSCNSD 2008; PSC 2011; MNP 2015; KPMG 2017; and StatsCan 2020). In fact, when we look at Table 6.2, we see that the provision of resources, education and knowledge are the main reasons provided by my survey respondents about large CSO importance. Mandate was another important reason for large CSO importance, which is not present for regional or local CSOs, and which also alludes to the quasi-institution status entities such as the Canadian Red Cross enjoy in emergency management (Grieve and Turnbull 2013).

Second, the case that local CSOs were perceived to be slightly more important than regional CSOs suggest that a close connection of non-governmental organizations to the affected communities is also important. Robert A. Stallings and E. L. Quarantelli refer to these grassroots entities as “emergent citizen groups” that are created in an ad hoc manner to help during times of crisis and are composed of people from the affected community (Stallings and Quarantelli 1985). This is evident when we look at Table 6.2 and find that the distance to affected areas is one of the most important aspects of local CSOs. The other salient important role of local CSOs is the provision of resources, which is commonly in the form of human capital through volunteerism (Catto and Tomblin 2013; and Young and Henstra 2013). The proximity and resource provision factors are especially important during the recovery effort of getting things back to a “new” normal for an affected area. Therefore, these non-governmental organizations have a high stake in the recovery process, especially as the media and public attention fades away, diminishing the pressure of governmental support for the community that composes these grassroots CSOs.

Last, after the previous two findings about large and local CSOs, we can safely argue that a large capacity and public profile is perceived to be more important than a close connection to affected communities for non-governmental organizations. The fact that governmental actors largely contributed to this distribution of CSO perceived importance show that CSOs play a large role in capacity building in the emergency management system. This argument is also supported by remembering that CSOs are perceived to be slightly less involved than regional and provincial actors in Chapter 5 (see Figure 5.1).

Nevertheless, if we connect this argument to that made from Figure 6.1, about regional entities trying to fulfill a capacity gap left open by the Province, we can argue that CSOs are also being used to address that capacity gap in the public sector. This argument stems from the reliance of CSOs to support municipalities in the capacity to address emergencies (Graham and Stoney 2006; Catto and Tomblin 2013; Grieve and Turnbull 2013; Hale 2013; Juillet and Koji 2013; and

Hurlbert 2018), reflected in the high perceived involvement of CSOs (Figure 5.1), with the overwhelming perceived importance of large CSOs in emergency management (Figure 6.2). This high importance, however, contrasts with the high degree of doubt about CSO actor involvement seen in Table 5.1, which may reflect the lack of social sector regulatory framework in Canadian emergency management.

In sum, Figure 6.2 shows that large and capable CSOs are perceived to be the most important social actors, followed by local, and then by regional CSOs. We also learned from Table 6.2 that the most important factor that drives perceptions about CSO importance is the provision of resources by large non-governmental organizations. This resource provision role would help to cover a public sector capacity gap as suggested by Gloria Simo and Angela Bies (2007) and Wendy Gomez and Ryan Bullock (2012), as well as by my data from the previous section and Chapter 5. The second most important factor considered is the proximity or connection to affected communities from local or grassroots CSOs.

6.4. Chapter 6 Summary

This chapter showed that municipalities are perceived to be the most important governmental actor, followed by provincial, and then by federal or regional actors depending on the policy phase. In terms of the reasons for perceived actor importance, there is a separation between levels of government. On the one hand, the proximity to affected areas and the delegation of responsibility are the most important factors for intra-provincial governments. On the other hand, fiscal capacity, jurisdiction and leadership are the most important factors for provincial and federal governments.

In the case of non-governmental actor importance, Large CSOs are overwhelmingly perceived to be the most important social actor, followed by local CSOs, and then by regional CSOs. The main reason for CSO importance is the provision of resources to the municipal level. This speaks to the role of CSOs in helping to cover a capacity gap in the public sector.

When we compare the perceptions about *actor involvement* from the previous chapter to *actor importance* from this chapter, we find that the most fiscally capable actors, federal and provincial governments, are playing an inadequate role in emergency management that could translate into a capacity gap for municipalities. This is evident from the discrepancy between regional, provincial, and federal involvement versus importance scores, as well as in the overwhelming importance of the resource provision role from CSOs in emergency management.

This is evidence for a local-level capacity gap that is driven mainly from provincial and federal inaction, which speaks to the *multilevel fragmentation argument* found in the Canadian emergency management literature.

The marginalization of municipalities from the regulatory mechanisms of emergency management disconnects the most knowledgeable and accountable actor, the local level, from the decision-making processes and frameworks necessary for managing emergencies. This is problematic given that the most involved and important actor as shown in this thesis, the municipal level, has constrained regulatory agency because jurisdiction and decision-making is concentrated at the provincial level. This concentration of jurisdiction at the provincial level not only creates regulatory marginalization, but also controls and funnels federal fiscal capacity to municipalities, creating a disconnect between responsibility and capacity building, which hinders the prospects of developing robust mitigative measures. Furthermore, the role of the federal government is distant, especially in the mitigation phase, which prevents any effective centralized leadership that could provide a national standardized framework for capacity building at the local level, such as that for an effective national mitigation strategy.

Nevertheless, to "foster cooperation and coordination" was one of the most important reasons provided by respondents for all governmental actors' importance, which hints at the current state of inter-governmental relationships in emergency management. The next chapter dives into an analysis of actor interactions not only between governmental levels, but also with CSOs to investigate the current health of relationships in this governance area. This will help us further understand how governmental levels interact, and how CSOs fit in to cover a suggested public sector gap.

Chapter 7: Public and Social Actor Interactions in Canadian Emergency Management

This project has been investigating the reactive rather than proactive approach to Canadian emergency management through a multilevel governance lens. My previous two chapters used survey data to study the *roles* of public and social actors in terms of *involvement* (Chapter 5) and *importance* (Chapter 6) in emergency management.

As suggested in the previous chapter, effective interaction among public and social actors in emergency management could potentially address a capacity gap at the local level. This chapter therefore provides an empirical study of the *interactions* between these actors, building on the study of actor *roles* provided in the previous two empirical chapters. I investigate the willingness of these actors to work and cooperate with each other, adding another dimension to the study of reactive emergency management in Canada.

In this chapter I find that there is a pervasive disconnect in the policy community of Canadian emergency management, in which everyone tends to underestimate the willingness of other actors to work with them. To remedy this, my survey respondents suggest improving the quality of partnerships, communication, and knowledge about actor roles in the system, as well as creating more standardization with a higher degree of federal leadership.

7.1. Expectations from the Literature

With regards to what the literature says about public and social actor interaction, we can expect findings in this chapter that portray a fragmented policy community. We should see a disconnect between the eagerness of actors to interact with each other, given the vertical and horizontal disruptions provided in the *fragmented multilevel governance* explanation. We should also see that the municipal level perceives itself to be marginalized. Regional and CSO actors should reflect their supportive role in their perceptions about actor interactions, with a high degree of eagerness to work with all actors. In contrast, the jurisdictional bottleneck and control of the province creates the expectation of this actor to be more interested or willing to cooperate with intra-provincial actors than with the federal level. Finally, the federal level's perceptions about actor interactions should reflect its distant and disengaged role.

7.2. Overall Views About Actor Interaction

Figure 7.1 was drawn from survey questions that asked respondents to rate their eagerness to interact with other actors, and the eagerness of other actors to interact with them. These questions were respondent-group-specific, which were later combined to provide the overall averages seen in this section. For example, Question 20 asked municipal respondents about how interested regional, provincial, federal and CSO actors would be in the input and expertise of municipal actors. Question 21 was the opposite, where municipal respondents were asked about how interested they would be in working with regional, provincial, federal and CSO actors.[17]

We can draw a few interesting patterns from Figure 7.1, as it looks at the aggregate eagerness of actors[18] to work with others (left bar), as well as how these actors perceive the eagerness of others to work with them (right bar). This figure shows us that overall, actors underestimated the eagerness of interaction from others. We can see this underestimation in the differences between the left and right bars in the graph, where the right bar is lower than the left bar. Therefore, there is a clear misunderstanding about the eagerness to cooperate in this policy community. There, all actors are interested in working with others, but at the same time, all actors underestimate the eagerness of others to cooperate with them.

Figure 7.1 – Perceptions About Actor Eagerness to Interact with Each Other

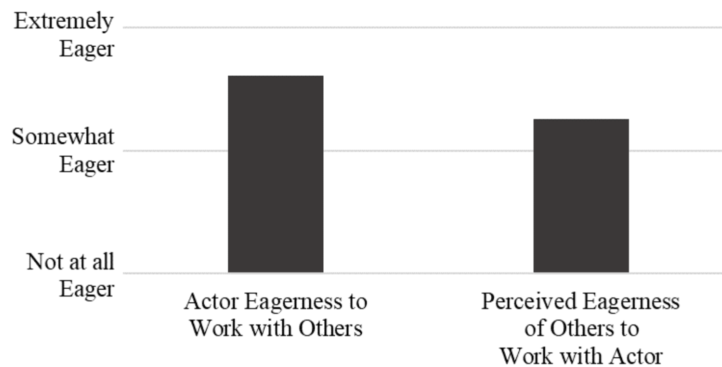


Figure 7.2 expands on the previous figure by separating aggregate views into perceptions about specific actor interaction (municipal, regional, provincial, federal or CSO separately). When looking at Figure 7.2, notice that there are five clusters of coloured bars separated by larger blank

[17] See “Block 7: Relationships” in Appendix B (Survey Design).
[18] Municipal, regional, provincial, federal or CSO actors.

spaces. Each cluster contains four bars: two bars of the same colour beside a black bar each, separated by smaller blank spaces. Each colour represents the perceptions of a specific actor: blue for municipal; orange for regional; green for provincial; yellow for federal; and grey for CSO respondents. The black bars represent the perceptions of *other* respondents, which excludes the views of specific actors already shown in the coloured bars.

Let's take the first cluster from Figure 7.2 as an example, which represents municipal interaction as suggested by the blue bars. The two bars on the left show us municipal (blue) versus other (black) perceptions about municipal eagerness to work with other actors. Conversely, the two bars on the right show us municipal (blue) versus other (black) perceptions about the eagerness of other actors to work with municipal governments.

Figure 7.2 – Actor Own-Versus-Other Views About the Eagerness to Interact with Each Other

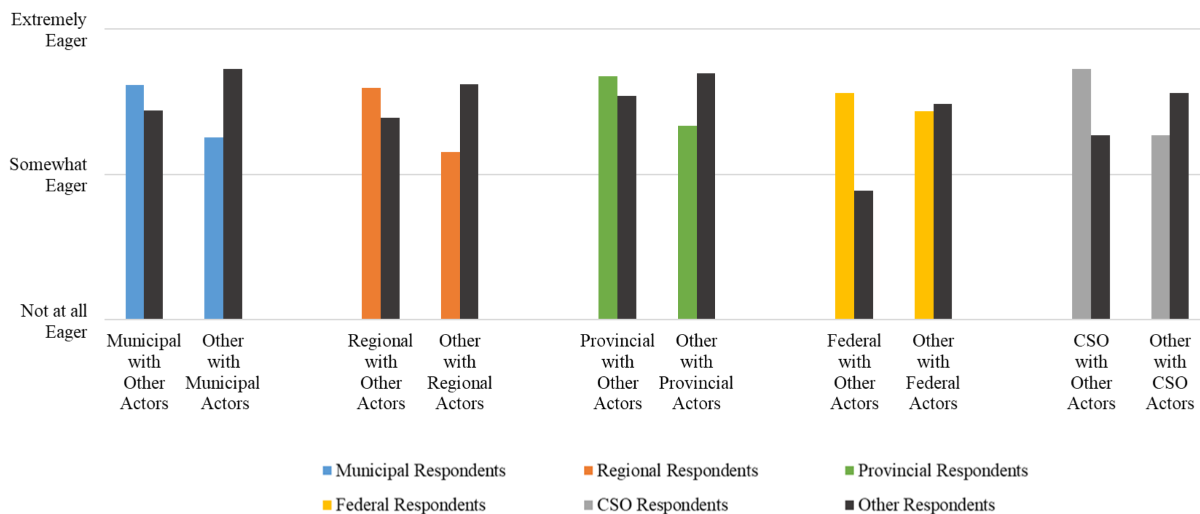


Figure 7.2 replicates the finding from Figure 7.1 in each of the coloured clusters. By looking at the differences in each pair of coloured-black bars, we can see a disconnect in perceptions about everyone's eagerness to interact with each other, where all respondents tended to be pessimistic about the interest of other actors to work with them.

Figure 7.2 also shows us two salient similarities between actors. On the one hand, municipal, regional, and provincial respondents had similar patterns of own (coloured) versus other (black) perceptions. This is evident if we notice how the coloured-black bars are most different on the

right side for municipal, regional, and provincial clusters (blue, orange, and green clusters, respectively). On the other hand, own (coloured) versus other (black) perceptions were also similar for federal and CSO respondents. There, coloured-black bars were most different for federal and CSO respondents on the left side clusters (yellow and grey clusters). This means that municipal, regional, and provincial respondents underestimated the eagerness of other actors to work with them the most, while other actors underestimated federal and CSO eagerness to work with them the most.

It is worth noting that the perceptions about the interaction with the federal level are particularly different than the rest. Figure 7.2 shows us that federal responses have the highest differential on the eagerness of the federal government to interact with other actors, but also the lowest differential on the eagerness of other actors to interact with the federal level. Furthermore, the perceptions of other respondents about the eagerness of the federal level to interact with them is the only bar that lies between the *not at all* and *somewhat* scale. This speaks to the distancing of the federal level in emergency management as described in the literature (Catto and Tomblin 2013; Grieve and Turnbull 2013; and Young and Henstra 2013).

This is problematic considering the emphasis on capacity building in emergency management, which drives the perceptions about actor importance in this policy area (see Chapter 6). If there are doubts or pessimistic ideas about the interactions among emergency managers, there may also be fractures in the interactions to efficiently provide and use resources, to create effective decision-making mechanisms and frameworks, and to successfully carry out the responsibility to act in this system.

In sum, Figures 7.1 and 7.2 show that every actor is interested in working with others in Canadian emergency management. However, every actor also underestimated the eagerness of other actors to interact with each other. There is also a striking divide between provincial/intra-provincial perceptions and federal/CSO perceptions. These findings support the *fragmented multilevel governance* explanation by showcasing an overall disconnect among emergency management actors. This would hinder the implementation of a standardized mitigation strategy in Canada.

Nevertheless, as seen throughout this thesis, overall findings do not paint a complete picture about emergency management governance, and a deeper investigation provides more insight about agreements, variations, or inconsistencies among perceptions. The next section dives into an actor-

focused analysis of perceptions about interactions between the different public and social actors studied in this thesis.

7.3. Actor-Focused Views About Actor Interaction

This section analyzes own-vs-other perceptions about actor *interactions*. The five graphs presented in this section were designed with a comparative process that focuses on a *specific actor*, which is visualized with coloured bars in each graph.

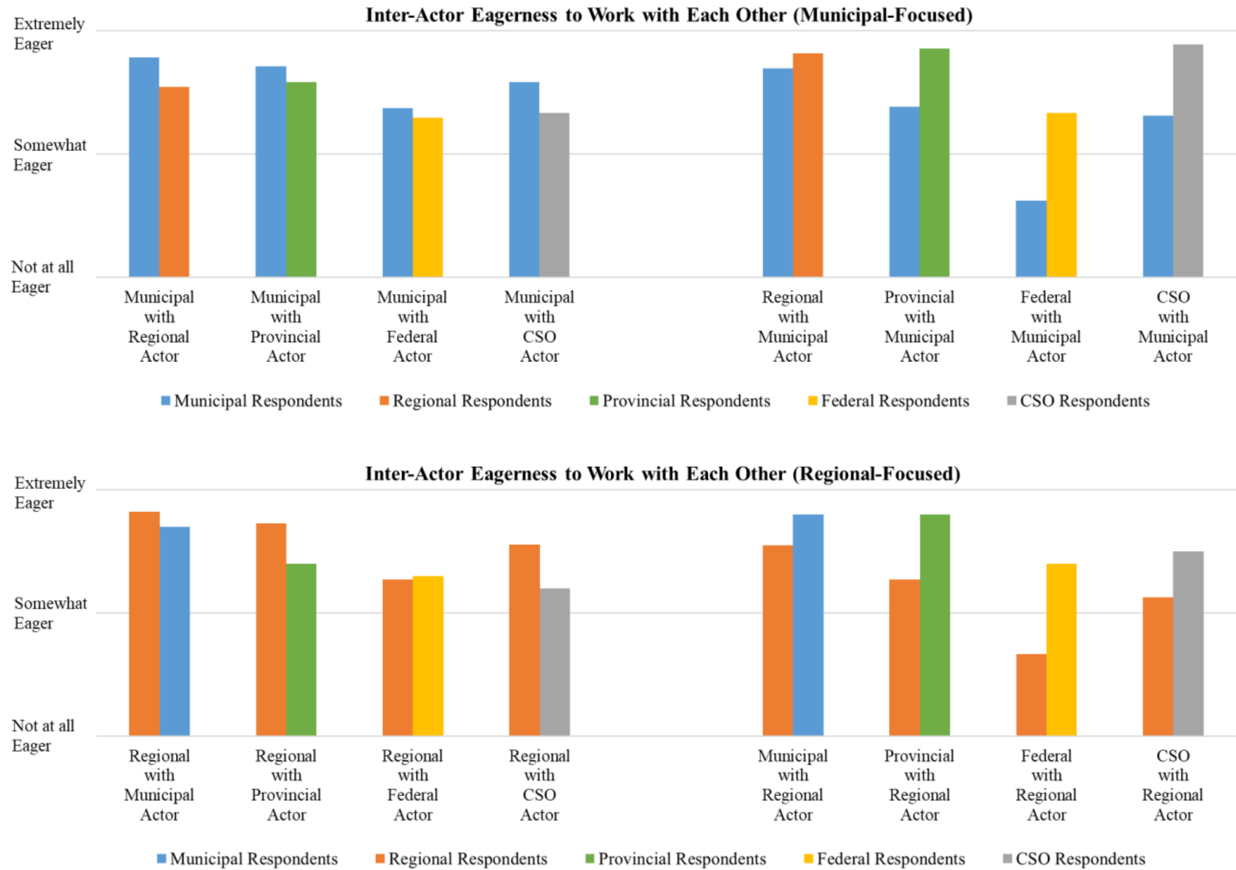
7.3.1. Municipal and Regional Interactions

Figure 7.3 presents two graphs that were gathered from my survey participant perceptions. The upper graph shows interaction data about municipal actors, while the lower graph shows interaction data about regional actors. This figure displays the eagerness of municipal and regional survey respondents to interact with other actors (left-side clusters in both graphs), as well as the eagerness of other actors to interact with local and regional authorities (right-side clusters). As compared to provincial-, federal- and CSO-focused interaction (see Figures 7.4, 7.5 and 7.6), municipal and regional interaction data is shown together due to the striking similarities in perceptions.

Let us use the upper graph (Municipal-Focused) from Figure 7.3 as an example to better understand this and subsequent figures. We can see two separate clusters of bars, separated by a large blank space in the middle. The left cluster shows the perceptions about the eagerness of the *municipal actor* to interact with *another actor*. The right cluster shows the opposite, or the eagerness of *another actor* to interact with the *municipal actor*.

Within each bar-cluster we can find bar-pairs with a *specific* and *different* coloured bar, separated by small blank spaces. While the specific coloured bars represent specific-actor perceptions (blue for municipal respondents in this case), the perceptions from the other respondent-groups are visualized in different-coloured bars. The most important aspect to consider in this and the following figures is which bar is higher in each pair. On the left-side cluster we will mostly see that the specific-actor bars tend to be higher, and on the right-side cluster we will mostly see that the other-actor bars tend to be higher.

Figure 7.3 – Municipal and Regional Own-Versus-Other Views About the Eagerness to Interact with Each Other



If we focus on the left-side clusters for both municipal and regional graphs in Figure 7.3, we can see that all own-versus-other actors' perceptions are more aligned, compared to the bars on the right-side clusters. This means that there is more agreement in the degree of eagerness of municipalities and regional entities to work with other actors, than in the eagerness of other actors to work with local and regional authorities. However, this degree of interaction differs, where municipal and regional respondents are more eager to work with each other first, followed by provincial actors, then CSOs, and last by federal actors. This shows the disconnect that has reoccurred in this thesis between intra-provincial and federal actors, which is also substantiated in the *fragmented multilevel governance* explanation.

The relationships on the right-side clusters from Figure 7.3 mostly differ from those seen on the left-side. The only similarity is that municipal respondents perceived that regional actors were extremely interested in working with them, and this perception was reciprocated by regional respondents. This can be explained from the closeness regional and municipal levels enjoy. As

shown in Chapter 6, regional actors often function to support municipalities operationally. Therefore, these two intra-provincial actors should have cohesive perceptions about the working relations between each other.

We can see the differences between the left and right clusters in the perceptions about provincial, federal and CSO eagerness to work with local and regional authorities. Municipal and regional respondents perceived that provincial and CSO actors were somewhat interested in working with them. In contrast, provincial and CSO respondents noted that they are extremely or more than somewhat interested in working with local and regional authorities. This is easier to explain in the case of CSOs, given that the *fragmentated multilevel governance* explanation portrays a lack of regulatory framework for the social sector (Catto and Tombling 2013), which would be reflected in the perceptual discrepancy here.

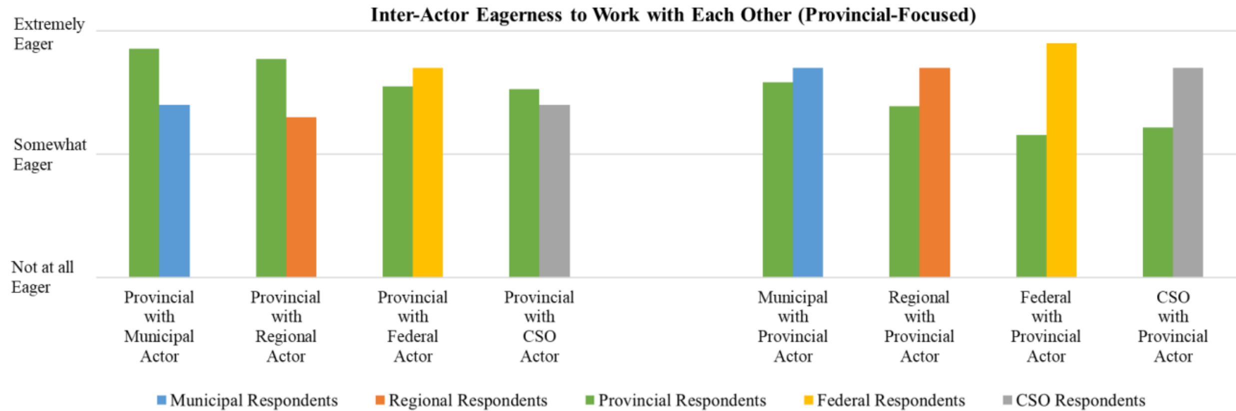
However, this perceptual discrepancy is harder to explain for provincial eagerness to work with municipal and regional actors, given that the Province governs both actors, and delegates responsibility over emergency management to the local level. This could be evidence of a friction between provincial and intra-provincial actors that reflect the marginalization of municipalities, along with regional entities. Municipalities and regions are marginalized from decision-making by the provincial control over jurisdiction, making local and regional authorities responsible for a policy area they often do not have regulatory control over (Graham and Stoney 2006; Henstra 2013; Juillet and Koji 2013; and Stevens and Hanschka 2014). Furthermore, this jurisdictional bottleneck at the provincial level also controls and funnels federal fiscal aid (Ibid.), potentially separating the local and regional levels from direct capacity building by the federal government.

The largest difference in perceptions, however, are seen in those about federal eagerness to interact with local and regional actors. Municipal and regional respondents perceived that federal actors were not interested in working with them. This perception is strikingly different than that of federal respondents who considered to be moderately interested in working with both actors. This further portrays the disconnect between intra-provincial and federal actors, created by the provincial jurisdictional bottleneck. This disconnect disrupts the interaction between the most responsible actor, the municipality, from the most fiscally capable actor, the federal level.

7.3.2. Provincial Interactions

Figure 7.4 shows us the eagerness of provincial survey respondents to interact with other actors (left-side cluster), as well as the eagerness of other actors to interact with the Province (right-side cluster).

Figure 7.4 – Provincial Own-Versus-Other Views About the Eagerness to Interact with Each Other



By looking at the left-side cluster from Figure 7.4, we can see that that provincial respondents noted a higher eagerness to cooperate with municipal and regional actors than with federal and CSO actors. However, the most distant perceptions in the left cluster were provided by municipal and regional respondents who noted a lower interest by the Province to work with them than that provided by provincial respondents. This finding coincides with perceptual discrepancies found in Figure 7.3 (municipal/regional interaction), which suggest a friction between intra-provincial and provincial actors. As mentioned before, this friction could be attributed to the marginalization of intra-provincial public sector actors by the provincial control over regulatory and fiscal capacity in Canadian emergency management.

The right-side cluster in Figure 7.4 shows that provincial respondents slightly underestimated the eagerness of municipal and regional actors, and somewhat underestimated the eagerness of CSOs to work with them. This is expected given the provincial control over emergency management jurisdiction, municipalities, and regional entities. Therefore, provincial respondents understand that intra-provincial public sector actors rely on the Province for regulation and resources. Nevertheless, the differences in the municipal and regional perceptions from the

left to right clusters in this figure suggest that these actors do not consider that the Province is as interested in working with them as they are in working with the Province.

In contrast, CSO and federal respondents provided the most aligned perceptions about the eagerness of provincial actors to work with other actors (see left-side cluster). This could be the case for CSO perceptions, since the Province usually creates the mandates and contracts for CSOs to act upon (Young and Henstra 2013). However, provincial respondents somewhat underestimated the eagerness of CSOs to work with them in the right-side cluster. This could stem from the lack of social sector regulatory framework (Catto and Tombling 2013), which not only creates ambiguity for CSO roles (see Chapter 5), but also for CSO interactions.

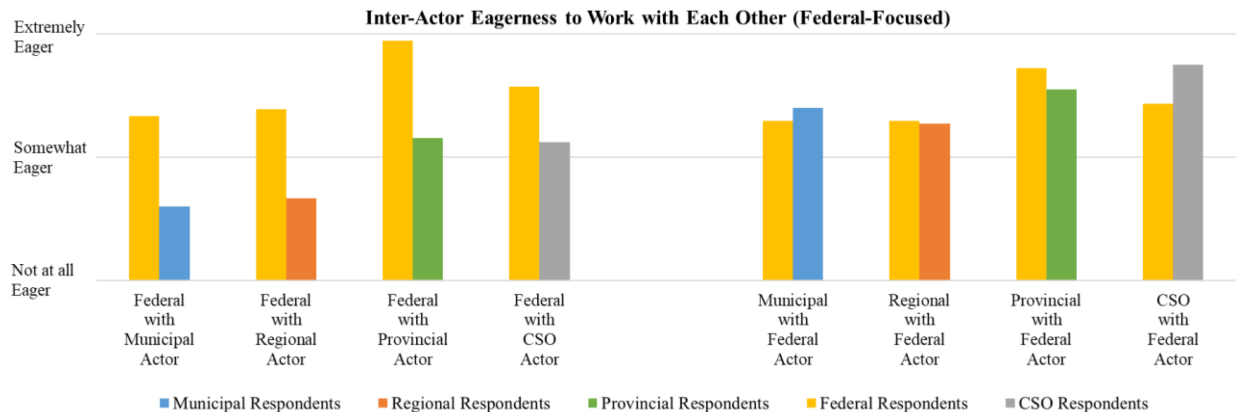
In the case of federal perceptions, the Province is the point of contact for the federal government in the provincial jurisdiction of emergency management. It explains the close perceptions about provincial eagerness to interact with the federal actor in the left-side cluster. In fact, the federal participant score in this figure is the only score from the left side clusters in Figures 7.3 to 7.6 that is higher than the score provided by the specific actor being studied in each figure. This means that federal respondents are the only respondents who overestimated the eagerness of any actor, in this case provincial, to work with them.

In contrast, the largest underestimation in the right-side cluster comes from the scores given to the federal level. Here, provincial respondents largely undermined the eagerness of federal actors to interact with the province. This shows that provincial actors perhaps perceive that federal actors should not be as interested in getting involved in the provincial jurisdiction of emergency management, since the Province is overprotective over its constitutional powers (Young and Henstra 2013). In contrast, the federal level seems to be extremely interested in working with the Province. This federal interest, however, is higher than that provided for municipal and regional interaction (see Figure 7.3), which shows that federal distance is not only created by the provincial jurisdictional bottleneck, but also from a lack of federal interest to cooperate with intra-provincial actors.

7.3.3. Federal Interactions

Figure 7.5 displays the eagerness of federal survey respondents to interact with other actors (left-side cluster), as well as the eagerness of other actors to interact with the federal level (right-side cluster).

Figure 7.5 – Federal Own-Versus-Other Views About the Eagerness to Interact with Each Other



In this subsection, we can see how federal perceived interactions differ from those of provincial and intra-provincial governmental actors. On the right-side cluster from Figure 7.5 we see that all the views of all the other respondents (coloured bars) more or less align with the perceptions of federal participants (yellow bars). These federal versus other actor perceptions mismatch on the left-side cluster. In contrast, we can find the majority of mismatched perceptions on the right-side clusters and alignment on the left-side clusters of municipal, regional and provincial interaction data (see Figures 7.3 and 7.4).

While the right-side cluster provides aligned views in Figure 7.5, the left-side cluster shows us that municipal, regional, and provincial respondents significantly undermined the eagerness of the federal level to cooperate with them. This difference in perceptions about interactions is further evidence for the distanced and disengaged role of the federal government in emergency management, created by the provincial jurisdictional bottleneck.

In fact, Figure 7.5 also shows that overall, federal respondents were least interested in interacting with municipal and regional actors, but were most interested in working with provincial actors. With regards of non-governmental organizations, federal respondents chose a higher degree of eagerness to work with CSOs than with municipal and regional actors. This speaks volumes about current inter-actor relationships, or the lack there of, between federal and intra-provincial governments, where it is easier for the federal level to interact with CSOs than with municipalities or regional entities.

However, provincial actors are not subject to the disconnect created between federal and intra-provincial governments. The lower provincial perception can therefore be explained by the provincial jurisdiction over emergency management. Provinces are very protective over their constitutional jurisdictions (Young and Henstra 2013), which would lead provincial respondents to underestimate the eagerness of federal interaction in a provincial jurisdiction, as also seen in the previous section (see right-side cluster in Figure 7.4). Nevertheless, federal respondents noted that they were extremely interested in working with the provinces, but provincial respondents did not reciprocate.

7.3.4. CSO Interactions

Figure 7.6 show us the eagerness of CSO survey respondents to interact with other actors (left-side bars), as well as the eagerness of other actors to interact with CSOs (right-side bars).

Figure 7.6 – CSO Own-Versus-Other Views About the Eagerness to Interact with Each Other

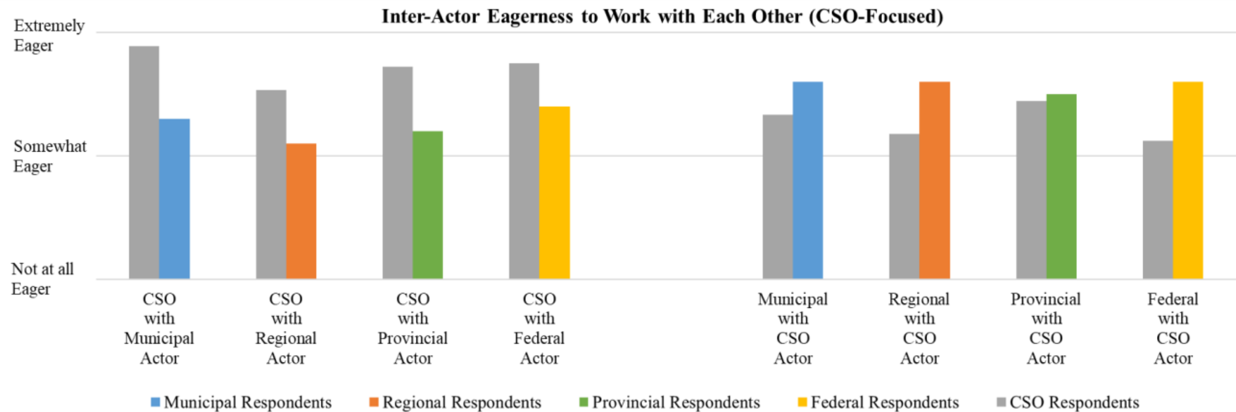


Figure 7.6 shows us that CSOs are most interested in working with municipal governments, followed by provincial and federal actors. This can be explained by the supportive role CSOs have towards the local level (Henstra 2010; and Young and Henstra 2013), while being contracted or mandated by provincial or federal governments (Young and Henstra 2013). On the other hand, all governmental survey participants expressed an equal and considerable eagerness of working with CSOs. This shows the importance of social actors in the emergency management policy area, which could function to cover a public sector gap as suggested by the literature (Simo and Bies 2007; and Gomez and Bullock 2012), and by my data throughout this thesis.

We can see another noticeable pattern in Figure 7.6 that compares to the interaction data about the governmental actors studied in this project (see Figures 7.3, 7.4 and 7.5). There, CSO interaction scores are moderate to high, with all being between the *somewhat* and *extremely* willing to interact scales, and with low to moderate own-versus-other differentials. This suggests that there is a moderate degree of understanding about social actor interaction in emergency management.

Table 7.1 – Unsure Perceptions About Specific Actors' Eagerness to Interact

	Municipal Actors	Regional Actors	Provincial Actors	Federal Actors	CSO Actors
Municipal Respondents	0%	6%	3%	6%	19%
Regional Respondents	0%	0%	0%	20%	30%
Provincial Respondents	0%	5%	0%	5%	15%
Federal Respondents	6%	6%	0%	0%	22%
CSO Respondents	0%	6%	0%	12%	0%

Nevertheless, Table 7.1 shows the that there is misunderstanding about CSO roles and interactions. In this table, we see that CSO actors have the largest share of unsure perceptions from all public sector participants, which aligns with the high degree of CSO role misunderstanding from Chapter 5 (see Table 5.1). The degree of social sector interaction misunderstanding can be explained through the *fragmented multilevel governance* explanation, as CSOs are not governed by any nationally standardized legislative framework (Catto and Tombling 2013). This lack of standardization of CSO roles (see Chapter 5) and interactions prevent a comprehensive understanding of social forces by public sector actors, which is particularly problematic for capacity building at the local level.

7.4. Suggestions for Improving Interactions in Emergency Management

While the previous two sections provided quantitative evidence of fragmentation and disconnect in the policy community of emergency management, this section analyzes suggestions from survey participants for improving interactions in the system. Here, we will explore possible

gaps in actor interactions that can explain the fragmentation seen so far in this chapter and throughout this thesis.

The data provided in this section builds upon the quantitative analysis above by providing the five most mentioned suggestions for improving inter-governmental (Table 7.2) and public-social sector (Table 7.3) relations in Canadian emergency management. The suggestions shown in both tables were based on themes I picked up from participant responses, such as to "Improve Partnerships and Communication" or "Better Understand Roles" (see Tables 7.2 and 7.3). These tables hence provide qualitative empirical and normative views of policy community interaction in Canadian emergency management.

As seen in Tables 7.2 and 7.3, all survey respondent-cohorts felt that implementing better partnerships and means of communication is the best approach to improve inter-governmental and public-social sector relations. These recommendations suggest that there is indeed inter-actor disconnect in emergency management. Therefore, the most important suggestion relates to a disconnected policy community aspect, which has been put forward in this thesis, and has been passively suggested in the *fragmented multilevel governance* explanation (Haque 2000; Henstra 2010; Catto and Tombling 2013; Grieve and Lori Turnbull 2013; Hale 2013; Juillet and Koji 2013; and Young and Henstra 2013).

The second most common recommendation for improving inter-governmental relations was the improvement or implementation of standardized frameworks and/or legislation (see Table 7.2). We can assume here that a more centralized and organized public emergency management system seems to be of high importance to all actors in the system, which agrees with the notion that there is a notorious lack of standardization in emergency management (Haque 2000; Graham and Stoney 2006; Lindsay 2014 and 2018; and Hurlbert 2018). As suggested by a municipal respondent, inter-governmental relations would improve "through an interoperable model of operations", where "all authorities are playing from the same book", which "would be more conducive to intergovernmental cooperation."

Table 7.2 – Suggestions for Improving Inter-Governmental Relations in Canadian Emergency Management

Suggestion Rank (1 is most mentioned; 5 is least mentioned)	Overall Respondents	Municipal Respondents	Regional Respondents	Provincial Respondents	Federal Respondents	CSO Respondents
1	Improve Partnerships and Communication	Improve Partnerships and Communication	Improve Partnerships and Communication	Improve Partnerships and Communication	Improve Partnerships and Communication	Improve Partnerships and Communication
2	Create or Improve Standardization of Frameworks and/or Legislation	Increase Top-Down Support (Operational and Fiscal Capacity)	Increase Top-Down Support (Operational and Fiscal Capacity)	Create or Improve Standardization of Frameworks and/or Legislation	Create or Improve Standardization of Frameworks and/or Legislation	Create or Improve Standardization of Frameworks and/or Legislation
3	Better Understand Roles	Create or Improve Standardization of Frameworks and/or Legislation	Create or Improve Standardization of Frameworks and/or Legislation	Better Understand Roles	Better Understand Roles	Better Understand Roles
4	Increase Top-Down Support (Operational and Fiscal Capacity)	Better Understand Roles	Better Understand Roles	Increase Federal Presence or Control	Increase Top-Down Support (Operational and Fiscal Capacity)	Increase Top-Down Support (Operational and Fiscal Capacity)
5	Increase Federal Presence or Control, and Connect Federal and Local Levels Directly	Increase Federal Presence or Control	Increase Federal Presence or Control	Increase Top Down Support (Operational and Fiscal Capacity)	Connect Federal and Local Levels Directly	Connect Federal and Local Levels Directly

Table 7.3 – Suggestions for Improving Public-Social Sector Relations in Canadian Emergency Management

Suggestion Rank (1 is most mentioned; 5 is least mentioned)	Overall Respondents	Municipal Respondents	Regional Respondents	Provincial Respondents	Federal Respondents	CSO Respondents
1	Improve Partnerships and Communication	Improve Partnerships and Communication	Improve Partnerships and Communication	Improve Partnerships and Communication	Improve Partnerships and Communication	Improve Partnerships and Communication
2	Better Understand Roles	Create or Improve Standardization of Frameworks and/or Legislation	Better Understand Roles	Better Understand Roles	Better Understand Roles	Better Understand Roles
3	Create or Improve Standardization of Frameworks and/or Legislation	Better Understand Roles	Increase CSO Inclusion in Policy Dynamics	Create or Improve Standardization of Frameworks and/or Legislation	Create or Improve Standardization of Frameworks and/or Legislation	Increase Top-Down Support (Operational and Fiscal Capacity)
4	Increase Top-Down Support (Operational and Fiscal Capacity)	Increase Top-Down Support (Operational and Fiscal Capacity), and Increase Municipal Control	Decrease Duplication of Tasks	Increase Top-Down Support (Operational and Fiscal Capacity), and Better Understand Gaps	Increase Top-Down Support (Operational and Fiscal Capacity)	Better Understand Gaps
5	Increase CSO Inclusion in Policy Dynamics	Increase Accountability for Social Sector	Create or Improve Standardization of Frameworks and/or Legislation	Increase CSO Inclusion in Policy Dynamics	Increase CSO Inclusion in Policy Dynamics	Create or Improve Standardization of Frameworks and/or Legislation

However, the standardization of frameworks and/or legislation was slightly more important for provincial, federal and CSO respondents than for municipal and regional respondents. The difference could mean that municipal and regional actors would perceive as conflictive to further distance their involvement in regulation, as decision-making is further centralized in provincial or federal bureaucracies. This would further marginalize intra-provincial actors from decision-making processes, and make their responsibility a higher burden than what is described in the literature (Stoney 2006; Graham and Stoney 2006; Hale 2013; Henstra 2013; Henstra and McBean 2005; Lindsay 2014; Lindsay 2018; McEntire and Lindsay 2012; Stacey 2017; Stevens and Hanschka 2014; and Young and Henstra 2013).

This suggests that intra-provincial governments want to have the responsibility to manage emergencies, and if standardization is achieved, this responsibility should not change, but should include the local level in the decision-making process. It makes sense that responsibility stay at the local level, given their proximity and knowledge of their own communities, as explained by Phil Graham and Christopher Stoney (2006), and by my *importance* data from Chapter 6 (see Table 6.1).

In terms of improving public-social relations (see Table 7.3), the standardization of frameworks and/or legislation was the third most important factor. In contrast to perceptions about inter-governmental relations (see Table 7.2), municipal respondents were the most interested in standardization for improving public-social interactions. This factor ties well with "better understanding of actor roles" in emergency management, which was the second most important factor for improving public-social sector relations, and the third for improving inter-governmental relations. In terms of public-social relations (see table 7.3), we can see how better understanding roles in the system would be an important factor given the lack of standardized legislative framework for the social sector in emergency management (Catto and Tombling 2013).

However, while the three other governmental actors suggested increasing CSO inclusion in policy dynamics, municipal respondents were the only group that included accountability measures for the social sector in their top five suggestions (see Table 7.3). We can see some animosity against CSOs in the following quotes from two different municipal respondents:

> Firstly the local authority must clearly understand the capacity and function the civil society plays in emergency management so that a partnership can be fostered, create dialogue so that there is a greater understand of what can be provided and how to be accessed in times of need. In addition these organization[s] must understand the lines on authority and communication to ensure a coordinated response when deployed. (Municipal Respondent, 15 years of experience)

> Open and transparent communication and with consistency is needed to ensure that what is communicated in advance of a disaster is actually delivered when a disaster occurs. I believe that a better understanding is needed regarding what supports and services can be provided by international/national [non-governmental] organizations. There seems to be a disconnect. From my perspective, I see international/national civil society organizations collecting $ for those individuals who have been impacted, however I am not seeing those dollars return to the impacted individuals. (Municipal Respondent, 6.5 years of experience)

The standardization, understanding of roles, and social sector accountability suggestions show that the local level is the most interested in remedying the ambiguity surrounding CSO roles in the system. This also shows that there is some degree of animosity from municipal actors towards CSOs, which as described in the above quotes, is related to authority and resource competition between the local level and large non-governmental actors.[19] Hence, capacity building seems to be a challenge at the local level, and municipal authorities seem to dislike the role of some CSOs in covering local capacity gaps. We can track this animosity since Chapter 5, where municipal and CSO respondents tended to undermine each other's involvement the most (see Figure 5.3).

Incrementing vertical (from federal and provincial actor) support for intra-provincial governments through fiscal and operational capacity building was perceived to be the fourth most important factor for improving inter-actor relations (see Tables 7.2 and 7.3). However, this was the second most important factor for improving inter-governmental relations from municipal and regional respondents, which was more important than standardization and better understanding actor roles (see Table 7.2).

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[19] See Figure 6.2 and Table 6.2 in the "Findings: Comparative Views About Social Actor Importance" section from Chapter 6, which shows that large CSOs are perceived to be the most important social sector actors, as well the main providers of non-governmental resources in emergency management.

Vertical fiscal and operational capacity were, however, a lower importance factor for federal and CSO respondents, and the least important factor for provincial respondents (see Table 7.2). This is interesting when we look at the overall responses in Table 7.2 and realize that the fifth most important suggestion for improving inter-governmental relations is a more involved federal level. These recommendations and the difference in perceptions between intra-provincial and higher levels of government speak to a gap in capacity building at the local level driven from a disconnect with the federal level, which has been reiterated empirically throughout this thesis. Nevertheless, for intra-provincial governmental actors, fiscal and operational capacity is more important than standardization or legislative capacity.

In short, according to my survey participants, to improve inter-governmental and inter-sector relations there needs to be better partnerships and communication among actors; more standardization; better understanding of actor roles; an increase in vertical capacity building and federal presence; and an increase in CSO policy involvement. This suggests that there is an overall perception about disconnection and fragmentation in the policy community of Canadian emergency management.

However, recommendations varied among respondent groups, once again highlighting a disconnect between intra-provincial and federal actors, and suggesting a capacity gap at the local level that, as previously mentioned in this thesis, would be covered by social actors. Nevertheless, we also saw further evidence of social sector role ambiguity, as well as animosity from the local level towards CSOs in this chapter, which questions the effectives and legitimacy of CSOs to cover local level capacity gaps in Canadian emergency management.

7.5. Chapter 7 Summary

The first two sections of this chapter provided quantifiable actor interaction data from my elite practitioner survey. An important finding from these sections is a disconnect between the perceptions of all survey participants, where all specific-actor participants underestimated the eagerness of other actors to work with them, despite most actors showing a keen interest in working with them.

The overall view of the qualitative data about actor interaction in the last section of this chapter showed that the most important suggestions provided by survey participants for improving inter-governmental and inter-sector relations are improving partnerships and communication

among actors, followed by more standardization in emergency management. An increased presence and leadership from the federal level was perceived to also improve inter-governmental relations, and a better understanding of the different actors and their roles in emergency management was also perceived to be important for improving inter-sector relations.

These overall representations of my quantitative and qualitative data show us that there is a disconnect in the policy community of emergency management. All the different actors misunderstood the eagerness of interaction among each other, and they all suggested the need to improve the quality of partnerships and communication in the system. Furthermore, we saw evidence of the *multilevel fragmentation argument*, since standardization was a key factor suggested by respondents for improving interactions in emergency management. The multilevel fragmentation and lack of standardization factors may be catalysts for the policy community disconnect, since there also seems to be a lack of understanding of actor roles that transcends the ambiguity of the social sector, as well as insufficient leadership from the federal level.

As we moved through actor-focused data in the last two sections, we saw how those underestimations and perceptual differences concentrated in different actors. The three most salient disconnections were found first between intra-provincial governments (municipal and regional actors) and the federal government; second, in the indifferent interaction attitude of provincial responders towards federal actors that reflects an overprotective provincial jurisdiction; and third, in the misunderstanding of CSOs from public sector actors that showcases the result of non-regulatory standardization in the social sector.

This is a reoccurring finding throughout my thesis that reflects the *multilevel fragmentation argument*. It portrays a distant and disengaged federal level and an overprotective provincial jurisdiction, which potentially creates capacity gaps at the local level. As reiterated throughout this thesis, federal distance and disconnect disrupts the interaction between the most responsible actor, the municipality, from the most fiscally capable actor, the federal level. This capacity gap at the local level is supposed to be bridged by CSOs. However, as persistently shown in this project, social actor roles and interactions are somewhat ambiguous, and are also looked at with suspicion from local actors, raising serious questions about the capacity of CSOs to help cover a public sector gap effectively and legitimately.

Therefore, fragmentation and disconnection exist in the interactions among Canadian emergency management actors, with marginalized and burdened municipalities, overprotective

provincial authorities, and an inadequate federal leadership. Additionally, there are potential public sector gaps from the separation of responsibility and fiscal capacity at the local level, that are supposed to be bridge by a misunderstood and somewhat illegitimate social sector. These factors hinder the prospects of establishing a standardized Canada-wide mitigation strategy that would be implemented through local level management, and federal level funding and leadership.

Chapter 8: Conclusions on the Pervasiveness of a Reactive Emergency Management

Let us recap this thesis to better synthesize the findings and arguments found here. My research questions investigated the persistence of a reactive rather than proactive approach in the Canadian emergency management system, and the part that multilevel actors play in this pattern. The premises for these questions were gathered from governmental primary sources that acknowledge the challenge to implement a national mitigation strategy, and from the scholarship on Canadian emergency management that describe this system as reactive. These premises were verified empirically in Chapter 4 through the perceptions of elite practitioners from the public and social sectors in Canadian emergency management.

In the literature review from Chapter 2, I conceptualized the *fragmented multilevel governance* explanation as comprehensive for analyzing the reactive rather than proactive approach to Canadian emergency management through a multilevel governance lens. This is an umbrella explanation that contains the following four salient arguments: (1) legislative and fiscal marginalization at the local level; (2) inter- and intra-provincial fragmentation; (3) a distanced federal level; and (4) public-social sector fragmentation.[20]

To test these arguments, I employed an empirical framework to study multilevel actor roles and relationships, which consisted of analyzing elite practitioner perceptions about three factors: actor *involvement*, actor *importance*, and actor *interactions*. I implemented this empirical framework in Chapters 5, 6 and 7, where each chapter dealt with a particular factor, respectively.

The first two sections of this chapter explore the most salient, big picture findings from my analytical and empirical frameworks. The third section explores suggestions for implementing a proactive approach to addressing emergencies based on the findings from this project. The last section provides future research direction for the scholarship of emergency management in Canada.

[20] See the next section for a description of these four arguments.

8.1. Multilevel Governance Fragmentation

As previously mentioned in this chapter, I created the *fragmented multilevel governance* explanation as my analytical framework, which consists of four arguments. First, although municipalities are the most knowledgeable about their own communities, they are burdened with the responsibility to manage emergencies because they are more often marginalized from the legislative decision-making process owned by the Province. We can see evidence of this in my empirical chapters, where municipalities were given the highest actor involvement scores, and were perceived to be the most important actor due to their responsibility to manage emergencies and to their proximity to affected communities. Furthermore, there was evident interaction friction between intra-provincial (municipal and regional) and provincial respondents, which suggests that intra-provincial governmental actors are not contempt about their dependant relationship with the Province in emergency management. This friction was present in the description of municipal-provincial relations in the literature (Juillet and Koji 2013; and Morrison et al. 2018), but the notion of regional-provincial friction is an original contribution from this thesis to the Canadian emergency management literature.

Second, there is considerable heterogeneity in emergency management approaches between and inside of provinces due to the concentration of jurisdiction at the provincial level. Although this project did not consist of a comparative study between provinces but among multilevel actors and emergency phases, it nevertheless provided a glimpse into this argument. In Chapters 5 to 7, we saw how regional actors were moderately misunderstood in emergency management, which showed evidence of the lack of standardization of regionalization across provinces.

The third and perhaps most important argument considers a jurisdictional bottleneck at the provincial level, which distances the federal level in emergency management. This creates a disconnect between federal fiscal capacity from local knowledge and responsibility, possibly creating public sector gaps at the local level. My empirical chapters provide plenty of evidence for this argument, as out of all the actors studied in this thesis, federal involvement scores were persistently the lowest, as well as the most different across the four policy phases. Federal importance scores somewhat followed its involvement scores, except for in the most capital-intensive mitigation and recovery phases. In fact, the main reasons for federal importance were: (1) the provision of fiscal resources, which the literature supports; and (2) leadership in the system, which the literature describes as lacking but important to implement. Furthermore, my interaction

data showed a pattern of disconnect between local and federal players, which when compared to these actors' *importance* data, it is in fact a disconnect between responsibility and fiscal capacity. Although this project did not examine specific examples of public sector gaps, it did verify the systemic and governance conditions for the existence of such gaps, which are derived from the disconnect of intra-provincial and federal governmental levels.

The final argument in the *fragmented multilevel governance* explanation stipulates that the social sector is expected to cover such public sector gaps, as suggested by New Public Management policies introduced in the 1980s and 1990s, but there is no standardized legislative framework for the social sector, making its role ambiguous. This notion was supported by my data throughout this thesis, as the role of CSOs was consistently and moderately misunderstood by public sector actors. Despite the misunderstanding, CSOs were perceived to be highly involved and important actors in emergency management, which shows their crucial role in resource provision as demonstrated in my *importance* chapter. Nevertheless, the role of CSOs is overshadowed first by a lack of social sector standardization, and second by an apparent competition with the local level for resources and authority in the system. Therefore, there seems to be a public sector gap at the local level that is attempted to be bridged by CSOs from an ambiguous role that is not necessarily welcomed or trusted by municipalities. This creates a conundrum for the effectiveness of emergency management in Canada.

In sum, the most salient explanation for the low performance and reactive approach found in the emergency management literature is the vertical, horizontal, and inter-sector fragmentation in this multilevel governance area. Vertically, there is a concentration of power where the Province controls most of the jurisdiction, where the federal level is distant, and where intra-provincial governments suffer from legislative and fiscal marginalization. Horizontally, there is considerable asymmetry in legislation and in the approaches taken between provinces, as well as among municipalities, which prevents effective regionalization. Finally, at the inter-sector dimension, there is a disruption between state and non-governmental organizations, where CSOs are important actors that are moderately misunderstood and distrusted within the policy community, and function in the public sphere without a legislative framework. Hence, this vertical, horizontal, and inter-sector fragmentation prevents the proper development and implementation of a Canada-wide standardized framework, federal leadership, and mitigation strategy.

8.2. Policy Community Disconnection

As shown in the previous section, as argued by the literature (Juillet and Koji 2013), and as empirically supported in my thesis, federal distance disconnects this governmental level from intra-provincial public actors. However, federal disconnect goes beyond its distanced role, and in this thesis, I discovered that it is also reflected in the perceptions provided by federal respondents.

Throughout Chapters 4 to 7 we saw how federal respondents provided the most different and deviant responses. When compared to other respondent cohort perceptions, federal respondents consistently provided disproportionate and exaggerated scores about system performance, as well as about other actors' and own involvement and interaction. It seems that federal respondents are not only disconnected from acting in the emergency management system but are also disconnected from knowledge and understanding about other actors in this system.

With regards to specific actors, we saw throughout this thesis a clear pattern of public and social actor misunderstanding. On the public sector side, we saw how regional and federal actors were somewhat misunderstood by other survey respondents. This correlates with the non-standardization of regional entities, and the distanced role of the federal level described in the *fragmented multilevel governance* explanation. On the social sector side, we saw how CSO roles and interactions were consistently and highly misunderstood by public sector respondents, which speaks to the non-standardization of the social sector argument. Therefore, some actors are less understood than others, and this has to do with disconnected and non-standardized roles in the system.

There was also a prevalent disconnect between emergency management inter-actor perceptions in my data. The most salient disconnect in my survey respondents' perceptions were found in Chapters 5 and 7. Chapter 5 looked at the perceptions about actor *involvement*, where we saw how every respondent cohort tended to inflate its own involvement scores, or other survey respondent-cohorts tended to undermine other actors' involvement scores. This shows that there is a disconnect in how different public and social actors perceive each other's roles in emergency management.

The *interaction* data from Chapter 7 also showed a pattern of disconnect, where all respondent-cohorts underestimated the eagerness of other actors to work with them, despite most actors expressing interest in working with them. At this point, the inter-actor disconnect transcends the perceptions about how different actors act in the system, into a misunderstanding of the

eagerness of actors to work with each other, raising doubts about the effectiveness of cooperation and interaction in Canadian emergency management.

The overall findings about disconnection are reminiscent of the biblical story of the Tower of Babel, where humans lose the ability to work together as they all begin to speak different languages and cease to understand each other. Likewise, a disconnected governance system where public and social actors exaggerate, undermine, and misunderstand each others' roles and eagerness to interact cannot be expected to function effectively. A real challenge that arises from this would be in the creation of a national, standardized mitigation strategy, where all actors in the policy community must cooperate and follow the same frameworks to establish large, complex, multi-jurisdictional, capital-intensive, long-term regulatory, and highly interactive mitigation projects. This is a novel contribution to the analysis of reactiveness in emergency management.

8.3. Implementing a Proactive Emergency Management System

The general takeaway from this thesis is that Canadian emergency management is reactive rather than proactive, which is largely due to a fragmented and disconnected multilevel governance. Practitioners and scholars alike perceive that a reactive approach is not beneficial for governing emergencies, and a proactive framework should be established to effectively address hazards. Nevertheless, adopting a proactive approach has proven to be difficult in Canada. This section therefore explores some suggestions for adopting a proactive approach, which are guided by the findings and lessons from this project.

The first change I would suggest would be to change the division of powers and responsibilities in the policy area of emergency management. One way to implement such change would be to add emergency management provisions directly into the Canadian Constitution for effective jurisdictional recognition, as suggested by Luc Juillet and Junichiro Koji (2013), Robert Young and Daniel Henstra (2013), Jonathan Raikes and Gordon McBean (2016 and 2017), and John Lindsay (2014 and 2018). However, I would also suggest the creation of a constitutional role for municipal actors, which either gives them separate constitutional jurisdiction, or where municipalities become a shared provincial-federal jurisdiction in emergency management. This would deviate from the role of the local level as "child" or "creature" of the province, as often described in public policy rhetoric. It would reciprocate the already established responsible role

with new legislative and decision-making powers that municipalities deserve in emergency management.

Unfortunately, it is very difficult to embark in constitutional change to create a role for municipalities in Canada (Sancton 2012). Nevertheless, there may be other changes that do not require drastic constitutional change. Perhaps the most important would be to decentralize jurisdiction from the provincial level to a large extent and change the provincial role as supportive instead of decisive in emergency management, since jurisdiction is not stipulated constitutionally. This suggestion stems after studying the emergency management scholarship from Chapter 2, as well as after analyzing my empirical data throughout this project. There, we saw how the provincial jurisdictional bottleneck marginalizes intra-provincial governments and influences the distant and disengaged role of the federal level. This disconnects the delegated responsibility of municipalities and regional entities from direct capacity building that could be provided by the federal government, which is problematic for implementing a pan-Canadian mitigation strategy.

Therefore, substantially increasing federal leadership and involvement in emergency management is important for improving performance and proactiveness in the system. This would create a direct channel of communication and cooperation between local/regional actors and the federal level. It could mitigate public sector gaps at the local level that were insinuated by my survey respondents, and increase leadership at the governmental level that enjoys the largest fiscal capacity in Canada. However, emergency management should not be largely centralized at the federal level, like that in the United States (Newton 1997; Henstra and Sancton 2002; Henstra 2003; and McEntire and Lindsay 2012). Instead, provincial governments should have a seat in the decision-making process along with the federal and local levels. Canada is a large and regionally diverse country, where provinces play a pivotal role of representing and understanding regional characteristics and interests. As Daniel Henstra and Andrew Sancton put it:

> Any national strategy in Canada must account for regional differences and build on provincial initiatives to ensure compatibility and minimize conflict. The autonomy and regional interests of the provinces should not be regarded as a barrier, but instead should be used to guide targeted strategies for mitigation of hazards, recognizing the regional expertise of provincial officials and building on programs developed by the provinces. (Henstra and Sancton 2002:24)

Another suggestion would be to establish public and social sector standardized frameworks. These frameworks would create similar patterns for managing emergencies across provinces, which should improve the chances of establishing a comprehensive pan-Canadian mitigation strategy. This notion should also be applicable within provinces, where the standardization of regionalization should improve intra-provincial approaches, and better support municipalities from an established and understood regional framework. This would improve the chances of applying mitigation strategies among municipalities with the involvement of escalating governmental levels. Standardized frameworks could also strengthen the social sector, since it would clarify CSO roles and relationships, while increasing social sector understanding and legitimacy from governmental actors.

Finally, perhaps the easiest and one of the most important suggestions for improvement would be to simply invest in inter-actor relationship building. This was the most recurrent suggestion for improving inter-governmental and inter-sector interactions by my survey respondents. It involves creating better channels of communication and cooperation among all multilevel actors in the policy community, such as through periodical summits/conferences, policy development/implementation committees, and multilevel representation in municipal and regional Emergency Operations Centres. Effective multilevel cooperation and collaboration is essential for establishing a proactive/mitigation strategy in Canadian emergency management.

8.4. Future Research Directions

One valuable extension to the research I have done would be to add private actors to the multilevel governance analysis. There is a large industry that addresses emergencies, which is well established in the United States, and it is starting to pick up momentum here in Canada. Private sector professionals that have access to an international emergency management industry could provide valuable knowledge to future studies. It would also be important to study how a business model for addressing emergencies works, and explore the ethics of such industry, since emergencies create and exacerbate vulnerabilities for communities.

It would also be valuable to incorporate Quebec and the North into this analysis. I believe that a bilingual approach would be suitable for studying emergency management in Quebec. In the case of the territories, because of their low and sparce populations, a focused comparative study between the three territories would be methodologically sound.

A thorough study of Indigenous, First Nations and Métis communities, which should include those located in the territories, would also be valuable. Although there are several studies about emergency management in Quebec, these studies about Indigenous, First Nations and Métis communities are notoriously missing. I believe that it is crucial for scholars of Canadian Indigenous Politics to seriously pay attention to emergency management in these communities, since emergencies exacerbate already established and potential vulnerabilities in populations. These studies could also uncover factors about Canadian Indigenous-Settler relations. It would be very interesting to test whether or to what extent racist and colonial attitudes and policies against Indigenous, First Nations and Métis communities emerge during times of crisis. Furthermore, these studies would provide an interesting parallel to the findings about federal distant and disengaged roles from this thesis, given that the federal government holds jurisdiction over Crown-Indigenous Relations and Northern Affairs in Canada.

Another important research project to consider would be a mirror study of elite perceptions presented in this thesis but focusing on elected officials. Such study would provide interesting comparisons to the findings presented in this project about the roles and interactions of public and social actors in the different phases of emergency management. This study would be important in testing the influence that public visibility and political currency have on the perseverance of a reactive approach from a politician's view, as argued in the *temporal explanation* of reactive emergency management (see Chapter 2).

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Appendix

Appendix A – Extended Comparison of Sampling Frame and Respondents

Invited From	Number of Invited Individuals	Percentage Breakdown of Invited	Number of Completed Surveys	Response Rate
MUNICIPALITIES	209	21%	53	31%
From British Columbia	86	9%	15	9%
Abbotsford	1	0.1%	Confidential	Confidential
Burnaby	3	0.3%	Confidential	Confidential
Armstrong	1	0.1%	Confidential	Confidential
Campbell River	2	0.2%	Confidential	Confidential
Castlegar	2	0.2%	Confidential	Confidential
Chilliwack	5	0.5%	Confidential	Confidential
Colwood	5	0.5%	Confidential	Confidential
Coquitlam	1	0.1%	Confidential	Confidential
Courtenay	1	0.1%	Confidential	Confidential
Dawson Creek	2	0.2%	Confidential	Confidential
Delta	6	0.6%	Confidential	Confidential
Duncan	1	0.1%	Confidential	Confidential
Enderby	1	0.1%	Confidential	Confidential
Fernie	1	0.1%	Confidential	Confidential
Fort St. John	1	0.1%	Confidential	Confidential
Kamloops	2	0.2%	Confidential	Confidential
Kelowna	1	0.1%	Confidential	Confidential
Kimberley	5	0.5%	Confidential	Confidential
Langford	1	0.1%	Confidential	Confidential
Langley	2	0.2%	Confidential	Confidential
Maple Ridge	1	0.1%	Confidential	Confidential
Merritt	2	0.2%	Confidential	Confidential
Nanaimo	3	0.3%	Confidential	Confidential
New Westminster	2	0.2%	Confidential	Confidential
North Vancouver	1	0.1%	Confidential	Confidential
Parksville	2	0.2%	Confidential	Confidential
Penticton	1	0.1%	Confidential	Confidential
Pitt Meadows	2	0.2%	Confidential	Confidential
Port Alberni	1	0.1%	Confidential	Confidential
Port Coquitlam	1	0.1%	Confidential	Confidential
Port Moody	2	0.2%	Confidential	Confidential

Prince George	1	0.1%	Confidential	Confidential
Surrey	3	0.3%	Confidential	Confidential
Terrace	1	0.1%	Confidential	Confidential
Vernon	1	0.1%	Confidential	Confidential
Victoria	5	0.5%	Confidential	Confidential
Vancouver	9	0.9%	Confidential	Confidential
West Kelowna	3	0.3%	Confidential	Confidential
White Rock	1	0.1%	Confidential	Confidential
From Alberta	46	5%	18	11%
Airdrie	3	0.3%	Confidential	Confidential
Brooks	3	0.3%	Confidential	Confidential
Calgary	9	0.9%	Confidential	Confidential
Camrose	2	0.2%	Confidential	Confidential
Chestermere	1	0.1%	Confidential	Confidential
Cold Lake	1	0.1%	Confidential	Confidential
Edmonton	6	0.6%	Confidential	Confidential
Fort Saskatchewan	2	0.2%	Confidential	Confidential
Lacombe	3	0.3%	Confidential	Confidential
Leduc	2	0.2%	Confidential	Confidential
Lethbridge	4	0.4%	Confidential	Confidential
Lloydminster	2	0.2%	Confidential	Confidential
Red Deer	3	0.3%	Confidential	Confidential
Spruce Grove	1	0.1%	Confidential	Confidential
St. Albert	3	0.3%	Confidential	Confidential
Wetaskiwin	1	0.1%	Confidential	Confidential
From Saskatchewan	7	1%	5	3%
Prince Albert	1	0.1%	Confidential	Confidential
Saskatoon	2	0.2%	Confidential	Confidential
Regina	2	0.2%	Confidential	Confidential
Moose Jaw	2	0.2%	Confidential	Confidential
From Manitoba	5	1%	3	2%
Winnipeg	1	0.1%	Confidential	Confidential
Brandon	2	0.2%	Confidential	Confidential
Steinbach	1	0.1%	Confidential	Confidential
Thompson	1	0.1%	Confidential	Confidential
From Ontario	51	5%	8	5%
London	5	0.5%	Confidential	Confidential
Hamilton	1	0.1%	Confidential	Confidential
Milton	3	0.3%	Confidential	Confidential
Windsor	2	0.2%	Confidential	Confidential
Toronto	6	0.6%	Confidential	Confidential
Kingston	2	0.2%	Confidential	Confidential

Guelph	1	0.1%	Confidential	Confidential
Brampton	4	0.4%	Confidential	Confidential
Oakville	3	0.3%	Confidential	Confidential
Thunder Bay	5	0.5%	Confidential	Confidential
Brantford	1	0.1%	Confidential	Confidential
Vaughan	1	0.1%	Confidential	Confidential
Kitchener	1	0.1%	Confidential	Confidential
Barrie	1	0.1%	Confidential	Confidential
Markham	1	0.1%	Confidential	Confidential
Ottawa	1	0.1%	Confidential	Confidential
Richmond Hill	1	0.1%	Confidential	Confidential
St. Catharines	1	0.1%	Confidential	Confidential
Mississauga	11	1.1%	Confidential	Confidential
From New Brunswick	4	0%	1	1%
Saint John	1	0.1%	Confidential	Confidential
Moncton	3	0.3%	Confidential	Confidential
From Prince Edward Island	5	1%	0	0%
Charlottetown	3	0.3%	Confidential	Confidential
Summerside	2	0.2%	Confidential	Confidential
From Nova Scotia	2	0%	1	1%
Halifax	1	0.1%	Confidential	Confidential
Cape Breton	1	0.1%	Confidential	Confidential
From Newfoundland	3	0%	2	1%
St. Johns	2	0.2%	Confidential	Confidential
Conception Bay South	1	0.1%	Confidential	Confidential
REGIONAL ENTITIES	108	11%	25	15%
From British Columbia	28	2.9%	4	2.4%
From Alberta	52	5.3%	15	8.9%
From Saskatchewan	3	0.3%	0	0.0%
From Ontario	25	2.6%	6	3.6%
PROVINCIAL GOVERNMENTS	261	27%	52	31%
British Columbia	49	5.0%	11	6.5%
Alberta	39	4.0%	14	8.3%
Saskatchewan	39	4.0%	2	1.2%
Manitoba	43	4.4%	11	6.5%
Ontario	61	6.2%	8	4.7%
New Brunswick	19	1.9%	3	1.8%
Prince Edward Island	4	0.4%	1	0.6%
Nova Scotia	0	0.0%	0	0.0%
Newfoundland	7	0.7%	2	1.2%

FEDERAL GOVERNMENT	298	31%	20	12%
Agriculture and Agri-Food Canada	3	0.3%	Confidential	Confidential
Canada Border Services Agency	2	0.2%	Confidential	Confidential
Canadian Food Inspection Agency	11	1.1%	Confidential	Confidential
Canadian Heritage	3	0.3%	Confidential	Confidential
Canadian Nuclear Safety Commission	7	0.7%	Confidential	Confidential
Canadian Radio-television and Telecom. Commission	4	0.4%	Confidential	Confidential
Environment and Climate Change Canada	2	0.2%	Confidential	Confidential
Fisheries and Oceans Canada	20	2.0%	Confidential	Confidential
Global Affairs Canada	11	1.1%	Confidential	Confidential
Health Canada	13	1.3%	Confidential	Confidential
Indigenous and Northern Affairs Canada	7	0.7%	Confidential	Confidential
Indigenous Services Canada	1	0.1%	Confidential	Confidential
Innovation, Science and Economic Development Canada	5	0.5%	Confidential	Confidential
Justice Canada	7	0.7%	Confidential	Confidential
National Energy Board	6	0.6%	Confidential	Confidential
Natural Resources Canada	4	0.4%	Confidential	Confidential
Privy Council Office	4	0.4%	Confidential	Confidential
Public Health Agency of Canada	18	1.8%	Confidential	Confidential
Public Safety Canada	53	5.4%	Confidential	Confidential
Public Services and Procurement Canada	4	0.4%	Confidential	Confidential
Royal Canadian Mounted Police	9	0.9%	Confidential	Confidential
Service Canada	5	0.5%	Confidential	Confidential
Shared Services Canada	6	0.6%	Confidential	Confidential
Transport Canada	93	9.5%	Confidential	Confidential
CIVIL SOCIETY ORGANIZATIONS	101	10%	19	11%
Canadian Red Cross	16	1.6%	Confidential	Confidential
BC Association of Emergency Managers	8	0.8%	Confidential	Confidential
Ontario Association of Emergency Managers	4	0.4%	Confidential	Confidential
The Disaster Recovery Information Exchange	3	0.3%	Confidential	Confidential
Mennonite Disaster Service Canada Office	1	0.1%	Confidential	Confidential
Mennonite Central Committee (MCC)	13	1.3%	Confidential	Confidential
St. John Ambulance	10	1.0%	Confidential	Confidential
Salvation Army	6	0.6%	Confidential	Confidential
Food Banks Canada	9	0.9%	Confidential	Confidential
Calgary Food Bank	1	0.1%	Confidential	Confidential
Calgary Seniors' Resource Society	1	0.1%	Confidential	Confidential
Distress Centre (Calgary)	1	0.1%	Confidential	Confidential
Kerby Centre (Calgary)	1	0.1%	Confidential	Confidential

Calgary Chinese Community Service Association	1	0.1%	Confidential	Confidential
Carya (Calgary)	1	0.1%	Confidential	Confidential
Meow Foundation	1	0.1%	Confidential	Confidential
AB Spay & Neuter Task Force (ABSNTF)	1	0.1%	Confidential	Confidential
AARCS	2	0.2%	Confidential	Confidential
Canadian Centre for Emergency Preparedness	5	0.5%	Confidential	Confidential
Canadian Association of Fire Chiefs	2	0.2%	Confidential	Confidential
Paramedic Association of Canada	5	0.5%	Confidential	Confidential
Canadian Risk and Hazards Network	4	0.4%	Confidential	Confidential
Canadian Task Force 1	1	0.1%	Confidential	Confidential
Canadian Task Force 2	1	0.1%	Confidential	Confidential
International Association of Emergency Managers	3	0.3%	Confidential	Confidential
Total	977	100%	169	17%

Appendix B – Survey Design

Block 0: Consent

Q1. Consent
- (1) Consent and Continue
- (2) Quit

Block 1: Description of Respondent

Q2. Please choose the sector of emergency management you work in:
- (1) Municipal Government
- (2) Multi-Municipal Regional Entity
- (3) Provincial Government
- (4) Federal Government
- (5) Civil Society Organization (non-governmental, non-profit, etc.)

Q3. How long have you been involved in emergency management?
- Numerical answer

Block 2: Perceptions about Emergency Management

Q4. What type of natural disaster is the most frequent in your Community?
- (1) Drought
- (2) Flood
- (3) Wildfire
- (4) Heat event
- (5) Cold event
- (6) Hurricane/typhoon/tropical storm
- (7) Storm surge
- (8) Hailstorm and severe thunderstorm
- (9) Winter storm
- (10) Tornado
- (11) Earthquake
- (12) Tsunami
- (13) Other: (Open-ended answer)

Q5. Of the natural disasters that could happen in your community, which has the most destructive potential?
- (1) Drought
- (2) Flood
- (3) Wildfire
- (4) Heat event
- (5) Cold event
- (6) Hurricane/typhoon/tropical storm
- (7) Storm surge
- (8) Hailstorm and severe thunderstorm
- (9) Winter storm
- (10) Tornado
- (11) Earthquake
- (12) Tsunami
- (13) Other: (Open-ended answer)

Q6. How familiar are you with the following phases of emergency management? (2) Very familiar; (1) Somewhat familiar; and (0) Not familiar at all.
- Q6_1 Mitigation
- Q6_2 Preparedness

- Q6_3 Response
- Q6_4 Recovery

Q7. In your opinion, how well is the Canadian emergency management system performing in each of these phases? (3) Excellent; (2) Good; (1) Fair; (0) Poor; and (99) Not sure.

- Q7_1 Mitigation
- Q7_2 Preparedness
- Q7_3 Response
- Q7_4 Recovery

Block 3: Mitigation

Q8. In your opinion, how involved are the following actors in the mitigation phase of emergency management? (4) Extremely involved; (3) Very involved; (2) Moderately involved; (1) Slightly involved; (0) Not involved; and (99) Not sure.

- Q8_1 Municipal Government
- Q8_2 Regional or Multi-Municipal Agencies
- Q8_3 Provincial Government
- Q8_4 Federal Government
- Q8_5 Civil Society Organizations

Q9. Which governmental actor(s) do you think are the most important in the mitigation phase of emergency management? Why?

- Open-ended answer

Q10. Which civil society organization(s) do you think are the most important in the mitigation phase of emergency management? Why?

- Open-ended answer

Block 4: Preparedness

Q11. In your opinion, how involved are the following actors in the preparedness phase of emergency management? (4) Extremely involved; (3) Very involved; (2) Moderately involved; (1) Slightly involved; (0) Not involved; and (99) Not sure.

- Q11_1 Municipal Government
- Q11_2 Regional or Multi-Municipal Agencies
- Q11_3 Provincial Government
- Q11_4 Federal Government
- Q11_5 Civil Society Organizations

Q12. Which governmental actor(s) do you think are the most important in the preparedness phase of emergency management? Why?

- Open-ended answer

Q13. Which civil society organization(s) do you think are the most important in the preparedness phase of emergency management? Why?

- Open-ended answer

Block 5: Response

Q14. In your opinion, how involved are the following actors in the response phase of emergency management? (4) Extremely involved; (3) Very involved; (2) Moderately involved; (1) Slightly involved; (0) Not involved; and (99) Not sure.

- Q14_1 Municipal Government
- Q14_2 Regional or Multi-Municipal Agencies

- Q14_3 Provincial Government
- Q14_4 Federal Government
- Q14_5 Civil Society Organizations

Q15. Which governmental actor(s) do you think are the most important in the response phase of emergency management? Why?

- Open-ended answer

Q16. Which civil society organization(s) do you think are the most important in the response phase of emergency management? Why?

- Open-ended answer

Block 6: Recovery

Q17. In your opinion, how involved are the following actors in the recovery phase of emergency management? (4) Extremely involved; (3) Very involved; (2) Moderately involved; (1) Slightly involved; (0) Not involved; and (99) Not sure.

- Q17_1 Municipal Government
- Q17_2 Regional or Multi-Municipal Agencies
- Q17_3 Provincial Government
- Q17_4 Federal Government
- Q17_5 Civil Society Organizations

Q18. Which governmental actor(s) do you think are the most important in the recovery phase of emergency management? Why?

- Open-ended answer

Q19. Which civil society organization(s) do you think are the most important in the recovery phase of emergency management? Why?

- Open-ended answer

Block 7: Relationships

Q20. In your opinion, how interested are the following actors in the input and expertise of the municipal sector in emergency management? (based on sector response = Municipal) (2) Extremely; (1) Somewhat; (0) Not at all; and (99) Not sure.

- Q20_1 Regional or Multi-Municipal Agencies
- Q20_2 Provincial Government
- Q20_3 Federal Government
- Q20_4 Civil Society Organization

Q21. If given the opportunity, how eager is the municipal sector to work with each of the following actors in emergency management? (based on sector response = Municipal) (3) (2) Extremely; (1) Somewhat; (0) Not at all; and (99) Not sure.

- Q21_1 Regional or Multi-Municipal Agencies
- Q21_2 Provincial Government
- Q21_3 Federal Government
- Q21_4 Civil Society Organization

Q22. In your opinion, how interested are the following actors in the input and expertise of the regional or multi-municipal sector in emergency management? (based on sector response = Regional or Multi-Municipal Agencies) (2) Extremely; (1) Somewhat; (0) Not at all; and (99) Not sure.

- Q22_1 Municipal Government
- Q22_2 Provincial Government
- Q22_3 Federal Government

- Q22_4 Civil Society Organization

Q23. If given the opportunity, how eager is the regional or multi-municipal sector to work with each of the following actors in emergency management? ? (based on sector response = Regional or Multi-Municipal Agencies) (2) Extremely; (1) Somewhat; (0) Not at all; and (99) Not sure.

- Q23_1 Municipal Government
- Q23_2 Provincial Government
- Q23_3 Federal Government
- Q23_4 Civil Society Organization

Q24. In your opinion, how interested are the following actors in the input and expertise of the provincial sector in emergency management? (based on sector response = Provincial) (3) (2) Extremely; (1) Somewhat; (0) Not at all; and (99) Not sure.

- Q24_1 Municipal Government
- Q24_2 Regional or Multi-Municipal Agencies
- Q24_3 Federal Government
- Q24_4 Civil Society Organization

Q25. If given the opportunity, how eager is the provincial sector to work with each of the following actors in emergency management? (based on sector response = Provincial) (2) Extremely; (1) Somewhat; (0) Not at all; and (99) Not sure.

- Q25_1 Municipal Government
- Q25_2 Regional or Multi-Municipal Agencies
- Q25_3 Federal Government
- Q25_4 Civil Society Organization

Q26. In your opinion, how interested are the following actors in the input and expertise of the federal sector in emergency management? (based on sector response = Federal) (2) Extremely; (1) Somewhat; (0) Not at all; and (99) Not sure.

- Q26_1 Municipal Government
- Q26_2 Regional or Multi-Municipal Agencies
- Q26_3 Provincial Government
- Q26_4 Civil Society Organization

Q27. If given the opportunity, how eager is the federal sector to work with each of the following actors in emergency management? (based on sector response = Federal) (2) Extremely; (1) Somewhat; (0) Not at all; and (99) Not sure.

- Q27_1 Municipal Government
- Q27_2 Regional or Multi-Municipal Agencies
- Q27_3 Provincial Government
- Q27_4 Civil Society Organization

Q28. In your opinion, how interested are the following actors in the input and expertise of civil society organizations in emergency management? (based on sector response = Civil Society Organizations) (2) Extremely; (1) Somewhat; (0) Not at all; and (99) Not sure.

- Q28_1 Municipal Government
- Q28_2 Regional or Multi-Municipal Agencies
- Q28_3 Provincial Government
- Q28_4 Federal Government

Q29. If given the opportunity, how eager are civil society organizations to work with each of the following actors in emergency management? (based on sector response = Civil Society Organizations) (2) Extremely; (1) Somewhat; (0) Not at all; and (99) Not sure.

- Q29_1 Municipal Government
- Q29_2 Regional or Multi-Municipal Agencies
- Q29_3 Provincial Government

- Q29_4 Federal Government

Q30. In your experience, how is the involvement of civil society organizations in emergency management most often initiated?
- (1) By the civil society organization itself
- (2) By a government actor or legislation
- (3) By the affected community
- (4) Other: (Open-ended answer)

Block 8: Open Ended Questions

Q31. In your opinion, how could intergovernmental relations improve in emergency management?
- Open-ended answer

Q32. In your opinion, how could the relationship between governments and civil society organizations improve in emergency management?
- Open-ended answer

Block 9: Interview Request

Q33. Would you be willing to participate in a follow-up interview to provide additional expertise on emergency management policy roles and relationships in Canada? If so, please write your email address below. Please note: if you choose to provide your email address, it will never be linked to your responses in this survey.
- Open-ended answer

Appendix C – The Three Most Important Public Actor Roles During Each of the Four Emergency Management Phases by Respondent

	Municipal Respondents	Regional Respondents	Provincial Respondents	Federal Respondents	CSO Respondents	All Respondents
Municipal Importance in Mitigation	1) Distance to Affected Area 2) Knowledge and Expertise 3) Responsibility to Manage Emergency	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Educating the Public	1) Distance to Affected Area 2) Responsibility to Manage Emergency 3) Foster Cooperation and Coordination	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Knowledge and Expertise	1) Distance to Affected Area 2) Foster Cooperation and Coordination 3) Knowledge and Expertise	1) Distance to Affected Area 2) Responsibility to Manage Emergency 3) Knowledge and Expertise
Regional Importance in Mitigation	1) Distance to Affected Area 2) Knowledge and Expertise 3) Responsibility to Manage Emergency	1) Responsibility to Manage Emergency 2) Distance to Affected Area	1) Foster Cooperation and Coordination 2) Distance to Affected Area 3) Responsibility to Manage Emergency	N/A	1) Foster Cooperation and Coordination 2) Distance to Affected Area 3) Knowledge, Expertise, and Responsibility to Manage Emergency	1) Foster Cooperation and Coordination 2) Distance to Affected Area 3) Knowledge, Expertise, and Responsibility to Manage Emergency
Provincial Importance in Mitigation	1) Funding and Resource Provision 2) Educating the Public 3) Regulation and Leadership	1) Funding and Resource Provision 2) Regulation	1) Funding and Resource Provision 2) Foster Cooperation and Coordination 3) Regulation	1) Funding and Resource Provision 2) Knowledge and Expertise 3) Regulation and Leadership	1) Foster Cooperation and Coordination 2) Funding and Resource Provision 3) Distance to Affected Area, Knowledge and Expertise	1) Funding and Resource Provision 2) Foster Cooperation and Coordination 3) Regulation and Leadership
Federal Importance in Mitigation	1) Funding and Resource Provision 2) Leadership 3) Educating the Public and Regulation	1) Funding and Resource Provision 2) Regulation	1) Funding and Resource Provision 2) Foster Cooperation and Coordination 3) Leadership	1) Funding and Resource Provision 2) Leadership 3) Regulation	1) Foster Cooperation and Coordination 2) Funding and Resource Provision	1) Funding and Resource Provision 2) Foster Cooperation and Coordination 3) Leadership
Municipal Importance in Preparedness	1) Distance to Affected Area 2) Responsibility to Manage Emergency 3) Knowledge and Expertise	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Educating the Public	1) Distance to Affected Area 2) Responsibility to Manage Emergency 3) Knowledge and Expertise	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Educating the Public	1) Distance to Affected Area 2) Knowledge and Expertise 3) Responsibility to Manage Emergency	1) Distance to Affected Area 2) Responsibility to Manage Emergency 3) Knowledge and Expertise
Regional Importance in Preparedness	1) Foster Cooperation and Coordination 2) Distance to Affected Area	N/A	1) Foster Cooperation and Coordination 2) Distance to Affected Area	1) Responsibility to Manage Emergency 2) Distance to Affected Area	1) Distance to Affected Area 2) Foster Cooperation and Coordination	1) Foster Cooperation and Coordination 2) Distance to Affected Area

	3) Responsibility to Manage Emergency		3) Knowledge, Expertise, and Educating the Public	3) Knowledge and Expertise	3) Leadership	3) Responsibility to Manage Emergency
Provincial Importance in Preparedness	1) Funding and Resource Provision 2) Educating the Public 3) Regulation, and Foster Cooperation and Coordination	1) Regulation 2) Leadership	1) Responsibility to Manage Emergency 2) Foster Cooperation and Coordination 3) Educating the Public, and Funding and Resource Provision	1) Responsibility to Manage Emergency 2) Regulation 3) Distance to Affected Area, and Leadership	1) Regulation 2) Foster Cooperation and Coordination 3) Leadership	1) Regulation 2) Responsibility to Manage Emergency 3) Foster Cooperation and Coordination
Federal Importance in Preparedness	1) Funding and Resource Provision 2) Leadership 3) Foster Cooperation and Coordination	1) Regulation 2) Leadership	1) Leadership 2) Foster Cooperation and Coordination 3) Funding and Resource Provision	1) Regulation 2) Leadership	1) Foster Cooperation and Coordination	1) Regulation 2) Leadership 3) Foster Cooperation and Coordination
Municipal Importance in Response	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Knowledge and Expertise	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Knowledge and Expertise	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Foster Cooperation and Coordination	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Leadership	1) Responsibility to Manage Emergency 2) Distance to Affected Area	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Knowledge and Expertise
Regional Importance in Response	1) Operational Support for Local Level 2) Responsibility to Manage Emergency 3) Knowledge and Expertise	1) Operational Support for Local Level 2) Responsibility to Manage Emergency 3) Distance to Affected Area	1) Operational Support for Local Level 2) Responsibility to Manage Emergency 3) Foster Cooperation and Coordination	1) Responsibility to Manage Emergency 2) Distance to Affected Area	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Operational Support for Local Level	1) Operational Support for Local Level 2) Responsibility to Manage Emergency 3) Distance to Affected Area
Provincial Importance in Response	1) Operational Support for Local Level 2) Funding and Resource Provision 3) Responsibility to Manage Emergency	1) Operational Support for Local Level	1) Operational Support for Local Level 2) Funding and Resource Provision 3) Foster Cooperation and Coordination	1) Leadership 2) Operational Support for Local Level 3) Responsibility to Manage Emergency, and Funding and Resource Provision	1) Operational Support for Local Level 2) Regulation 3) Funding and Resource Provision	1) Operational Support for Local Level 2) Funding and Resource Provision 3) Responsibility to Manage Emergency
Federal Importance in Response	1) Operational Support for Local Level 2) Funding and Resource Provision	1) Operational Support for Local Level	1) Operational Support for Local Level 2) Funding and Resource Provision	1) Leadership 2) Foster Cooperation and Coordination	1) Operational Support for Local Level 2) Foster Cooperation and Coordination	1) Operational Support for Local Level 2) Foster Cooperation and Coordination

	3) Leadership and Regulation		3) Foster Cooperation and Coordination			3) Funding and Resource Provision
Municipal Importance in Recovery	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Foster Cooperation and Coordination	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Leadership	1) Distance to Affected Area 2) Foster Cooperation and Coordination 3) Responsibility to Manage Emergency	1) Responsibility to Manage Emergency 2) Distance to Affected Area	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Funding, Resource Provision, and Leadership	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Foster Cooperation and Coordination
Regional Importance in Recovery	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Foster Cooperation and Coordination	1) Responsibility to Manage Emergency 2) Leadership 3) Operational Support for Local Level	1) Foster Cooperation and Coordination 2) Responsibility to Manage Emergency 3) Funding and Resource Provision, and Operational Support for Local Level	N/A	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Operational Support for Local Level	1) Responsibility to Manage Emergency 2) Distance to Affected Area 3) Foster Cooperation and Coordination
Provincial Importance in Recovery	1) Funding and Resource Provision 2) Foster Cooperation and Coordination 3) Leadership	1) Funding and Resource Provision 2) Regulation	1) Funding and Resource Provision 2) Operational Support for Local Level 3) Responsibility to Manage Emergency	1) Responsibility to Manage Emergency 2) Regulation	1) Funding and Resource Provision 2) Operational Support for Local Level 3) Foster Cooperation and Coordination	1) Funding and Resource Provision 2) Regulation, and Operational Support for Local Level 3) Responsibility to Manage Emergency
Federal Importance in Recovery	1) Funding and Resource Provision 2) Foster Cooperation and Coordination 3) Leadership	1) Funding and Resource Provision	1) Funding and Resource Provision 2) Foster Cooperation and Coordination 3) Operational Support for Local Level	1) Funding and Resource Provision 2) Regulation 3) Leadership	1) Funding and Resource Provision 2) Operational Support for Local Level	1) Funding and Resource Provision 2) Foster Cooperation and Coordination 3) Operational Support for Local Level

Appendix D – The Three Most Important Social Actor Roles During Each of the Four Emergency Management Phases by Respondent

	Municipal Respondents	Regional Respondents	Provincial Respondents	Federal Respondents	CSO Respondents	All Respondents
Large CSO Importance in Mitigation	1) Educating the Public 2) Resource Provision 3) Distance to Affected Area	1) Educating the Public 2) Resource Provision 3) Public Trust and Credibility	1) Resource Provision 2) Educating the Public 3) Knowledge and Expertise	1) Educating the Public 2) Resource Provision 3) Mandated	1) Educating the Public 2) Knowledge and Expertise 3) Resource Provision, Public Trust and Credibility	1) Educating the Public 2) Resource Provision 3) Knowledge and Expertise
Regional CSO Importance in Mitigation	1) Educating the Public 2) Resource Provision 3) Distance to Affected Area	1) Educating the Public	1) Educating the Public 2) Resource Provision	1) Educating the Public	1) Resource Provision	1) Educating the Public 2) Resource Provision 3) Distance to Affected Area
Local CSO Importance in Mitigation	1) Distance to Affected Area 2) Educating the Public 3) Foster Cooperation and Coordination	1) Educating the Public	1) Distance to Affected Area 2) Resource Provision 3) Educating the Public	1) Educating the Public	N/A	4) Educating the Public 5) Distance to Affected Area 6) Resource Provision
Large CSO Importance in Preparedness	1) Educating the Public 2) Resource Provision 3) Distance to Affected Area	1) Educating the Public 2) Resource Provision 3) Public Trust, Credibility, Knowledge and Expertise	1) Resource Provision 2) Educating the Public 3) Knowledge and Expertise, and Foster Cooperation and Coordination	1) Resource Provision 2) Knowledge and Expertise 3) Distance to Affected Area	1) Educating the Public 2) Resource Provision 3) Public Trust, Credibility, Mandated, and Visibility	1) Educating the Public 2) Resource Provision 3) Public Trust, Credibility, and Distance to Affected Area
Regional CSO Importance in Preparedness	1) Foster Cooperation and Coordinatio n	1) Educating the Public	N/A	N/A	N/A	2) Educating the Public, and Foster Cooperation and Coordination
Local CSO Importance in Preparedness	1) Distance to Affected Area 2) Foster Cooperation and Coordination 3) Educating the Public	1) Educating the Public	1) Distance to Affected Area 2) Knowledge and Expertise	N/A	1) Distance to Affected Area	1) Distance to Affected Area 2) Educating the Public 3) Knowledge and Expertise
Large	1) Resource Provision	1) Resource Provision	1) Resource Provision	1) Resource Provision 2) Mandated	1) Resource Provision 2) Mandated	1) Resource Provision

CSO Importance in Response	2) Operational Support for Government 3) Knowledge and Expertise	2) Knowledge and Expertise 3) Operational Support for Government	2) Knowledge and Expertise 3) Mandated; Cover a Public Sector Gap; and Operational Support for Government	3) Visibility	3) Foster Cooperation and Coordination	2) Mandate, Knowledge and Expertise 3) Operational Support for Government
Regional CSO Importance in Response	N/A	1) Foster Cooperation and Coordinatio n	1) Foster Cooperation and Coordination 2) Resource Provision	N/A	N/A	1) Foster Cooperation and Coordination 2) Resource Provision
Local CSO Importance in Response	1) Resource Provision 2) Knowledge and Expertise 3) Volunteer Provision	1) Foster Cooperation and Coordination	1) Distance to Affected Area	1) Resource Provision	1) Resource Provision 2) Volunteer Provision	1) Resource Provision 2) Distance to Affected Area 3) Knowledge and Expertise
Large CSO Importance in Recovery	1) Resource Provision 2) Knowledge and Expertise 3) Operational Support for Government	1) Resource Provision 2) Knowledge and Expertise 3) Cover a Public Sector Gap, and Foster Cooperation and Coordination	1) Resource Provision 2) Knowledge and Expertise 3) Cover a Public Sector Gap, and Operational Support for Government	1) Resource Provision 2) Knowledge and Expertise 3) Mandated	1) Mandated 2) Knowledge and Expertise 3) Operational Support for Government	1) Resource Provision 2) Knowledge and Expertise 3) Mandate
Regional CSO Importance in Recovery	N/A	N/A	1) Resource Provision 2) Cover a Public Sector Gap	N/A	N/A	1) Resource Provision 2) Cover a Public Sector Gap
Local CSO Importance in Recovery	1) Resource Provision 2) Operational Support for Government 3) Volunteer Provision	N/A	1) Distance to Affected Area 2) Resource Provision, Knowledge and Expertise 3) Cover a Public Sector Gap	1) Distance to Affected Area	1) Resource Provision 2) Educating the Public	1) Resource Provision 2) Distance to Affected Area 3) Operational Support for Government