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POLITICIZATION, SOCIAL MEDIA, AND CRISIS  
MANAGEMENT:

THE 2011 CHRISTCHURCH EARTHQUAKE

**Bachelor Thesis**

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30<sup>th</sup> June 2016

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## **I. Abstract**

Natural disasters are becoming more frequent and severe in recent times, due to a growing population in vulnerable areas of the world. Because of their major societal impact, issues around natural disasters are increasingly disputed in the political arena. Even in crises that seem to stimulate decision makers finding a unitary solution, political decision makers follow their own agenda. In addition, modern technologies provide people with immediate access to social media, thus fundamentally altering the landscape for crisis communication. These technologies are increasingly used by crisis managers for information gathering in order to terminate the crisis the best possible way. The underlying research features an approach on how and to what extent the adequacy of crisis management is affected by politicization. Moreover incorporates this research the component of social media, since it is on a rise and scientific knowledge in this context is not available. By taking into account the impact of social media on how politicization affects crisis management valuable insights for crisis managers are created. However did it not directly affect the politicization, but rather fosters inter-organizational collaboration. This research focuses as well on improvisation from protocols and the way it is affected by politicization. The role how collaboration is affected by politicization and in turn how this leads to a better crisis management is explored. Nevertheless did the research find no connection between improvisation and the adequacy of crisis management. This research follows an exploratory approach, by using existing theories which are explored in the light of a real-event crisis. It shows that politicization has a direct and an indirect effect on crisis management. The analyzed case is the crisis after the earthquake in Christchurch, New Zealand from the 22<sup>nd</sup> February 2011.

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#### **IV. List of abbreviations**

CBD	Central business district
CCC	Christchurch City Council
CDEM	Civil Defence Emergency Management
CERA	Canterbury Earthquake Recovery Authority
CERR Act	Canterbury Earthquake Response and Recovery Act
CIMS	Coordinated Incident Management System
CPT	Causal-process tracing
CRC	Christchurch response center
CTV	Canterbury Television
EOC	Emergency Operations Centre
GNS	GNS (formerly: Institute of Geological and Nuclear Science)
HMNZS	Her Majesty's New Zealand Ship
MCDEM	Ministry of Civil Defence & Emergency Management
MFAT	Ministry of Foreign Affairs and Trade
M <sub>L</sub>	Magnitude local (Richter scale)
MP	Member of Parliament
NCMC	National crisis management center (“Beehive Bunker”)
NDRF	NGO Disaster Relief Forum
NGO	Non-governmental organization
NPO	Non-profit organization
NZDF	New Zealand Defence Force
ODESC	Officials Committee for Domestic and External Security Coordination
PM	Prime Minister
RNZAF	Royal New Zealand Air Force
SAF	Singaporean Armed Forces
SCIRT	Stronger Christchurch Infrastructure Rebuilding Team
TLA	Territorial local authority
UNISDR	United Nations Office for Disaster Risk Reduction
USAR	Urban Search and Rescue

# **1. Introduction and background**

## **1.1. Research object**

In recent times crises are getting more frequent, may it be man-made, due to technical failure or natural disasters. Especially to the latter a rising number of people in many countries is exposed to. This is due to a globalizing and ever growing world population. New challenges occur through crises. Decision makers have to react in order to get the best possible outcomes and means to cope with the issue.

On virtually all crises where the vital interests of society are affected political decision makers have to step in. Their decision-making affects the outcomes and the adequacy of crisis management. Hence the research will be about the relationship between the level of politicization and the adequacy of crisis management towards a natural disaster. However framing by politicians and officials is an important component in crisis management. Decision makers “frame what a crisis is all about [in order to] hold the key to defining the appropriate strategies for resolution” (Boin, 't Hart, Stern, & Sundelius, 2005, p. 82). Therefore they want the most support they can get, also in order to make the most out of the situation for their own political agenda. However is the outcome of a crisis steered towards a position beneficial for decision makers suiting their agendas. On the other hand inter-organizational collaboration and the level of improvisation is also affected by the level of politicization. This is because the officials and political decision makers are responsible for the action of the subordinated agencies and determine the level of improvisation from protocols, if needed. If there is a lot at stake for political leaders they are likely to comply strictly with the protocols, because in case of an error actors in charge can invoke the protocols. Collaboration is also not fostered by decision makers if an issue is politicized. Leaders would give away parts of their control or leaking information would end up in blame games. On the same time inter-organizational as well as interagency collaboration is fostered by the decision makers which has an influence on the adequacy of crisis management. This is because improvisation can overcome problems to which a solution was not manifested in the protocols. Many actors collaborating help as well to overcome the crisis, since information is shared, different kinds of tasks can be passed to experts and trust towards the decision makers is created. During the last decade social media became important in crisis management and communication not only for the rescue and relief of individuals (Merchant, Elmer, & Lurie, 2011). Social media has certain components, amongst other a political and a helping one (Macias, Hilyard, & Freimuth, 2009). In the Christchurch earthquake from February 2011 social media was extensively used by individuals, but also institutions such as the University of Canterbury. This component is taken into account by examining the relationship between the level of politicization and the adequacy of crisis management. It is important not to omit this variable, since the significance of such an instrument cannot be neglected. There are several studies where the usage and adequacy of social media as a crisis communication tool was examined.

However there is a lack of research where this component is integrated into the bigger picture and taking it as a moderating variable into account that influences the effects of politicization.

The research takes several variables together that play an important role by coping with a domestic natural disaster. Therefore the relationship between politicization and adequacy of crisis management will be examined thoroughly. It is set in the context of the Christchurch earthquake in New Zealand from 22<sup>nd</sup> February 2011. Because after all, this unprecedented crisis was managed effectively, despite of the unsatisfactory legal basis what regards crisis recovery.

## **1.2. Scientific and societal relevance**

As mentioned above crises become more omnipresent in recent times. Stakeholders and other political decision makers are demanded for decision making which mostly happens in political contexts. The exploratory research will examine the effect of politicization on the adequacy of crisis management in a context where the authorities were overstrained in the beginning, because such an unprecedented event had a huge impact not only on Christchurch. Especially including the social media into the bigger picture is important to learn for future events. Since the world is becoming more and more interconnected it is important to take this into account. How it will affect the adequacy of crisis management looking at the level of politicization. This may help decision makers to better anticipate their actions more thoroughly when having an extreme case provided. This might be useful for people in charge to fall back on when carrying out actions in terms of politicization. Existing theories can be expanded by taking the potential of social media into account it has on the organization of volunteer groups which reversely have an impact on other factors such as the level of inter-organizational collaboration. The scientific gap in the literature is present, because there is not much literature about how politicization by political decision makers affects the adequacy of crisis management. Moreover takes the literature social media usage not into account as a factor that has an impact on politicization by analyzing the overall adequacy of crisis management. The achieved learnings from this research can be useful to those who make decisions in crises. Those people can better understand how certain factors influence the adequacy of crisis management. Thus they are able to anticipate how adequate the termination of a crisis will be and may act in the best possible fashion. It can provide a helpful tool for those in decision making positions to draw back on. It aims as well to those who enjoy learning about established mechanisms in context of a crisis.

### **1.3. Research question**

The research is explanatory. It aims to explain the causes and effects of politicization on the adequacy of crisis management. Taking the case of the earthquake in Christchurch from February 2011 it follows an exploratory approach to test the theories and the research question. The main research question is the following:

**To what extent and how did politicization affect the adequacy of the crisis management by the New Zealand authorities after the Christchurch earthquake in February 2011?**

The research question is divided into four sub-research questions, which are tied to different theoretical mechanisms that affect the relationship between politicization and the adequacy of crisis management:

1. How did politicization affect (a) the level of improvisation and (b) the inter-organizational collaboration?
2. How did (a) the level of improvisation and (b) the inter-organizational collaboration affect the relation between politicization and adequacy of crisis management?
3. How did social media usage affect the relation between politicization and adequacy of crisis management?
4. How did social media usage affect (a) the level of improvisation and (b) inter-organizational collaboration?

## **2. Theoretical framework**

In this section a theoretical framework is introduced that explains the effects on the adequacy of crisis management. Like it was mentioned in the previous part there is an absence of scientific research from the effect of politicization on the adequacy of crisis management. In this section the concepts of politicization and social media, as well as improvisation and collaboration will be connected to the outcome.

### **2.1. Conceptualization – Adequacy of crisis management**

The concept of the dependent variable is a broad one. *Adequacy of crisis management* consists out of six sub-processes (Torenvlied et al., 2015) which are (1) adequate preparation. Which refers to the availability of crisis protocols for a certain event and their accessibility for decision makers. The (2) adequate recognition and signaling of crisis refers to the decision makers' ability "to determine how threatening the events are, to what or whom, what their operational and strategic parameters are, and how the situation will develop" (Boin et al., 2005, p. 11). Moreover does it refer to how the decision maker is signaling the crisis to subordinates. Thirdly the (3) adequate provision of information within crisis organization refers to how much and how useful the information is that is provided to the crisis organizations. So the level of uncertainty is reduced to a minimum. Another sub-process is (4) adequate analysis, judgement and preparation of decision-making. During a crisis resources are scarce and uncertainty is high, therefore it is vital to make a sound analysis and judgement to prepare the best possible options for decision making. Having then an adequate preparation means that the possible resources are taken into account and the best possible alternatives for each context are prepared. The (5) adequate decision-making and steering is where decision makers chose for an alternative provided to them, for example from protocols or advisory bodies, that will determine the outcome of the crisis. According to Boin decision-making requires "flexibility, improvisation, redundancy, and the breaking of rules" moreover does it demand "coordination of [...] different groups or agencies involved in the implementation of crisis decisions" (Boin et al., 2005, p. 12). This will be elaborated further as the mediating variables are conceptualized. The last sub-process is (6) adequate crisis communication. This refers to how the crisis is communicated to outsiders. On the one hand to inform the public in order to reduce uncertainty about the crisis and on the other to justify ones' actions towards the public and for political leaders towards the political arena as well. In order not to be opposed to blame games or to loose support for ones' actions.

## **2.2. Extant research on crisis management**

### **2.2.1. Politicization**

All issues that are dragged into the political arena and discussed by different parties that want to steer the outcome towards their direction are politicized. The goals for the outcomes are manifested in political agendas of the parties. If such issues that lie outside of everyday politics are discussed under these conditions they are politicized. The term *politicization* refers to a set of different characteristics and is more a process than a single variable. Boin describes in his book three political dimensions of crisis leadership which are “conflict, power and legitimacy” (Boin et al., 2005, p. 9). Here conflict refers to how much of the control of decision-making is in political hands, and what can be distributed. The stronger a party in parliament the more weighs its’ voice in disputes. One characteristic of politicization would be the attention that draws the crisis in the media as an outside political arena. The more dispute about an issue is present, the more salient it is covered in media and the higher the public notices the issues. Political leaders can use the media attention to get support for their decision, on the other hand support can also be crushed by the wrong kind of attention that does not fit to the leaders’ decisions. This is also used by blame games that actors in a crisis perform. Mostly the political opposition attacks the measures of crisis management performed by the government. Other actors and institutions have also possibilities to make political actors accountable for their actions. The other characteristic is the own position of the political actor. It is considered, since the position is moved towards a point that is best to bargain for a decision maker. A part of this is framing of the decision situation which refers to how the decision makers address the crisis and the meaning one attaches to it. Such frames affect interpretations and can be used to “highlight[...] certain of its features while masking other[s]” (Coombs, 2007, p. 105). When frames are competing the topic is more politicized, since each party wants to push their agenda. It is also a tool to get support from the population not only for the managing of the crisis, but also for the own person, for example with regard to upcoming elections. Nevertheless it is as well used to make use of the own political agenda and to enforce it in those times of uncertainty. Unlike ordinary-business, decision makers in crises are leaders in that certain event. Which they are not automatically in times where crises are absent, for example a national crisis management center. However decision makers are accountable to a higher instance, for political leaders this can be jurisdiction or the people. Still, leaders in crisis management are in democratic societies mostly groups of institutions that make decisions. Thus politicization consists of the salience political actors put in an issue paired with dissent about this certain issue among parties.

In an ever globalizing world that is interconnected news of a crisis spread rapidly. Stakeholder activism by affected people has “shape[d] crisis management” (Coombs, 2007, p. 9). Thus decisive decision makers have to react quickly, since their reputation is at stake. Unlike companies that face a loss in sales or

reputation due to a crisis, official decision makers face loss of reputation of their person or in democratic societies even endanger political coalitions.

Dekker and Hansén examine the influence of politicization in their article on organizational learning in public bureaucracies. This affects also the inter-organizational learning and collaboration. It is stated that “in some cases, a process of politicization is actually welcomed [...] because it opens a “window of opportunity” [...] that [was] previously unimaginable” (Dekker & Hansén, 2004, p. 219). However is as well stated that in case of urgency and serious matters not all executive parties are consulted in decision making. This may lead to difficulties especially in the field of implementation. The article concludes that learning in those organizations depends not so much on politicization, but rather on the characteristics of the involvement. This is considered having a positive effect if it is committed to structural solutions and the institutionalization of good practices. However the focus of this research is more on politicization as such. Decision makers might manage crises more adequately if there is a focus on them and important topics are pushed forward due to politicization. Nevertheless is a lot pressure put on crisis managers, may it be the press, members of the parliament, from the opposition, own party or the public. If decision makers fail to comply with these high expectations it has political consequences. Since “others might well seize the opportunity to fill the gap [that leaders failed to manage properly]” (Boin et al., 2005, p. 8). Therefore politicization as a tool for adequate crisis management is helpful in countries where “governments can simply “write off” certain people, groups, or territories, or when they can deal with threats regardless of the human costs or moral implications of their actions” (Boin et al., 2005, p. 8). This is not possible in a democratic country with a political opposition as in New Zealand.

Such preconditions are underlying in the paradox of open societies. In circumstances with an accountability processes that is accessible to interested actors openness leads to delays in the termination of the crisis. Actors therefore try to participate in blame games and try to “protect their self-interests rather than to serve the common good” (Boin et al., 2005, p. 103). If blame games accelerate once it is hard to get out, since every actor tries to defend his doings and it can turn into a dilemma. The decision on who is to blame follows a certain decision model with three stages. The first stage is how severe a situation was eventually, the second stage is the question on how it could have happened and the last stage is the responsibility and who should be sanctioned.

Legislators can attack the opposing side when they do not have a task related to the crisis or had one before to which an opponent could draw back. Such attacks come from opposition parties in parliament that use their ability to monitor the government, so they seek to weaken the ones in charge. Other institutions play the blame game as well such as the public that has the means to call political decision makers into account. The response leads to a weaker adequacy of crisis management, because during blame games the attacked actors focus on protecting their reputation in first place.

One lesson learned from Ulmer et al. is that “leaders should be open and honest following a crisis” (Ulmer, Sellnow, & Seeger, 2007, p. 142). Which would have a positive effect on the adequacy of crisis management. Otherwise the media may become aggressive towards the decision makers and stakeholders will become angry as well, if they do not know what is going on and “think the organization is trying to shift blame and avoid responsibility” (Ulmer et al., 2007, p. 53). However advisors, e.g. in companies, advise decision makers to remain silent, because any statement can be used against the decision makers. Eventually this could ruin the ones’ reputation and the companies’ as well. The same is the case for political decision makers since a reputation loss of their person and their party is at stake in terms of crises. Considering the negative media attention that decision makers receive the adequacy of crisis management in return is affected by that. The more control is in political hands, the less adequate the crisis management will be. This is especially the case when decision makers are not available nor open and honest. To not give away their sense of control, provide an advantage for another party involved or be a target of an opposing party, leaders of decision making processes often hold back information regarding this. Politicization negatively affects the level of the adequacy of crisis management, because of diverse opinions manifested in rigid political agendas. Thus a compromise for an adequate solution is harder to reach than if the issue is not politicized. Such important decisions that affect the outcome of a crisis are usually not made solely by one person alone, but rather a group decision with other factors influencing as well. The governmental politics model of Allison (Allison & Zelikow, 1999) states that in key decisions party politics and preferences play a factor that cannot be neglected. Through such processes not only the important resource time, but also other resources utilized in the politicization process will attenuate the adequacy of crisis management. Therefore the hypothesis is the following.

***H1: A high level of politicization leads to less adequate crisis management***

Uncertainty avoidance is a concept of Hofstede and indicates how comfortable members of a society feel about uncertainty. Thus “strong uncertainty avoidance societies maintain rigid codes of belief and behavior and are intolerant towards deviant persons and ideas” (Hofstede, 1984, p. 83). In weaker uncertainty avoidance societies principles are not that highly valued, therefore improvisation is rooted in such societies. Nevertheless has New Zealand a moderate score, so improvisation is in this society neither very restricted nor much stimulated. Whereas Boins’ theory states that the level of politicization influences inter-organizational collaboration and the level of improvisation negatively due to blame avoidance or the elimination of vulnerabilities (Boin & 't Hart, 2003). Having many political actors that work against each other or are responsible for different agencies will attenuate the collaboration as well as the improvisation where the agencies are not allowed to deviate from the protocols. In return improvising form protocols is sometimes vital to react in the best way possible. On the other hand there is a high risk at stake for the

decision maker when responsibilities are transferred. If something goes not the way leaders want it to be they will be very prone to be blamed for the errors. In a political context this can be the end of a political career. According to the principal agent theory self-interest plays a role when the agent, which are the subordinated agencies to the principal in this case the decision makers, exercise a task for the principal. Especially if different agencies are led by members of other parties. Therefore a high level of politicization, also when the political agendas are at stake has a negative effect on the level of inter-organizational collaboration and the level of improvisation. This results in the second hypothesis.

***H2: A high level of politicization leads to a low level of improvisation and to a low level of inter-organizational collaboration***

### 2.2.2. Inter-organizational Collaboration and Improvisation

*Inter-organizational collaboration* is how different organizations affected by the crisis interact and work hand in hand with each other in order to achieve the best possible crisis termination. Therefore it regards in this case the issue of centralization versus collaboration, the possibility where a balance can be made between steering all top-down or collaborating with other agencies and hand responsibilities to them. It may be official organizations, NGOs or volunteer groups that have never worked together before. The concept is not focusing on subsidiarity and which agency was responsible for which task, but it focuses on the collaboration across all involved organizations. This concept and improvisation go hand in hand, because otherwise knowledge exchange would not gain results fitting to the circumstances and eventually everyone involved had to stick to the protocols. The *level of improvisation* is how strictly agents follow the protocols and how much they are improvising out of it. It is the issue of balancing protocolization against improvisation. Depending on the specific circumstances of a crisis decision makers can adapt their strategies, if actions are highly protocolized strategies that can be applied may be more rigid. If strategies are highly politicalized agents have to act strictly to the protocol in order to secure that the accountability of the principal is not jeopardized. However is there not a lot of leeway given, which is needed in crisis situations. Both of those variables are affected by the level of politicization. Due to the principal-agent theory both can occur, even when the ties are so strong that there is no leeway to do so.

Having different agencies that join forces in times of crisis relates positive to the adequacy of crisis management. To work towards bringing back normality as well as the level of leeway that such organizations need to carry out their duty to their best, will contribute to the best possible outcome of the crisis. When it comes to improvisation there are different views, if one should rather stick to protocols or improvise according to the crisis. Boin et al. (Boin et al., 2005) point out that structure does not always trump the protocols in crisis situations, since they do not exist without a reason as a framework to refer to.

Nevertheless protocols make certain things impossible especially in crisis situations. Thus it is stated that “structure is best exploited by a healthy dose of improvisation” (Boin et al., 2005, p. 55). Roux-Dufort and Vidaillet emphasize that improvisation helps reducing the crisis, because “human coordination can react reliably in unpredicted situations” (Roux-Dufort & Vidaillet, 2003, p. 88). Improvisation is also a tool to overcome the rigidity of protocols, since protocols cannot predict the exact circumstances in which a crisis is set. This variable is grouped together with inter-organizational collaboration, since they are affected by the same independent variables and have both a positive effect on the adequacy of crisis management.

Regarding the inter-organizational collaboration the academic focus is more on learning in such networks (Moynihan, 2008). Through knowledge and exchange among the organizations the adequacy of crisis management is positively affected. However disputes and mistrust among agencies cannot foster an adequate crisis outcome. The issue here in inter-organizational collaboration is not one about hierarchy. Since different organizations follow a common goal in exceptional situations of overcoming the crisis the collaboration happens through mutual agreement. The organizations also share the same risk by coping with the crisis and professional agencies do not have to be suspicious about the volunteers intentions. Which professional agencies are in non-emergency situations (Kapucu, 2005). With such mutual agreement and the shared burden of the risks that crises bring, inter-organizational collaboration can take place. In general group decisions produce better decisions, because more knowledge is gathered and shared, e.g. in WWII a strong man at the top alone was inferior to groups who shared their wisdom, like the allies (Allison & Zelikow, 1999). Problems caused by a disaster that results in a crisis are often across the capacities of a single organization. Therefore inter-organizational collaboration is important to tackle the crisis and bundle experts from different fields. Kapucu points out that “response systems composed of multiple agencies and jurisdictions will be able to adapt more appropriately to threats in a given region than separate, uncoordinated efforts by agencies acting independently to meet the same challenges” (Comfort & Kapucu, 2006, pp. 313-314). However such collaborations also require a level of mutual trust, since organizations could easily abuse the expertise of a counterpart. Another problem can be the complexity that such collaboration networks create (Kapucu, 2005). Nevertheless do the advantages of such inter-organizational collaborations eventually lead to a positive effect on the adequacy of crisis management. The positive effect of inter-organizational collaboration and improvisation results in a hypothesis.

***H3: A high level of improvisation and a high level of inter-organizational collaboration leads to more adequate crisis management***

### 2.2.3. Social Media

The *usage of social media* refers to how platforms like Twitter or Facebook were used to help with the relief. Moreover can it be used to organize users into groups to do hands-on volunteer work (Dabner, 2012) and to get in contact with official agencies (Macias et al., 2009). Especially in times of crisis information and the velocity of its distribution is pivotal. Due to internet-borne communication technology one can communicate and share information from many places in the world without further burdens. Other social media outlets are personal blogs of independent authors and so called Wikis where information can be uploaded, for example evacuation plans. Those sources are open to everyone to add or edit parts of the content. Social media can thus be used in different ways may it only be as a consumer or actively by sharing information or forwarding it.

In the last decade more and more people are using media outlets this is especially important in terms of crisis management. The great advantage of social media towards traditional media such as newspaper, television or radio is that it is not a one-way communication tool. Social media uses a bottom-up approach to spread the word, where users can easily become active to do so. Veil, Buehner and Palenchar mention in their literature review about incorporation of social media into risk and crisis communication (Veil, Buehner, & Palenchar, 2011) other advantages as well. The notable ones towards traditional media are the global outreach of platforms. Especially mentionable are platforms like Twitter or Facebook that exist almost pan-nationally and have users, with a few exceptions like China where Facebook is forbidden, from all over the world. Such platforms are free or of low cost and can be accessed at almost any place with an internet connection. This is also what makes the distribution of information that fast. Eye-witnesses or victims of a crisis can share on-site information. There is no journalist in between that has to process the information and publish it. However governmental organizations as well as NGOs such as the Red Cross make use of social media and post entries through their accounts in different outlets. Media users see social media within different outlets as the most trustworthy, regardless the message it carries. This is due to a human voice and the possibility for immediate reactions (Schultz, Utz, & Göritz, 2011).

Social media usage is positively affecting the relation between the inter-organizational collaboration and the level of improvisation. Because with social media individuals can inform authorities where to help and can organize in themselves groups to help authorities. An existing theory of an Open Government Maturity Model states that organizations can move up certain stages to communicate with the public. The more sophisticated the public can interact with organizations the better the level of inter-organizational collaboration will be. As well as the more information is available that helps in improvising from protocols adapted more to the very specific characteristics of the crisis. However this model is limited to an interaction between the public and organizations. Therefore only these interactions are considered. Moreover states the theory that organizations face “increased technical and managerial complexity and greater challenges and

risks” (Lee & Kwak, 2012, p. 496) the more developed the stages of social media usage are. In the literature review of Veil et al. is a list with ten respectively eleven best practices in social media integration to crisis management. Especially important is working together with the public. On the one hand this provides decision makers with crucial information that the public acquired which can be used by decision makers. Furthermore on the other hand, decision makers “may ease uncertainty” (Veil et al., 2011, p. 111) by providing information to the public.

The power distance coined by Hofstede, examines “the extent to which the less powerful persons in a society accept inequality in power” (Hofstede, 1986, p. 307). This implies on the one hand that in a society with a low power distance people expect more justification for the actions of leaders (Hofstede, 1984). Due to a low power distance which is the case for New Zealand (Kennedy, 2000) decisive decision makers are less reluctant to accept advice from the public or retrieve information from them. Which was proposed by Veil et al. to be a best practice. Hence social media as a tool for this affects the level of inter-organizational collaboration and the level of improvisation positively, which results in the hypothesis below.

***H4: A high level of social media usage leads to a high level of improvisation and to a high level of inter-organizational collaboration***

Social media is mediating the relationship between the politicization and the adequacy of crisis management. It affects the relationship between the independent and dependent variable. Because social media usage responds more to the already politicized issue. This has a negative effect on the relation, because the decision makers will have a clearer insight of the evolving stages of the crisis. The public provides decision makers on the one hand with crucial information and on the other the attitude towards these leaders can be examined quickly. Social media does not replace the role of polls in opinion measuring. Yet feelings that are expressed through social media towards a certain political issue can be used as a trend in public opinion (O'Connor, Balasubramanian, Routledge, & Smith, 2010). Thus decision makers regard the public attitude towards their decisions or even more important they could overcome what the public regards as a problem. Due to the feature of social media that almost everyone can add content and through its velocity social media can also foster the spread of rumors. Thus social media can represent a risk especially if the official response to mass media attention is insufficient and shapes their own picture boosted by social media. This can be overcome by taking part in discussions on such online platforms. To destroy those rumors official agencies have to engage in social media as well (Veil et al., 2011). This is also to save the own reputation which is essential in political life. Consequently a higher social media usage will attenuate the effect of politicization on adequacy of crisis management. Having the own and the party reputation at stake leaders focus more on the common well-being than on their political agenda.

Around the second decade of the 21<sup>st</sup> century social media usage during crises was on the rise. Stakeholders shared information amongst each other, but also sought for official response. Former research showed as well that in crisis situations groups form through social media networks or existing groups are used to feed them with information about the crisis. These groups also start to interconnect amongst each other (Kaewkitipong, Chen, & Ractham, 2016). Due to social interaction of the public decision makers are provided with better information that is resulting from “crowdsourced solutions [which] [...] help[s] a government assess [the] [...] stages of each crisis” (Kaewkitipong et al., 2016, p. 654). Such information is achieved most effectively when public agencies assign employees to scan the content of such groups and steer communication as well in order to help effectively and stop rumors from spreading. The moment crises happen there is usually a flood of information that occurs in social media. It is important for leaders to steer this information, i.e. using the right hashtags for Twitter communication. In such a flood information can disappear and needs to be repeated to reduce uncertainty. If people participate in providing a solution together with the decision makers this attenuates the negative effect of politicization on the adequacy of crisis management. Because those leaders’ political positions are blended with crowdsourced knowledge that helps to terminate the crisis and makes the political decision makers more flexible to move from their rigid agendas. The negative attenuating effect results in the following hypothesis.

***H5: A high level of social media usage will attenuate the negative effects of politicization on crisis management***

The theoretical framework presented above leads to the elaborated hypotheses, which are graphically presented in Figure 1 below.

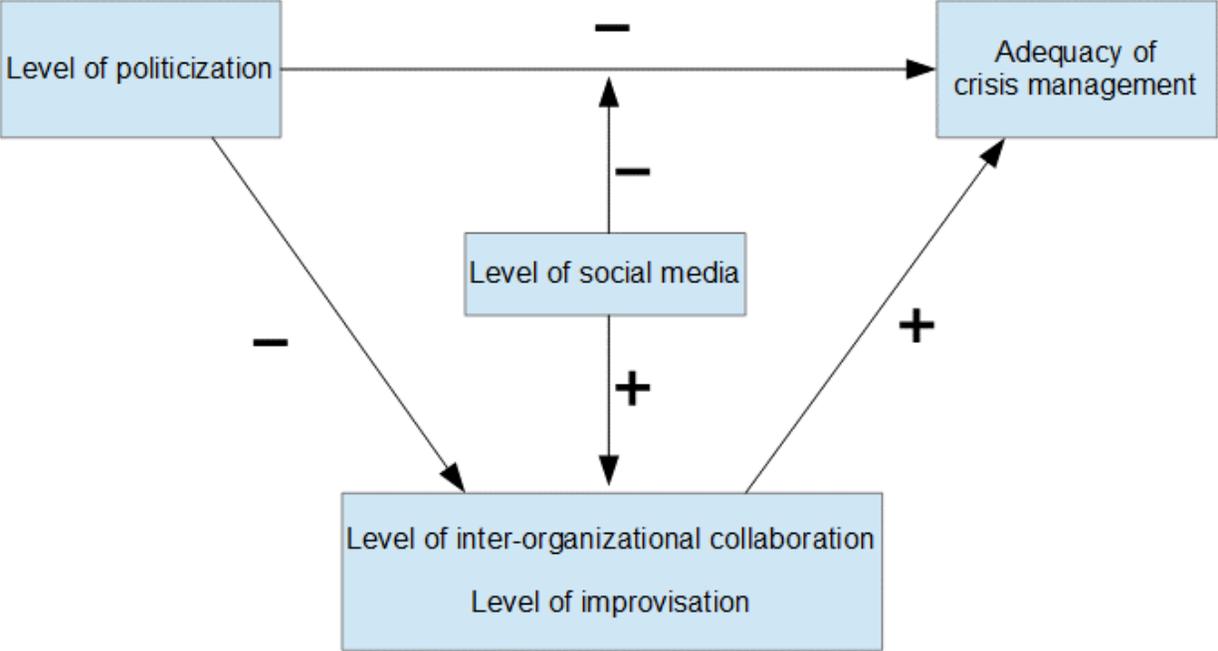


Figure 1: Causal Model

## **3. Approach**

### **3.1. Methodology**

#### **3.1.1. Research design**

The present study has a single case study empirical research design. It builds on Yin's research approach, which states that "a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin, 2003, p. 13). In exceptional situations, like a crisis, the boundaries between context and phenomenon become blurred. According to Pawson and Tilley (Pawson & Tilley, 1997) causal outcomes are produced by specific mechanisms that operate in a specific context. Hence a single-case study is best suitable to answer the research question of the present thesis. This is because "progress in theory development occurs by explicating the mechanisms and contexts" (Pawson & Tilley, 1997, p. 63). Therefore the best possible option to get an answer is to put the applicable theories which represent the mechanisms into the context, which is the crisis in this case. Another argument for a case study is the huge amount of data that is processed and which is fitting a case study the most (Yin, 2003).

Three different types of explanatory case study research exist. Those are exploratory, which includes theory formation, theory testing and theory application without testing. The underlying research uses an exploratory fashion. Namely it uses the approach of causal-process tracing (CPT). CPT aims for a "comprehensive storyline" (Blatter & Haverland, 2012, p. 111) which reveals decisive events and stakeholders' involvement. It will eventually lead to a causal narrative that provides the causal chain for the underlying case. The main characteristic of this approach is to link so called smoking guns to confessions in order to create the causal model. The former are core observation that link "cause and effect in space and time" (Blatter & Haverland, 2012, p. 110). The latter are deeper insights into "the perceptions, motivations, and anticipations of actors in crucial moments" (Blatter & Haverland, 2012, p. 110). Such smoking guns can be discovered, if an event occurs in space and time that was responsible for the crisis management outcome and did not fit to the theories elaborated. Confessions can be found usually in time and space proximity to smoking guns.

A complementing approach to CPT is the so called Realistic Evaluation. This term was coined by Pawson and Tilley (Pawson & Tilley, 1997). In realistic evaluation specific mechanisms are observed in its contexts and the effect of these mechanisms on causing an outcome. Mechanisms are the variables causing the outcome of the adequacy of crisis management. Setting these mechanisms into the light of the crisis they produce results future research can use as a starting point when analyzing the effect politicization has on the crisis management adequacy. Because the mechanisms are in a real life context and may act contradictory

to the theory. The mechanisms and the outcomes are present in the underlying case, as well as the context of the earthquake, therefore the research fulfills the preconditions for a realistic evaluation.

For the comparability it is better to use a study with quantitative data. However a case study is best to establish the effect of level of politicization in a specific case and set this into the context of a crisis. The outcome does not aim for generalizability rather than to give insights in the domain of politicization in crisis situations to build future inquiry on this research. The real crisis used in this research triggers these mechanisms most suitably, because they were created for such events. Then the adequacy can be measured. In this case however it can be certainly investigated, if the available mechanisms were triggered and it happened in the right context and time order, since data is analyzed in the right timely order. Henceforth is this an exploratory research that answers how and to what extent the different variables have influenced the adequacy of crisis management. Methods of process tracing are applied to test the theories for this case. With the explored data and the hypotheses that either were accepted or newly created, a causal model of the adequacy of crisis management is drawn. With the CPT approach it is possible to find out in which temporal order causal configurations, i.e. independent and dependent variables together, are linked to produce the outcome.

One type of threat is affecting the data. Because e.g. newspaper articles are chosen to retrieve data from. One has to assume that all such data that is politicized is as well ideologized by the author or the publisher following a philosophical movement. Also interviews that are conducted have different kinds of threats, e.g. the interviewee is prone to give socially desirable answers. However the threats can also lie within the researcher, if he already has a certain idea where the research will lead and put more weight on examine in such a way that the right outcome will be gained.

Within the research design there can lie another threat. This is the threat of a third variable that is omitted by putting up the theory. If there is an omitted variable that was not taken into account that one will bias the outcome.

Regarding the data the tool of triangulation is used. Different types of sources from different authors are consulted regarding the same topic. The threat of ideologized data is tackled by using reliable which New Zealand as a democratic state has to offer. The questions of the interview will be asked in a way that are understandable after explaining the main concept to the interviewee. The researcher can only act mindful and subjective in order to overcome the last threat.

Threats can also be the theories which the case study is based upon. If the validity of previous research that was consulted is lacking parts of the theory formation above is blurry. This was tried to tackle by consulting different research sources dealing with the different variables. Due to an exploratory research the threat of an omitted third variable is lessened. During the processing of data smoking guns are analyzed and a possible third variable might get discovered.

### 3.1.2. Case selection and sampling

The unit of analysis in this single-case study is the Christchurch earthquake of February 2011. This crisis was chosen out of a huge number of different crises. It was a convenience sample that proved to be outlying for different reasons. What makes this case special has several reasons. Firstly is that New Zealand is a structured country that has a sophisticated earthquake relief system, due to the many happenings of tectonic activities. However this earthquake was the one with the biggest impact in New Zealand society. Christchurch, then second biggest city fell behind Wellington on third place in terms of inhabitants, since people were moving away caused by the destruction of thousands of houses. New Zealand even had to get support from third countries, since authorities were overstrained to cope with the situation. Another point refers more to the usage of social media. The rise of social media usage of the public was slowly upcoming for a few years at that point and communication via social media was not that much dependent of a stable physical infrastructure. Therefore people used it in several ways that have to be taken into account nowadays when examining the adequacy of crisis management. Moreover did social media boost non-official volunteer groups which helped in the aftermath. This was a challenge for policy makers as well in terms of coordination, but also an opportunity if such resources are mobilized. Before the rise of social media in crisis communication getting access and information of how and where to help was a bigger obstacle to overcome than nowadays. The most striking feature of the earthquake however is that “the statutory basis for the coordination of recovery activities in New Zealand was not adequate” (Brookie, 2012, p. 19) and the crisis got politicized to some extent. Nevertheless did the crisis managers in Christchurch a good job that was considered effective.

### 3.2. Operationalization

The different concepts are fed with data that is qualitative for most of the variables. For the variables of improvisation the theoretical framework does not hold enough explanatory power and thus has to be adapted to be suitable for analyzing it. The time frame the research is conducted will be until the middle of 2011, since the investigation report covers only the time until the Canterbury Earthquake Recovery Authority took the command for the recovery. However parts of the crisis are still ongoing like issues about recovery and repair of the city and the area of Canterbury.

For *politicization* the media attention in mass media is analyzed, like how often and prominent did the crisis appear in the newspapers. These two newspapers are taken into account since they appear on the “Leading Media Index” that determines amongst others quality and run of the paper. Moreover was it used in previous academic literature (Schmidt, Ivanova, & Schäfer, 2013) to assess media attention. Another issue is control which means that having a veto to block a parliament decision. It is looked at certain top-down decisions of the crisis management and the possibility of the opposition to block these activities by considering the veto

points. The position of the involved political parties in government are analyzed on issues that were argued about in face of the crisis and put it in nominal terms. The further apart those parties are the more politicized an issue is. These three dimensions are bundled and the level of politicization is assessed in ordinal terms. The circumstance can be used to bring own interests in. Thus framing of the crisis can be tilted towards the own party agenda. The focus of politicization is on blame games as well. Even though some blame games happened rather long after the crisis was seen as terminated. For example as it was negotiated over the insurance payment which is still a going process. The stages of the blame games are composed by the previously mentioned dimensions of severity, agency and responsibility. The lowest stage is the scapegoat where one single agent is attacked. A stage higher is the organizational mishap where a whole implementation network where the faults happened is attacked. What Boin regards as the “most explosive outcome” (Boin et al., 2005, p. 104) are the failing policy makers. Here specific group is responsible for an act that can lead to a crisis or the extension of one. The highest stage where the blame games contribute most to politicization is the policy/system failure where the whole framework, the decisions were based on, is flawed. Figure 2 depicts the process of choosing who to blame.

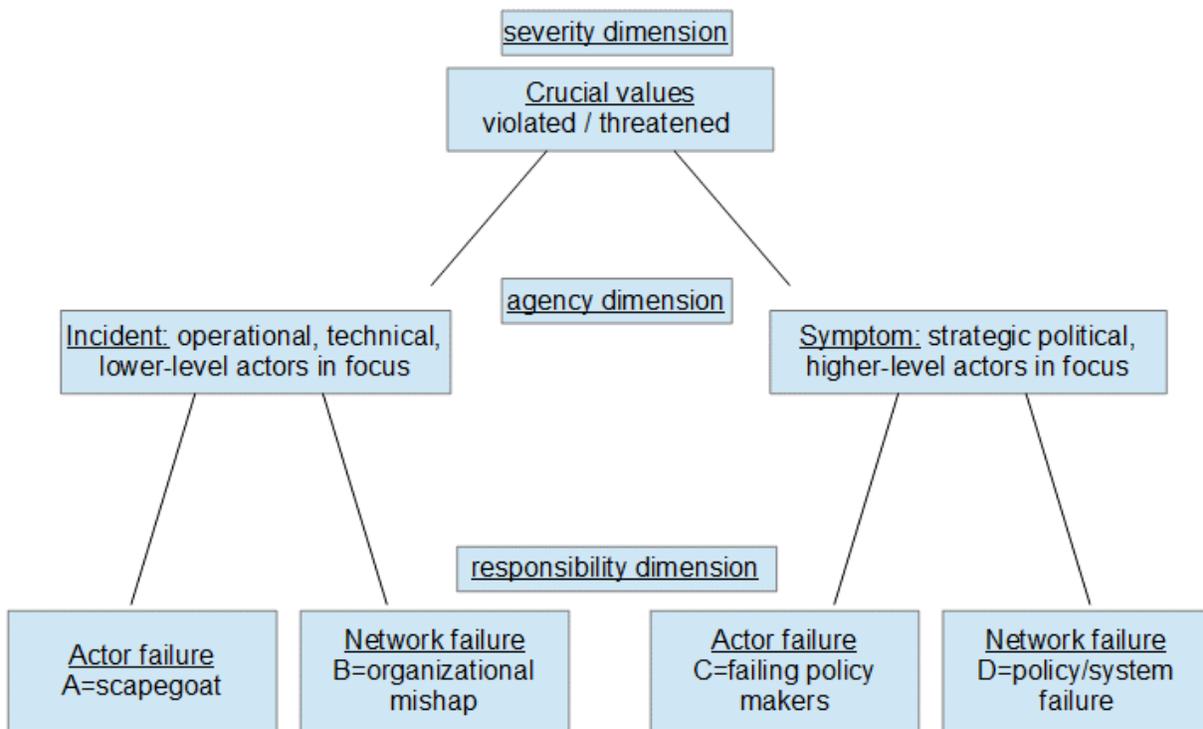


Figure 2: Actor choices in crisis-induced blame games (Boin et al., 2005, p. 104)

*Adequacy of crisis management* is operationalized by taking its six sub-processes together and assessing them in terms of the overall adequacy where an ordinal value is attached to. It includes the sub-process of adequate preparation, adequacy of recognition and signaling of the crisis. Provision of information within

crisis organizations where it is found out how much the uncertainty was reduced among the actors. Also the level of adequacy of decision-making and steering and the crisis communication belong to the concept of crisis management. The adequacy of all the parameters is extracted from the official investigation report of the Civil Defense Emergency Management (MCDEM). Evaluation of the parameters are taken to give value to the dependent variable. If two thirds of the parameters were considered as adequate, no matter which, since they are equally important, one can speak about an adequate crisis management.

The level of *improvisation* is measured by analyzing the undertaken action according to the official evaluation report and compare it to the existing protocols from the Blue Book to see how often situations deviated from protocolized action. The sections that regard the civil defense are analyzed, since the investigation report with which it is compared focuses mainly on the Civil Defence Emergency Management. If an action is found that does not correspond with the existing framework or is not at all in the protocols it is regarded as improvisation from protocols. However the Blue Book describes the actions in general terms and grants "very broad powers [to crisis managers]" (McLean, Oughton, Ellis, Wakelin, & Rubin, 2012, p. 26).

For *inter-organizational collaboration* the data is derived by comparing the ties between various organizations that engaged in the crisis recovery. To have a better picture of inter-organizational collaboration all agencies are grouped into NGOs and NPOs/volunteers, private organizations, professional organizations, public organizations and foreign organizations. To make it measurable an approach of Frey et al. (Frey, Lohmeier, Lee, & Tollefson, 2006) that measures collaboration among grant partners is here applied for the inter-organizational collaboration. He describes five stages of collaboration whereas networking is the weakest tie and collaboration the strongest. In Table 1 more specific descriptions for the stages are indicated. A simple network model is drawn with the extracted information. If the information fits best or some outstanding characteristics are fulfilled, the level of collaboration will be attached to the corresponding links. The stronger the ties between and inside the different groups the stronger the inter-organizational collaboration and the thicker the links in the model.

Table 1: Characteristics for the levels of collaboration (Frey et al., 2006, p. 387)

Networking	Cooperation	Coordination	Coalition	Collaboration
<ul style="list-style-type: none"> <li>- Aware of organization</li> <li>- Loosely defined roles</li> <li>- Little communication</li> </ul>	<ul style="list-style-type: none"> <li>- Provide information to each other</li> <li>- Somewhat defined roles</li> <li>- Formal communication</li> </ul>	<ul style="list-style-type: none"> <li>- Share information and resources</li> <li>- Defined roles</li> <li>- Frequent communication</li> <li>- Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>- Share ideas</li> <li>- Share resources</li> <li>- Frequent and prioritized communication</li> <li>- All members have a vote in decision making</li> </ul>	<ul style="list-style-type: none"> <li>- Members belong to one system</li> <li>- Frequent communication is characterized by mutual trust</li> </ul>

- All decisions are made independently	- All decisions are made independently			- Consensus is reached on all decisions
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*Usage of social media*, that plays an important role is measured by counting the number of tweets and measure the range of those crisis related tweets. Specifically only tweets with the hashtag ‘#eqnz’ are chosen, since it was the most prominent hashtag used during this crisis and stands for ‘earthquake New Zealand’. A manual about social media usage in crisis situation by the CDEM suggest to measure the impact of social media by looking at certain factors. Those are amongst other the reach of the message, the feedback from users, the links to other organizations, how well it encouraged intended behavior and the rumors dispelled (Rive, Hare, Thomas, & Nankivell, 2012). The focus of social media will be especially on Twitter, since it has a big technical infrastructure, many organizations are using Twitter profiles and the tweets can also be followed if one does not own a Twitter account. An important feature that Twitter had already sophisticated by then was the sharing function. With that function the range of information can be boosted very quickly, since everyone could share information with one click and create a snowball effect. The corresponding hashtags which inform the addressee as well are also analyzed, since it contributes to knowledge sharing amongst different institutions. Involvement by organizations are analyzed and their interaction is measured and compared to the ordinary publishing on Twitter. Moreover there will be interviews with stakeholders analyzed that engaged in social media. To conclude those factors will determine the level of social media usage.

### **3.3. Data**

#### **3.3.1. Data collection**

For a CPT approach “‘causal-process observations’ and not ‘variable-scoring’ or ‘data-set observations’ form the main empirical basis [for drawing conclusions]” (Blatter & Haverland, 2012, p. 106). Data that is collected for the analysis is stemming from various sources. The biggest share of it will be retrieved from existing protocols and the inquiries after the crisis. In order to get the most reliable data triangulation is used where it is possible, i.e. data for the same processes from different sources and authors.

Data for the dependent variable will fully be drawn from the official investigation report, since the *adequacy of crisis management* is already assessed there. Because the CDEM response was steered by the national government this is the most appropriate indicator to assess the adequacy of crisis management by the government.

The newspaper inquired for *politicization* are The Press and New Zealand Herald. For reasons of triangulation also the Australian newspapers are inquired, because of the spatial distance, the close ties to New Zealand and a more independent view from a foreign perspective. Those papers are The Australian and Sydney Morning Herald. To determine the party positions, debates in parliament after the crisis are

analyzed as well as the party manifestos and artefacts of the parties in parliament are analyzed. To find out on what level blame games took place statements of national politicians are analyzed and the actors derived from the figure provided above.

For analyzing *improvisation* the guide to National Civil Defence Emergency Management plan 2006 in the 2009 edition and the review of the Civil Defence Emergency Management response to the 22 February Christchurch earthquake are consulted. The same review is also used as one source to extract the organizations that were involved in the *inter-organizational collaboration*. The NGOs and private organizations involved will be completed with the list that provides the NGO Disaster Relief Forum and from the Earthquake Commission, because the focus of the official report is more on governmental agencies where NGOs and private organizations may not be extensively listed. Actual collaboration will be assessed through the investigation report, a paper about organization networks and recovery during the earthquake by Stevenson et al. (Stevenson et al., 2014) and an input paper from the United Nations Office for Disaster Risk Reduction (UNISDR). The information about collaboration will be extended by an interview with an expert conducting research about organizations that were involved after the 2011 earthquakes.

Another part will be collected from tertiary data, especially the analyzed content of social media. The quantitative data about the range of the information-steering hashtag '#eqnz' and the involvement of organizations are derived from an article by Bruns and Burgess (Bruns & Burgess, 2012). The interviews are derived from tertiary data as well. The already processed and analyzed findings from Sutton (Sutton, 2012) are used for that purpose. Social media usage is to be determined by taking the role of the stakeholders as well into account. The more the information used in social media outlets and organizations engaged into that, and the more sophisticated the usage was, the higher the level of social media usage eventually is. Nevertheless is there a risk to that approach, because qualitative data could have been misinterpreted by the previous researcher which results in flawed data output.

The interview style of the conducted interview was a semi-structured one. They consisted out of a set of open-ended questions and additional questions that arose during the interview and were further elaborated. The data collected for the case description and the accompanying sources are listed in the appendices.

### 3.3.2. Data analysis

The bases drawn conclusions on, will be the study of an outlying case, since this is a study chosen from a big pool of possible crises. The data will be analyzed mindfully and is taken from official sources, secondary academic literature and from newspaper articles in order to get the holistic view. The conclusions deriving from qualitative data analysis will be drawn on causal inference which is the most appropriate way. These mechanisms will be observed in this specific context which lead to the outcome of the case. Possible interaction effects between dependent and independent variables will be examined to construct a narrative where a causal model can be drawn from. The causal path retrieved through the analysis will be compared

to the causal model that was build based on the literature review. Thus it can be seen where the theoretical model was holding, where it needs some adjustment and where it did not hold at all.

## 4. Analysis

### 4.1. Case description

#### 4.1.1. Earthquakes in New Zealand

Being one of the youngest countries on earth New Zealand is located in a seismic zone that is very active. New Zealand is located between the Australian and the Pacific plate. As pictured in Figure 3 the red line marks the border between both plates. The triangles point in the direction in which the plate is subducted by the other one, i.e. the plates are drawn under the other one. For the North Island it is the Pacific plate that gets subducted and in the very south of the southern island the Australian plate gets subducted by the Pacific one. Most parts of the South Island however are located on the fault where the two plates are grinding against each other. The velocity of the tectonic movement is indicated in millimeters per year as well. Those circumstances are a big factor for causing earthquakes in New Zealand.

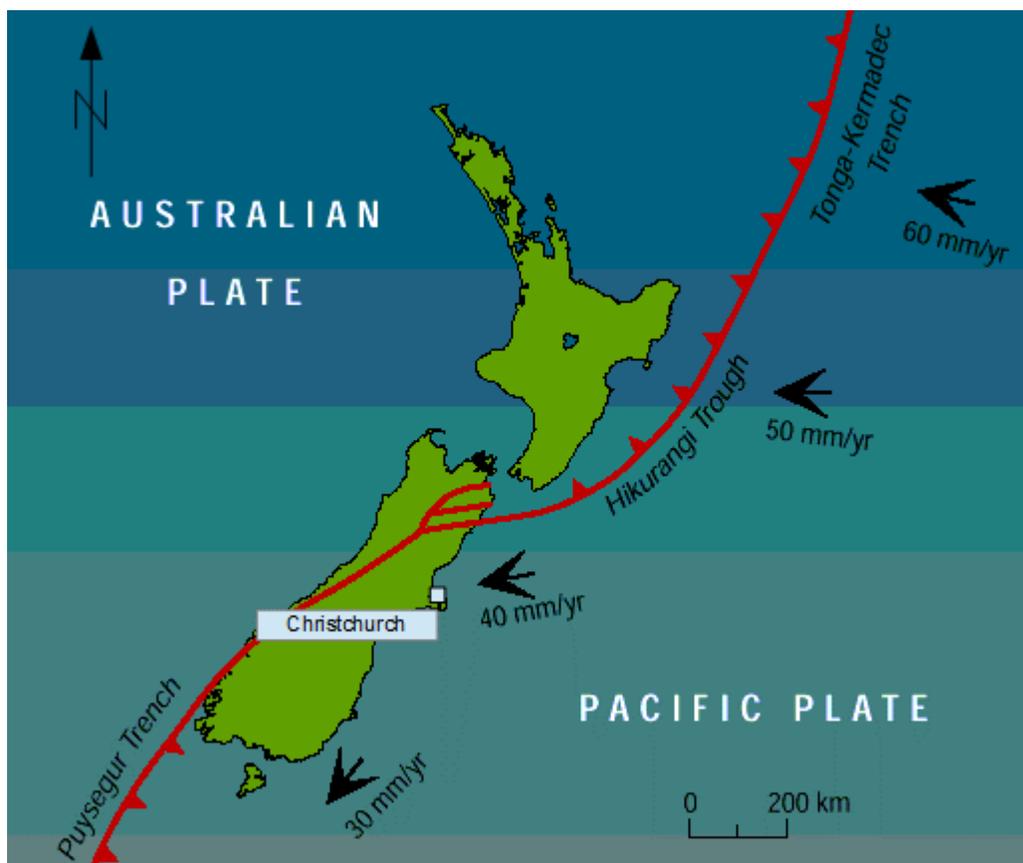


Figure 3: Tectonic movement of New Zealand (own work)

The surface of the earth consists out of such plates. Due to the hot core of the earth the plates keep always moving. The structure of the plates in the fault is not flat, therefore the movement is blocked at certain

points. At such a certain point tension starts to build up that is released with all the energy that was stored up there before. Most of the earthquakes that happen are not felt by humans. The location where this tension is released is called the hypocenter. Whereas epicenters are located on the surface of the earth above the hypocenter. Throughout times faults created smaller faults along their lines of movement which increases the size of the fault on the surface. Such faults can be broad in size, therefore an epicenter does not necessarily have to be located on the fault, but can also be a bit away from it. It was the case for the 2011 Christchurch earthquake, because Christchurch is located some hundred kilometers away from the fault. If an earthquake happens there is always an aftershock. It is difficult to determine if there are still aftershocks to come or whether a quake was just a pre-shock for an even bigger main-shock. Sometimes it takes up to some months or years until an aftershock may happen. However are there about 15,000 earthquakes recorded per year in New Zealand, but only some 200 are strong enough to be felt. Despite being located in such a dangerous area catastrophes in New Zealand were mostly caused by transportation (McLean et al., 2012).

The closer the hypocenter is to the surface of the earth and the bigger the tensions built up, the larger is the size of the earthquake. This so called magnitude can be measured in different scales, the most common is the Richter scale ( $M_L$ ) that ranges from 1 to 10. From the magnitude of 6 upwards the strong levels start. An increase of an earthquake per level is ten times the size than the previous one.

Dangers of earthquakes are the aftershocks and the unpredictability. Scientifically there is neither a possibility to determine if a quake was the main-shock or the side-shock, nor when and where an earthquake will happen. Earthquakes of course make the floor shake depending on the magnitude it can also destroy infrastructure, buildings and natural objects. But also liquefaction may happen after an earthquake. There the water pressure in the soil rises due to earthquakes. Thus the soil becomes not solid anymore but turns liquid. Soils cannot support buildings or natural shapes in the landscape anymore they can sink and liquefaction can also cause landslides. The greatest threat for humans however are falling objects, this can be furniture, trees or even whole buildings. Thus New Zealanders get education on how to behave in case of earthquakes and how to take precautionary measures. Moreover the building regulations are strict with regard to the earthquake safety.

#### 4.1.2. The Christchurch case

Christchurch, located in the region of Canterbury, had the second largest urban area in New Zealand after Auckland until the earthquake. To the present day its' level is still behind the capital - Wellington. It all started with the movement of the fault which was an aftershock of the 7.1 magnitude earthquake on 4<sup>th</sup> September 2010 near Christchurch. In 2010 there were no reported casualties from the earthquake. Further

the earthquake hit Christchurch on 22<sup>nd</sup> February 2011 with an hypocenter in 5km depth 10km south-east of the city center. All that during the week at lunchtime – 12:51pm. Within the following ten minutes there were four aftershocks which reduced the area into rubble. Due to the number of fatalities, injuries and economic damages it is considered the worst peacetime disaster in New Zealand (McLean et al., 2012).

The highest number of fatalities was caused by the multi-story building of the Canterbury Television (CTV) Tower. Due to the collapse of that building 115 people died. Overall 185 people were killed and thousands injured, most of them in the inner city but some also outside of Christchurch. Caused by the previous quake in September 2010 some buildings were already damaged. After the February 2011 earthquake more than 100,000 buildings were damaged and some 10,000 had to be torn down. Most buildings stayed inhabitable despite of the damages that were caused (McLean et al., 2012). However until 2016 more than 12,000 were torn down. This affected half of the central business districts' (CBD) buildings. Amongst others there was the highest building of the city – the Hotel Grand Chancellor and the Christchurch cathedral which was a landmark. Due to liquefaction many buildings were destroyed, but also the pipes and electricity cabled underneath the surface. Therefore some areas had days without electricity and water and sewage infrastructure. Floods were caused, because of the liquefaction. A so called “Central City Red Zone” was established as well here building was completely unsafe and access was restricted to the public. This caused a burden to the economic recovery, since most businesses in the CBD had to be closed. The zone existed for over two years until June 2013. Moreover many inhabitants there did leave the area which was an additional burden for the region to restart in terms of everyday life and the economy as well.

A day after the quake the national emergency was called out in that area and was even extended after its' expiring. Both cases were the first time in New Zealand history for a civil emergency ever. Regional resources are not enough to handle the crisis. Therefore agencies coping with the crisis can order such resources like medicine, beddings or vehicles in order to preserve human life. Under these conditions help was called from New Zealand e.g. the New Zealand army or volunteer organizations such as the Student Volunteer Army that had more than 10,000 volunteers help cleaning the damages of liquefaction. Due to the strong community spirit of Christchurch many volunteers could be stirred into action. But also international help was promised to Christchurch either monetary or with manpower. Australia sent different resources such as police officers, rescue teams or technical equipment.

The New Zealand circumstances required plans for emergency response. This consists out of three documents that form the legal basis which are the Civil Defence Emergency Management Act of 2002, National Civil Defence Emergency Management Plan (promulgated by Council in 2005), and the Guide to the National Civil Defence Emergency Management Plan of 2006 (2009 Edition) or the so called Blue Book. In a regional context the CDEM group consists out of a regional authority and Territorial Local Authorities

(TLA). Both groups can declare an emergency but only the group can appoint crisis managers. In the Christchurch case the TLA appointed their own crisis managers which were then confirmed by the CDEM group. The crisis managers can command the governmental agencies that are needed to overcome the crisis. However the cooperation between the CDEM groups and the TLAs is not further given in the legislation whereas the powers of crisis managers are stated in the legislation. Hence both parties have to rely on good cooperation and willingness to work together (McLean et al., 2012).

Right as the earthquake happened the political decision maker in Christchurch was the Christchurch City Council (CCC) that took the lead according to the Coordinated Incident Management System (CIMS) together with the local civil defense like CDEM groups, the police or the fire service. The CIMS is a system of management in crisis situations where staff is trained in. The next morning the state of national emergency was declared. Then the National Crisis Management Centre (NCMC) was activated and the national controller, that is in non-crisis times the director of civil defense, took over the crisis management. They represented the crisis management from a national level, since it was the state of national emergency. Together with the CCC and the Canterbury group for civil defense on a local level he established the Christchurch Response Centre (CRC) that was located in the art gallery of Christchurch. The art gallery was the operations center known as Emergency Operations Centre (EOC). After the state of national emergency expired the Canterbury Earthquake Recovery Authority (CERA) took the lead in an overlapping transferal from CRC. CERA collaborated together with the CCC on a local level. This construction in its essential points is represented in Figure 4.

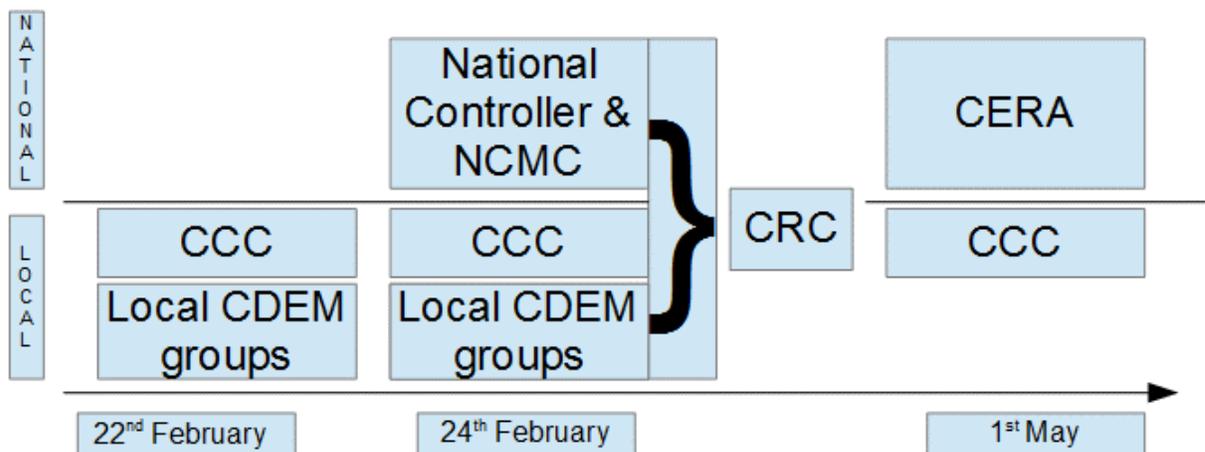


Figure 4: Political decision makers during the Christchurch earthquake from February 2011 (own work)

A brief timeline below in Table 1 will outline important events during the 2011 Christchurch earthquake. Dates and times are referring to the local time.

Table 2: Timeline of events after the 22<sup>nd</sup> February 2011 earthquake in Christchurch (McLean et al., 2012)

22 <sup>nd</sup> February 12:51	Earthquake 7.1 M <sub>L</sub> hits Christchurch
22 <sup>nd</sup> February 12:55	Telephone reports of earthquake & significant damage
22 <sup>nd</sup> February 13:00	Ministry of CDEM consults with GNS Science - confirmation of significance, Christchurch City Council activates at Art Gallery
22 <sup>nd</sup> February 13:05	Minister of civil defense and department of the prime minister and the cabinet informed
22 <sup>nd</sup> February 13:15	NCMC (Beehive Bunker) activates at assist mode, support agencies requested to send representatives
22 <sup>nd</sup> February 14:00	NCMC fully activated
22 <sup>nd</sup> February 14:45	Christchurch City Council declares a state of local emergency
22 <sup>nd</sup> February 15:00	Officials Committee for Domestic and External Security Coordination (ODESC) meets the first time; Cabinet meets the first time
22 <sup>nd</sup> February 16:00	Urban search and rescue (USAR) reconnaissance; Government helpline activated by Ministry of Social Development
22 <sup>nd</sup> February 16:30	Prime Minister arrives in Christchurch
22 <sup>nd</sup> February 17:00	USAR Task Force 2 (Christchurch) deploys
22 <sup>nd</sup> February 18:00	Welfare centers established at two locations; Ministry of foreign affairs and trade (MFAT) activates international emergency hotline
22 <sup>nd</sup> February Night	Cordon around 4 avenues - police imposing tight access restrictions; Fire service and police deploys additional personnel; USAR Task Force 1 (Palmerston North), 3 (Auckland) deploys and additional support teams; USAR in Australia, USA, Singapore, UK, Taiwan & Japan mobilized; Medical centers established at three places Air bridge by the Royal NZ Airforce (RNZAF) between Christchurch and Auckland HMNZS CANTERBURY mobilized in support
23 <sup>rd</sup> February 08:30	Work & Income sites established to focus on emergency assistance only
23 <sup>rd</sup> February 09:30	Cabinet meets
23 <sup>rd</sup> February 10:30	Minister of civil defense declares a state of national emergency
23 <sup>rd</sup> February 10:45	NCMC steps up managing mode
23 <sup>rd</sup> February AM	Army assistance to police cordon enforcement; Singaporean Armed Forces (SAF) contingent operating alongside NZ army and NZ police; NZ Army Medical Support teams operating ambulance stations

23 <sup>rd</sup> February 14:00	All of government media coordination established – to operate from Christchurch
23 <sup>rd</sup> February 17:00	Welfare centers established in 4 locations
23 <sup>rd</sup> February 20:00	National controller meets with CDEM group controller in Christchurch to establish response structure
24 <sup>th</sup> February 07:00	National controller meets with Christchurch mayor Bob Parker and chief executive Tony Marryatt to communicate the response structure and agree formation of a joint CRC the Art Gallery
24 <sup>th</sup> February 10:00	Army engineering support arrive in Christchurch with two water production units Tent city at Burnham Camp increasing from 350 beds to 500 beds
24 <sup>th</sup> February 15:00	CBD cordon expanded; Australian field hospital arrives
25 <sup>th</sup> February	US USAR arrives. USAR now comprises 150 NZ and 500 internationals, conducting grid search; Personnel deployment: Police 3366, Fire Service 1812, Ambulance 949, NZ Defense Forces (NZDF) 1114
26 <sup>th</sup> February	50% of city without water (62,000 homes), 100,000 homes without sewerage, 329 people in welfare centers; NZDF catering support now providing over 6000 hot meals per day, HMNZS CANTERBURY continues to provide over 500 hot meals per day to Lyttelton; National controller's priorities: USAR, eastern suburbs, restore water and power, planning including options for housing
28 <sup>th</sup> February	USAR moves from rescue focus to search and recovery of deceased
01 <sup>st</sup> March	Total of 1792 NZDF personnel now deployed; National controller sets delegations for CRC; Minister extends state of national emergency
06 <sup>th</sup> March	Community briefings commence; USAR Australian team rotated, US and Singapore teams downsized, China and Japanese remain
07 <sup>th</sup> March	NZDF completes phase 1 of reduction of forces from CBD cordon; Minister extends state of national emergency; Employers' assistance package introduced by government
08 <sup>th</sup> March	Of 167 state schools 7 open, 59 within seven days
14 <sup>th</sup> March	National Controller orders moratorium on demolition to revisit approvals process Royal Commission of Inquiry established

## **4.2. Causal analysis**

### **4.2.1. Politicization on the adequacy of crisis management**

Hypothesis 1 predicted that a high level of politicization will lead to a less adequate crisis management. The fact that The Press, as a national newspaper still runs a section concerning the Christchurch 2011 earthquakes in 2016 under the news header shows that the crisis is still omnipresent in the area. Moreover was the Canterbury Earthquake Recovery Authority only disestablished in 2016 five years after the earthquake. Therefore are certain aspects of the crisis not yet terminated. The newspapers and Hansards consulted can be found in the appendix.

Political power in New Zealand is shared among parties. During the election period between 2008 and 2011 a minority government formed by National as the strongest coalition party, together with ACT, United Future and the Maori party, was in government ending previous election periods won by Labour. The following general election after the February 22<sup>nd</sup> earthquake was scheduled for November of the same year. Thus was it important for the parties to win the trust of the people.

To enforce an act or a decision it needs the support of the majority in the parliament. To pass a bill in parliament it needs three readings and the majority of votes for the bill in every reading. Yet this crisis was special due to the Canterbury Earthquake Response and Recovery Act 2010 (CERR Act). This act traces back to the initial September 2010 earthquake in Canterbury which was also the main-quake for the aftershock in February the following year. The act includes vast competences to the Minister of Canterbury Earthquake Recovery from the National party. However the act was passed in a single day unanimously by the parliament. The act gives the minister so much lawmaking power independent from the parliament that all New Zealand law faculties wrote an open letter regarding the act. The powers according to the letter which are of concern features several aspects. One is that government ministers can change through Orders in Council which have full legislative force. This is a type of law can change “virtually every part of NZ’s statute book in order to achieve very broadly defined ends” (Geddis, 2010) Another point is that courts are excluded from examining the reasons and process for setting up an Order in Council. Moreover are persons that act under an Order in Council exempted from any legal liability. This includes also compensation payments if it has caused harm to others. Together with the state of emergency, that was announced one day after the earthquake and grants the minister extensive national resources, this is a powerful framework to build crisis management upon. However restricts such a legal framework the politicization, because there is no liability by the actors under the Order in Council and all the parties prior agreed to this act and would have to leave their previous position now. Thus the preconditions for politicization on a national level are not good due to the undemocratic ways a person acting under the CERR Act 2010 can base decisions on.

The politicization on a national level was in the direct aftermath of the crisis on a low level. During the first ministerial statement the prime minister John Key declared his deep sorrow. Whilst the opposition leader Anette King joined in with the prime minister. Moreover did she declare: “I support the Prime Minister in saying that we will do whatever we can, and that this House stands together in helping the people of Christchurch” (Hansard, 22.02.2011). She mentioned as well the rebuilding of the city and the impressive cathedral in Christchurch. The leader of the United Future party added that in such times all political and other differences are set aside when focusing on this crisis. Even in the second meeting of the parliament there was unanimity amongst the party leaders.

The main politicization happened in two domains. One was regarding all the issues about money and spending in the aftermath of the earthquake and the other domain was about issues of the recovery process. These were the topics most salient in the media. Whereas in parliament the debates were much more detailed as well as other disputes came up that were picked up less prominent by the media, for instance employment of adolescents and childcare in the crisis affected area.

About two weeks after the earthquake the first hint of politicization was happening. Prime Minister John Key of the National party proposed a paid day off for mourning where he received support from the New Zealand business union. The Labour party criticized Key that the day off has to be paid, since National aims for a balanced budget and does not want to borrow more money. National wanted to cut back on other expenses, because their party program includes not to rise the taxes. Those were the eligibility of interest free student loans and to set the thresholds higher for families to join in the Working for Families financial support. The Prime Minister stated years before the crisis that this program is “communism by stealth” (NZ Herald, 11.06.2004) therefore the crisis would be a good opportunity to soften the program. The Labour party opposes this approach, since Working for Families is a package that was introduced by a Labour government in the previous term and the party supports that people have the same opportunities to go to university despite their parental income.

The first media salient dispute among parties happened at the end of March. After the establishment of CERA for the rebuilding purposes the job loss cover and earthquake support subsidy was extended to the 18<sup>th</sup> April that year. The Labour party pointed out that the back-scaling of the payments is too early at this stage. They blamed the National party that this hinders the economic recovery of the area.

Although the New Zealand Herald reported about the government debt on the April 9<sup>th</sup> the government was not attacked by the opposition. The newspaper called for a need of higher taxes, because the government does not have enough monetary resources. The minister of finance did not announce a tax, complying to the party program. After the question about the funding by a National MP he replied that the economic program “build[s] long-term growth by having a tax system that rewards hard work” (Hansard, 12.04.2011).

As CERA was established under the CERR Act university law professors were concerned about the great power the agency has and the issue with the accountability. Other agencies as well as citizens from the area were upset that locals do not have a say in rebuilding measures if CERA takes the lead. The agency incorporates only an advisory body out of 20 locals, but is not bound to its decisions. At the 31<sup>st</sup> of March rumors about zealots in the agency marking houses in the cordoned area to be demolished were heard politicization started again. These rumors were salient in the national newspapers. Five days later the minister of civil defense brought the extension of the state of emergency in front of parliament. The Labour party expressed their concern about the further extension of the state of a national emergency and suggested a local state of emergency. Nevertheless did the party concede that during exceptional times, exceptional powers are needed. The Green party, in the opposition as well, referred to the rumors spread by the media. The speaker referred to “premises are being knocked down without the owners or residents even being informed” (Hansard, 05.04.2011). Moreover did they blame the government for their overcautiously approach of recovery in Christchurch. The exclusion of locals from rebuilding measures will cause frustration and a slow business recovery in the area. To tackle such problems the recovery should be handed more towards the locals. The Greens pointed out as well that a special tax on families with higher income should be levied to afford the earthquake payments to employees and businesses. Nevertheless did the party support the extension of the state of national emergency.

On April 12<sup>th</sup> newspapers reported that CERA will take over all of the civil defense within three days. The powers of the agency were reaching from requisition of land, requiring information up to the takeover of local government bodies. When the civil defense minister extended the state of national emergency Labour said that this must be the last extension, whereas the Greens argued that the extension can be even longer to ensure a proper timeframe for readings and deciding over the Canterbury Earthquake Recovery Bill. Nevertheless did the readings for the establishing of CERA and the transfer of the control to this agency took place that same day. The Labour party criticized the wartime power that the minister ruling CERA has, however MP Cosgrove supported the CERA bill. MP Dalziel opposed the view of her own party and attacked the bill. She took politicization to the highest level when she accused the whole system to be doomed. Because the recovery will cost billions and trust is a big issue when handling such sums the government decided for a top-down approach. Dalziel highlighted the missing leadership as well as the uninspiring administration of money rather than engaging in recovery. Most of the decisions are taken in Wellington through the government which is not at site. She mentioned as well that the locals rather want to rebuild their city according to their own plans and not being administered top-down. That the MP is going against the interest of her own party needs a confession. The confession is that in winter the same year were national elections were Dalziel was running for the electorate of Christchurch East. By opposing the Wellington lead approach and including locals she tried to gain a higher public opinion in her electorate.

MP Cosgrove eventually backed his party colleague and pointed out that the CERA has to take the locals into account. His electorate is located in Waimakariri which borders to the Christchurch district, therefore the motive is the same as for Dalziel. The Green party in contrast suggested to split the bill into two where one part grants urgent powers to CERA for a shorter timeframe and another part with lesser powers granted for a medium term. The earthquake minister Gerry Brownlee opposed that argument and stated that he needs all those powers for a fast decision making. Even though PM Key promised to take some amendments into account those suggestions were overruled by the majority in parliament. The bill was passed through all three readings in a single day despite the criticism. Later on MP Dalziel criticized the Maori MP Button that the Christchurch City Council was too slow in coming up with a solution despite that CERA was established and took over. Here the Labour MP aimed to blame the city council and looking for a scapegoat, so she politicized the issue to a low extent.

As the government praised CERA as a success the opposition parties attacked the agency. Especially the undemocratic structure, so there is no layer between governance and the minister as well as there is no decision making made by cabinet and the implementation by bureaucrats. The agency can also take over local government bodies, as The Press reports on 12<sup>th</sup> April. However was the Christchurch Central Development Unit incorporated to CERA where the latter can draw expertise from.

When winter was approaching in New Zealand not everyone in Christchurch had a heater then. Thus the Labour MP Fletcher accused the building company that they were too slow in installing heaters. The spokesperson of that company told the MP that he relies on old data, which in return was provided by Brownlee. Brownlee said that the accusation on the lack of response were “totally unreasonable in the[se] circumstances” (The Press, 19.04.2011). Fletcher was attacking CERA on a very low level by choosing the building company as a scapegoat. The reaction of Brownlee was justification, where he assured that the building company does the utmost to ensure heating for the winter according to the plan.

On the 20<sup>th</sup> July the Labour party confronted the government with their use of double standards. Since CERA paid its staff up to 1000\$ a day, but refused support for legal presentation for families in need in front of court. After the attack against the agency Brownlee used once more justification to escape the politicized issue by saying that the standard fee was not enough for high caliber panel members that such a situation required.

The existing framework for crisis management was blurry and considered as dysfunctional affected by the previous earthquake in September 2010. It was not clear if the regional CDEM group or the city of Christchurch takes the lead for action. Since the legal framework relies on collaboration and subsidiarity, which was difficult to determine in this situation. Staff of the crisis response were low skilled in terms of crisis management as well. This was until the NCMC took the lead as the state of national emergency was

declared, since an adequate preparation was not given. The crisis management benefited from the politicization on a national level. This is because the national controller took over the lead and removed uncertainties about hierarchies on the lower level, since the crisis was managed from a national level. The members of parliament all agreed to the establishment of a national state of emergency.

What regards CERA politicization had a negative impact on its establishment. Because there existed no prior legal framework for the recovery of major events such as the earthquake. The CERA bill had to be elaborated firstly which delayed the recovery. However did all the readings happen in one day so the bill was passed very quickly, because the politicization was on a low level.

The recognition and signaling of the crisis as a national emergency was well perceived by the people, since they had low confidence into the local authorities after the September 2010 earthquake. Therefore the national government saw the need to step in and take the lead up to a national level. To set a strong signal on tackling the crisis the minister of civil defense announced that “the declaration will ensure the maximum possible coordination and cooperation between central and local resources and international assistance. It also demonstrates the Government’s commitment to help people in Canterbury to respond to this disaster” (McLean et al., 2012, p. 31). The minister pointed out three reasons for declaring a state of emergency that were the powers of compulsion a national crisis management agency has, the availability of resources needed and public trust that is put in national agencies. Setting in the director of the civil defense ministry was an adequate move towards recognizing and signaling the crisis, as well as the appointment of the civil defense minister as crisis manager. However was the move of the national controller from Wellington to Christchurch not the right choice, since the organizational structure of the NCMC assumes the controller in Wellington and not on-site. Recognition and signaling of the crisis is thus recognized as adequate.

The information sharing among the Christchurch Response Centre, which operated under the state of emergency for the national government, was considered as very weak by the report. Despite information was accumulated in big numbers during the crisis the Canterbury Response Centre did not have the capabilities to share the information. Information sharing was therefore done by briefings or emails as soon as the internet capabilities were there. The CRC received information from different sources. One was minutes of briefings from police and emergency service that were held daily and regarded as valuable for the CRC. USAR information was forwarded as well, but not always consistent. Another source were situational reports, however these reports were not an advantage since information often came from different sources and thus were duplicating or unhelpful. The information gathering was successful, but sharing of information was sometimes difficult. Therefore provision of information in crisis organizations was done adequately (McLean et al., 2012).

What regards the emergency service, they focused on the areas where there was the most information that life was at risk. Therefore the efforts to save lives were concentrated in these areas, i.e. especially the CBD. The crisis managers of CRC at the Emergency Operations Centre, that was located in the art gallery of Christchurch right after the earthquake, had huge amounts of information available. However the report states that this information was not adequately analyzed and thus did not inform the crisis managers in charge adequately. So that they could have chosen for the best option (McLean et al., 2012).

The CRC, that was directed by the national controller, got scientific advice by the GNS. It included information about, e.g. possible rock falls or landslides to identify areas that have to be evacuated, information about liquefaction needed for response and recovery actions. The official report emphasizes that too less information was asked for by the CRC on a medium range, but GNS provided adequate analyses and judgements for a daily working basis. Analyses were considered adequate and on time by the official report so were the links of the CRC with the Wellington located NCMC.

Due to the unprecedentedness of the earthquake the National Controller took much of the control. He limited the budget of the operation directors to implement decisions. Moreover were many decisions transferred to the controller, because agents did not feel empowered or did not know the intention of the principal (McLean et al., 2012). Despite that too many decisions were pushed forward to the national controller which caused a huge workload for him, the decision making and steering is considered as adequate. John Hamilton as the National Controller did an outstanding job. “The way in which issues, once being brought to John Hamilton’s attention, were dealt with decisively and brought him respect” (McLean et al., 2012, p. 48). The deputy of the controller did a good job as well. Therefore the decision making and steering is considered as adequate. Moreover did the controller create an atmosphere of stability due to “his calm demeanour [that] was a steadying influence” (McLean et al., 2012, p. 48).

The transition from the response phase where CRC was in place to the recovery phase where CERA took over was seamless. Mainly due to proposals that were worked out for the establishment of CERA by the CRC. Due to the politicization of the CERA issue, the legislation gap had to be closed to further perform crisis management. Hence this “extended the response period beyond what was desirable” (McLean et al., 2012, p. 52), however is it still adequate, since recovery could start without major interruptions.

The crisis communication to the public was considered very adequate. This was because many agencies were involved in informing the public and they received information from the National Controller so rumors did not come up. The involvement of the controller “provided both authority and confidence to be conveyed at a critical time for local communities” (McLean et al., 2012, p. 48). The national controller did not justify its’ actions, since he did not have to testify in front of parliament.

There were two official outlets by the crisis managers that informed the media. One was from the EOC in Christchurch, whereas the other was an official press officer located in Wellington belonging to the NCMC. Two press conferences a day were held to inform the media, besides that officials were forbidden to share information with the media. This prevented rumors to spread or stories from people involved that did not see the bigger picture. The media instructed the public about the measures CRC took. The recovery of heritage buildings was mediatized, where local population was in favor of a fast recovery. This build some pressure on CRC which could start recovering before the topic was politicized. Not only the media instructed the people in the Christchurch area, but also the CRC. The CRC held meetings with local communities where all communities considered the information of the meetings as inadequate, since it was mostly to outdated information. However the provision of information to the general public outside the area via the media was considered as “excellent” (McLean et al., 2012, p. 170).

## **Conclusion**

To conclude, the effect of politicization on the adequacy of crisis management was visible, even though to a low extent. Politicization was present, however to a lower extent than what would be possible. The official report points out several flaws during crisis management which most of them were not salient in the media and were thus not highly politicized. The politicization that was present before the establishment of CERA did indeed slow down the recovery process, because the political system in New Zealand requires three readings until a bill passes into law. The blame games were too weak that political decision makers saw the need to respond to that. Issues that were not politicized like the crisis communication were adequate coherently to the theory. Most of the issues were not politicized, thus the whole crisis management is regarded as adequate.

### 4.2.2. Politicization on improvisation and inter-organizational collaboration

Hypothesis 2 predicted that a high level of politicization will lead to a low level of improvisation and a low level of inter-organizational collaboration. Protocolized action crisis managers could refer to was mostly manifested in the National Civil Defence Emergency Plan 2006. The official investigation report stated that the airport, the port and hospitals were damaged, but were intact on an operational level. Roads were passable and the police and fire service could operate. However were all these emergency services, in practice, able to respond, but their resources were insufficient. Through the declaring of a state of emergency additional resources could be deployed. The fire commander, the police commander and the Christchurch City Council duty controller agreed that a state of emergency shall be declared. A local state of emergency

was declared almost three hours after the main-quake by the CCC. These actions were within the boundaries that the protocols grants.

As the state of national emergency was declared the minister responsible for civil defense – John Hamilton, a former RNZAF marshal – was the man in charge. Therefore the NCMC became active in Wellington. In the Blue Book the role is identified as “MCDEM [Ministry of Civil Defence & Emergency Management] is the agency in central government that co-ordinates the civil defence emergency management necessary during states of national emergency or civil defence emergencies of national significance” (MCDEM, 2009, p. 5Section 3). The national controller has the responsibility to direct control and steer the coordination by using resources that are granted to him. The protocols do not further restrict the actions that the national controller can take. Moreover was “the possibility of locating the National Controller away from the NCMC [...] never been contemplated and consequently no plans existed [how to handle this situation]” (McLean et al., 2012, p. 61). This is also an improvisation away from established protocols. Moreover did the internal organization “depart[...] significantly from the structure set out in the National CDEM Plan [...]” (McLean et al., 2012, p. 11). This was due to a collaboration between the CCC and the local CDEM group that was already badly coordinated. The official report even states that “the internal organization of the CRC departed significantly from the structure set out in the National CDEM Plan and Coordinated Incident Management System (CIMS) doctrine” (McLean et al., 2012, p. 11). Because of the low level of politicization about the protocols the controller could move off the protocols. This is considered as a smoking gun due to the impact it had on the CRC. The motivation for the national controller for this decision was that the collaboration between the CCC and the CDEM groups did not work out well in the previous earthquake. This confession comes from “a report written for the CDEM Group after the 4 September earthquake criticized the performance of elements of the CCC and this contributed to the disunity between CCC and the Group, and dysfunctionality that was not resolved at the time of the February earthquake” (McLean et al., 2012, p. 45).

The role of the police during a crisis is stated in the protocols. Those are: maintaining law and order, take all measures within their power to save and protect lives, assisting the coroner as required, coordinating movement control over land; and conducting inland search and rescue (MCDEM, 2009). To fulfill their roles the police has certain rights and duties that are broadly defined as well. According to the official investigation report the police forces mainly engaged in preserving life by performing first aid, public reassurance whilst assisting the search and rescue operations, security when they enforced the cordon, and disaster victim identification. These tasks are all stated in the protocols for civil defense, therefore the police forces stuck to those protocols.

The fire service played an important role in the direct aftermath of the crisis. Because the Christchurch quake was so big in impact the fire service was overstrained. While the civil defense protocols do not state

anything about volunteer crews they were still integrated to the emergency response of the fire service. This can be considered as improvisation from protocols, despite no protocolized actions being present the officers in charge had to improvise in a new situation. Except of this the fire service stayed within their boundaries by the protocols and applied their rights and duties to perform their tasks.

A share in emergency management had the army. The NZDF cannot deploy themselves in a crisis. They have to be requested, but can never be the lead agency and must subordinate to an Emergency Operations Centre in a local or regional emergency context or respectively the NCMC. Despite that the protocols indicate that the NZDF has to be requested for. NZDF liaison officers came to the police and CCC EOC and offered their help. The motivation of the liaison officer was as the report states, that officers had experience from the previous earthquake and assumed that their help is needed again, since the previous collaboration did work out (McLean et al., 2012). The tasks that army personnel carried out was within their scope of action. However were the tasks for the NZDF in previous crises different to the earthquake 2011. In 2011 their tasks were to guard the cordon or to support logistics, in these fields the soldiers had expertise and training unlike providing just man power where no special training was needed as it was the case previously. Those task are within the scope of action as well as stated in the protocols.

The health sector response stuck to the protocols provided for an emergency as well. Hospitals were not really overstrained after the quake, because the victims arrived not all at once in the hospitals. So they were able to control the situation. Due to well trained staff there was no need to improvise from protocols. Hospitals in Christchurch were able to transfer patients from one hospital into the other if the capacities were used up.

Volunteers played a crucial role in the crisis 2011. There existed several volunteer groups in different sizes. Some of them coordinated the recovery of whole suburbs. However provided the protocols not much insights how to coordinate with volunteers. Most of those volunteers were so called spontaneous volunteers, since they did not receive any CDEM training or were members of civil defense. The protocols state that organizations using volunteers have to look after them and take the responsibility. In 2011 the crisis managers let them operate on their own, but send liaison officers to those volunteer groups for coordination purposes, since such big groups were important to overcome the crisis. This was an action improvised from the protocol, since such a situation was not included in the protocol.

## **Conclusion**

As listed above it can be seen that the level of improvisation was on a rather high level. This complies with the hypothesis, because a larger amount of improvisation was expected. As the focus is not so much on political accountability, which held to be true for the low level of politicization. It had effects on

improvisation, for internal as well as for some external dimensions. This was possible as the National Civil Defence Emergency Management Plan 2005 which was routinely reviewed every five years also in 2010 was not a salient issue. The 2010 earthquake was too recent to be included in the plan (McLean et al., 2012). However, protocols did not get politicized after the 2011. The national controller knew the dysfunctionality of collaboration for the local crisis management agencies. This finding goes along with the theory that a low level of politicization will lead to a high level of improvisation from protocols.

In the Christchurch crisis management all kinds of organizations were involved. The NGOs, NPOs, volunteer groups, public, private, and foreign organizations had different levels of collaboration.

Private organizations, i.e. mainly businesses were affected severely, since the earthquake hit the CBD the most. The issue about the earthquake subsidy for employees and business owners that was politicized did not lead to a collaboration among organizations. The politicization of the subsidy did not foster collaboration amongst businesses. It led to business trying to get their subsidies as long as it was possible, since the subsidy was not means tested and thus everyone could apply for it. So business owners had time to figure out for themselves how to proceed (cf. Interview). Business owners collaborated in later stages where discussions about that issue were not salient anymore and the concern that the subsidy will be suspended was not present then.

Businesses in Christchurch were not highly encouraged to form inter-organizational networks. They rather relied on their own social capital in order to overcome the crisis. To have a voice some joined an advocacy group. However they had ties within their professional networks that were strengthened during the crisis. For example, did pharmacies order their medicine from a central dealer who was a member in a professional association. This was collaboration on the level of coordination where information was shared, but also resources. For example, if one pharmacy did not have a certain product urgently needed, but another one close did, they could share rather than ordering.

The transition process between the CRC and CERA did lead to a lower level of collaboration as the theory predicts. An expert regards the relationship between CERA and the CCC, that should initially plan the recovery on a local level, as antagonistic. Both agencies moved further away from collaborating with the other side, as was the politicization process. This was as CERA came up with their own blueprint for the rebuilding of the city where they did not involve CCC or local organizations in the planning process.

New Zealand received a lot of offers from different countries that offered their help to all kinds of crisis management related issues. The best relations in terms of tackling incidents New Zealand has with Australia. Both countries assist each other in all crisis situations that are too big to handle alone. This relationship is strengthened through training, meetings, and joint operations. Therefore Australia send immediately

supporting teams for USAR and other operations in Christchurch. Other countries offered assistance as well, but there was no use for all offers. This was also because a great number of victims were foreign (McLean et al., 2012). Offers were processed by either the CRC, NCMC or the Officials Committee for Domestic and External Security Coordination. The different foreign teams however were coordinated by the MFAT. Between the national agencies and the foreign assistance it was a full collaboration, since those teams were incorporated into the system and steered from there, and the decision making was done in the CRC. Because the offers of different countries for relief came immediately in after the quake happened, even before the state of national emergency was declared. There is no evidence that politicization affected the collaboration of foreign actors with other organizations. Thus the politicization process started after foreign deployment when their capacities were already downsized.

The national and local agencies, respectively the CRC and CCC together with the local CDEM groups had naturally a very close relationship. As the state of national emergency was established the subsidiarity principle shifted on to the national controller who came from the NCMC and had to be the main crisis manager then. The collaboration inside the CRC was very high since the agencies belonged to one system. However was the sharing of information more bottom-up. So national agencies shared less with the CCC than vice versa. Despite this was the collaboration in the CRC and the joint decision making strong (McLean et al., 2012). The same was the case for organizations like the police or the fire service, because “collaboration with government and non-government agencies was effective through the high level of commitment shown by all” (McLean et al., 2012, p. 72).

Official agencies had connections to businesses and NGOs as well. The low politicization fostered as well the collaboration between public actors, private ones and NGOs. With the establishing of the Stronger Christchurch Infrastructure Rebuilding Team (SCIRT) there was a platform created that joins different types of organizations. On the one hand it includes official government agencies like the CCC and national agencies and on the other it includes private-public agencies like City Care. Most of all did SCIRT include local private businesses that benefited from this platform. The collaboration among partners was strong. What would be characterized as coalition, since it was a platform that gave especially local businesses a voice Information was shared as well as ideas. Eventually SCIRT and the Red Cross shared the same building and ended up working together as well (cf. Interview). According to the theory these mechanisms of strong collaboration between organizations can only occur when the level of politicization is low. The preconditions are set since they are rather low and the collaboration is high.

Private businesses and organizations had advocacy groups like CanCERN that linked businesses owners and resident associations together. However had official agencies also good connections due to liaison officers that were sent to NPOs or volunteering organizations. Two major volunteer organizations

established themselves, one was the FARMY Army and the other one the Student Volunteer Army. The former was established through the local group of Federated Farmers and the latter was a group of mainly students that organized themselves via social media. For the improvement of effective collaboration a liaison officer from the CRC was located at the headquarter of the FARMY Army. Both volunteer organizations were located close to each other so they could both benefit from the officer. The collaboration between official agencies and the volunteer organizations was really strong, even they did not belong to one system. However was information shared among those organizations and the CRC located them where they would be needed. There were also some small volunteer organizations that were more difficult to communicate with, but most of them used the FARMY Army as an organization to be incorporated into the network of volunteer organizations and official agencies (McLean et al., 2012).

NGOs in general were highly involved in terminating the crisis. Most of the NGOs participating in crisis management in Christchurch organized themselves in the NGO Disaster Relief Forum (NDRF) which is an independent sub-unit of the Council for International Development, that is an NGO itself. Moreover has the council connections to official agencies. Different organizations like Caritas, Oxfam, UNICEF, or World vision are members of that forum. The collaboration is strong as well in this forum, since information sharing is a key value and the NDRF coordinated the NGO support during the earthquake. The NDRF holds a permanent seat in the NCMC in Wellington and is closely connected to national agencies. As well did it help processing international offers of assistance like foreign NGOs offering their help.

## **Conclusion**

Because the work of the operating crisis managers was not politicized collaborations between official agencies that took the lead in crisis management and all other organizations could establish. Red tape or extensive political steering where every measure undertaken by the crisis managers were politicized was not present in this crisis. Therefore the collaboration across all kinds of organizations as well as within networks of organizations was high, which is in line with what the theory predicts. Even political agencies had well established networks. Due to the low politicization the accountability for crisis managers was not that salient which is a precondition for the crisis managers to establish collaborations.

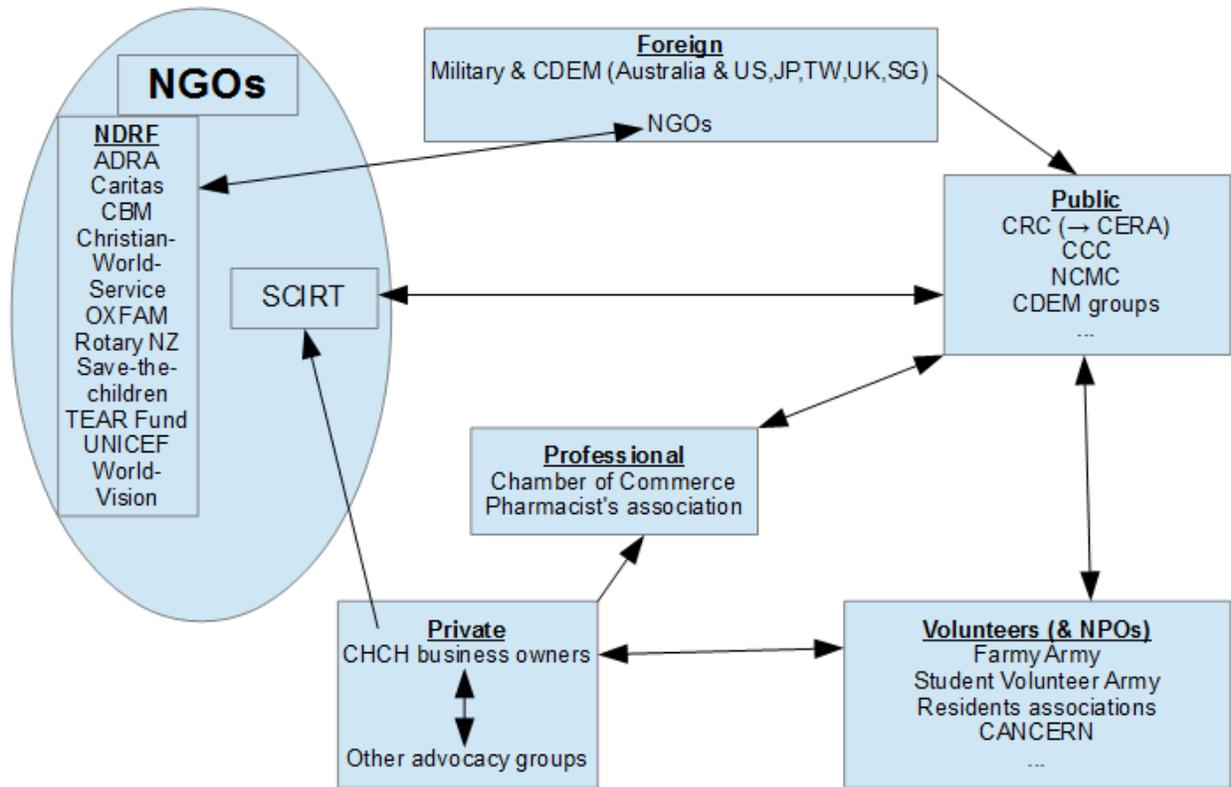


Figure 5: Simplified inter-organizational collaboration in the Christchurch earthquakes February 2011 (own work)

#### 4.2.3. Improvisation and inter-organizational collaboration on the adequacy of crisis management

Hypothesis 3 predicted that a high level of improvisation and a high level of inter-organizational collaboration leads to a more adequate crisis management. Preparation of the crisis management was negatively influenced by improvisation. Due to non-compliance with the established CIMS the trained staff was not prepared for such an improvisation. Adequacy of preparation suffered, because the efficiency came at the cost of the improvisation and the structure of the CRC “came at the expense of simplicity and functionality” (McLean et al., 2012, p. 50). The effect of improvisation on the adequacy of recognition and signaling could not be proved. Because the level of improvisation was rather low whereas the dimension of adequate crisis management was considered rather strong. In having appointed the national controller as the main crisis manager and the establishment of the CRC the protocols were followed without improvisation. Which is the same for the transition into the recovery phase where CERA took over. This process was accompanied by the signaling and recognition of the crisis by the government. The official report states as well that much personnel in the CRC did not have adequate training, but there was no improvisation in staffing these positions with more fitting people (McLean et al., 2012). The improvisation that was

undertaken in the internal organization of the CRC affected the provision of information within crisis organizations negatively. Due to that, information was not shared or got duplicated sometimes. In turn this lead to a less adequate provision of information with the crisis organizations.

Analysis and judgement of decisions were positively influenced by improvisation. The specific improvisation was the deployment of liaison officers to the headquarters of the volunteer organizations. Through this the CRC could fall back on the resources and information of these groups that lead to an adequate outcome in this dimension. However was the third dimension very negatively influenced through improvisation. Due to the internal organization of the CRC authority for management changed as the shifts did. Therefore “consistency in decisions [was] not always achieved” (McLean et al., 2012, p. 11). This, especially in crisis situations vital dimension of decision making lead to a non-adequate outcome in the dimension of preparation. The planning department in the CRC was not adequately integrated to crisis management, since plans went back and forth causing delays. In the report it is emphasized, that “the functional role of Planning [...] was largely lost” (McLean et al., 2012, p. 57). This affected as well the decision making and steering which itself was negatively influenced. This was because of the division between the CCC and the CDEM group (McLean et al., 2012). Due to the improvisation one sub-unit of the CRC had the operations and one the planning directorate which caused weaknesses in decision making. Crisis communication with the public was positively affected, since it is considered as adequate. Improvisation contributed through the usage of social media that made them more trustworthy (Sutton, 2012). Even though the social media account was only created right after the crisis. The creation of such an account is a smoking gun. Due to a high demand of questions via social media organizations tried to establish a trustworthy information outlet and gain credibility, which represents the confession.

The effect of inter-organizational collaboration on the adequacy of crisis management can be observed for some dimensions. Preparation in terms of protocols before the earthquake was done, but still under review. Different agencies collaborated to review the old protocols. However did collaboration influence the review, but this relationship is not related to the crisis that occurred in February 2011. For the adequacy of recognition and signaling could no evidence be found that inter-organizational collaboration influenced this dimension of crisis management. The provision of information was not adequate for the same reason as above. The internal structure in the CRC was not sophisticated enough to provide a platform for the inside agencies to share information. Therefore “there was a great deal of information collected but it did not appear to directly assist key decision makers” (McLean et al., 2012, p. 58), which represents inadequate provision.

Inter-organizational collaboration contributed to the adequacy of analysis, judgement, and preparation of decisions. For example could business owners through contact persons tell CRC where buildings could be

torn down. Through this information sharing through collaboration could decision making be better prepared (cf. Interview). Also the volunteer groups contributed to it as these organizations shared their knowledge and resources through the liaison officer. The decision making and steering is considered as adequate. John Hamilton, the national controller, collaborated with local and national political leaders. Therefore concludes the report about the adequacy of decision making and steering: “The quiet, strong leadership shown by John Hamilton as National Controller, together with political leadership by Hon Gerry Brownlee and Mayor Bob Parker, held the organization and indeed the city together.” (McLean et al., 2012, p. 10). The adequacy of crisis communication was affected through collaboration. More channels of communication were available. The Student Volunteer Army for example distributed leaflets in neighborhoods to inform the population about news or what steps to undertake (McLean et al., 2012).

## **Conclusion**

Improvisation led to a rather negative outcome in most dimensions of crisis management that are affected. This is contradictory to the hypothesis which stated that a high level of improvisation leads to an adequate outcome. Even though improvisation and the adequacy of crisis management is high, the variable of improvisation evidently affecting the non-adequate dimensions of crisis management. Therefore it contradicts the hypothesis and has to be rejected. Since the healthy dose of improvisation described in the theory was exceeded.

Inter-organizational collaboration was present to a relatively high extent in times of the crisis. The theory predicts a positive relationships between these variables. This hypothesis as confirmed since the adequacy of crisis management is rather high as well, which the data supports.

### 4.2.4. Social media usage on improvisation and inter-organizational collaboration

Hypothesis 4 predicted that a high level of social media usage leads to a high level of improvisation and to a high level of inter-organizational collaboration. Right after the earthquake in February 2011 the CCC set up a social media presence. The need for it was seen during the previous earthquake, however did it take time until the February one. Official accounts were created on different social media outlets that allowed the CCC to communicate with the public (Sutton, 2012). During the aftermath of the crisis much information was shared on open source webpages such as Facebook or Ushahidi, which is a map service. Information of those open online sources was accessible for all organizations and they used it as well. Maps created in Ushahidi were published by the press such as the New Zealand Herald. Official agencies felt the pressure to take the initiative to communicate with individuals and engage as well in social media usage.

Social media usage did not only strengthen collaborations, but also create new ones. Businesses formed networks of support with the local population, their customers or other businesses. They informed the public through social media about their businesses as well as others where they held relationships. However was social media used as well in the other direction where customers tried to add them to conversations or things as Facebook groups that functioned as networks. Also support from customers that was more psychological could be observed. For example did people tell to businesses that they should re-open and not close down (cf. Interview). Such kinds of social media usage did strengthen the inter-organizational collaboration.

The Twitter usage during the crisis was immense. The first two hours after the crisis were the most active ones with two new tweets per second, containing the '#eqnz' hashtag. Compared to the previous September earthquake and to one in June and December this earthquake created an unprecedented impact, not only in Twitter usage. The other earthquakes did not have the same impact on Christchurch, but on its peak the Twitter usage was almost ten times higher than the one 2010 (Bruns & Burgess, 2012). This is a big amount, but results not alone in a high social media usage. However were organizations big contributors to the social media usage. The biggest contributor in terms of generating Twitter content was the Canterbury Earthquake Authority which created almost 2500 tweets of which about 80% is self-created and not re-tweeted content (Bruns & Burgess, 2012). All different types of organizations participated in the creation of social media content. Those were ranging from government agencies like the CCC, news agencies, especially the New Zealand Herald, volunteer organizations that were partially only online based, and individual private accounts. The volunteer groups were looking for crowdsourced solutions or offered advice for certain situations.

Especially volunteers used social media to organize themselves. Organizations like the FARMY Army or the Student Volunteer Army did grow because of calls in social media and the facilitated process of joining such a group. Also through the crowdsourced solutions mentioned above. This was especially the case when individuals reported about the situations in their neighborhoods so agencies monitored the activities (Sutton, 2012).

## **Conclusion**

The social media usage throughout the crisis and especially in the immediate aftermath was very high. Even though social media was monitored and a lower amount of reconnaissance was necessary there was no evidence that crisis managers' improvisation from protocols increased. The high level of social media had a positive effect on the level of inter-organizational collaboration. This smoking gun can be found for the volunteer organizations that gained and accumulated a lot of knowledge and resources through social media. Because of that the CRC sent liaison officers to those groups in order to strengthen the collaboration between

the organizations. The motivation was the capacity they could provide in order to terminate the crisis with the best possible outcome.

#### 4.2.5. Social media usage on the effects of politicization

Hypothesis 5 predicts that a high level of social media usage will attenuate the negative effects of politicization on crisis management. In the fortnight of the earthquake there were numerous tweets with an appeal for donations. Like in other crisis-shook regions also Christchurch asked the public for help. One of the most shared tweets with the highest range was the call from the New Zealand Herald for donations (Bruns & Burgess, 2012). This could have in fact attenuate the level of politicization what regards the money. Since the extensive funds for the earthquake subsidy had been politicized. Nevertheless was the attention span for the fundraising via Twitter already on a very low level before the monetary issue was politicized.

Even though the level of social media usage was high and according to the theory it would have moderate the effect of politicization on the adequacy of crisis management was no evidence found to prove this. Neither smoking guns for a clear evidence nor confessions for the motivation for it could be found in the data. Therefore the hypothesis of the moderating effect through the level of social media did not hold true and has to be rejected.

## **5. Conclusion**

The thesis *POLITICIZATION, SOCIAL MEDIA, AND CRISIS MANAGEMENT: THE 2011 CHRISTCHURCH EARTHQUAKE* is based on the research question stated in the introduction. ‘To what extent and how did politicization affect the adequacy of the crisis management by the New Zealand authorities after the Christchurch earthquake in February 2011?’ alongside further sub-questions. Politicization does influence the adequacy of crisis management directly and indirectly through inter-organizational collaboration. It was visible that politicization had a negative effect on the adequacy of crisis management even though politicization was barely present. The fact that the presence was weak caused the adequacy to be high. The crisis management was adequate due to good decision making and steering, despite the weak preparation. Even low levels of politicization lead to a less adequate crisis management.

Effects of politicization could be well addressed. Especially the effect on the adequacy of crisis management was properly address, since all issues of politicization were identified and the effects explored. The effect politicization had on improvisation and inter-organizational collaboration were addressed accurately as well. A factor that made this task more easy was that politicization was rather low, so the focus was on the variables that were influenced by it. The level of these variables could be broadly explored. Nevertheless not all consulted newspapers did contain useful information to determine the level of politicization, some were only reporting superficially. Collaboration could be addressed well despite not all organizations could have been inquired, since a detailed explanation of collaboration was not present for them. Also the effect of collaboration on crisis management could be proved, because smoking guns were present and it complied with the theory. Improvisation on adequacy was rejected even though the adequacy was high, so was the improvisation. Hence it proved that improvisation was responsible for the weak dimensions of crisis management it had to be rejected. This could be addressed really clear and the exact function of crisis management became visible. The effect of social media on improvisation had to be rejected as well. This was due to a lack of information found on this relationship which could not confirm the theory. Unlike improvisation, the effects on inter-organizational collaboration could be explored properly, since the availability of information was sufficient. The moderating effect of social media could be addressed least properly. Because of inadequate data on the one hand and the timely division where the effect of social media usage was already gone before politicization happened. This did not go along with the theory. Overall the research question was answered in the analysis part and intervening variables were explored. But social media usage in general was not that well addressed and has to be modified for further research.

The research proofs that the level of politicization has a negative effect on the adequacy of crisis management. This can be used for constructing theories and for further research. It adds a valuable inquiry to the extant research on politicization. Decision makers in future crises cannot neglect the effects of

politicization and political actors should think twice when politicizing an issue, because they may put the adequacy of crisis management at risk. The research also grants more insights into the mechanisms social media usage has on collaboration. Particularly through causal process tracing a clearer picture of the effects was possible. This shows qualitatively how social media was used and these mechanisms can be taken to further research. For crisis managers in the field it is important to know those mechanisms. Through that collaboration can be strengthened and information can be shared which is vital in a crisis. As proven social media contributes indirectly to the adequacy of crisis management and should not be omitted by crisis managers. Especially nowadays, since this crisis in 2011, social media became even more important during the years. Therefore the right usage should be incorporated in every crisis management plan. The underlying extreme case shows that nonetheless a crisis was unprecedented and protocols had proven insufficient. A decisive leader can make the difference in how a crisis is managed. As stated in the introduction crisis managers can make use of this research and the mechanisms that could be proved. Moreover best practices can be taken into account for hands-on crisis management.

For society it is important to know how crisis managers can be assisted, especially through social media. The collaboration of different organizations was positively influenced by the usage of social media. Affected people in the crisis areas should share information with official agencies so they can analyze and prepare decisions more adequately. Thus it is important to address agencies properly through official information channels and steer their social media content in the right direction, i.e. using the proper hashtags assigned to a crisis. This is because the social media content is monitored by official agencies. It was not on a very high extent in the aftermath of the Christchurch earthquake from 2011, but fostered different collaborations. Therefore the adequacy of crisis management could have been higher, if this was conducted more extensively.

The research did explore that previous incidents have an impact on the crisis management like in the underlying case. Thus the effects on crisis management did not just occur during or shortly before the crisis, but also from others further down the road. Even though this crisis was unprecedented in New Zealand, the earthquake of 2010 had an impact on certain dimensions of the crisis management. For example the earthquake subsidies were organized differently. Business owners did not need to go to the welfare office and apply where their cases have to be processed alongside with people on unemployment benefits. They rather got money without having proven that they were in need and thus could focus more on recovery of their businesses. The Student Volunteer Army for example formed during the 2010 earthquakes, but was not that interconnected and large as they were in 2011. Some of these pre-existing organizations contributed strongly to a stronger collaboration with other organizations. An important point is the improvisation. Here the previous earthquake showed the dysfunctionality of the crisis management organization between the CCC and local CDEM groups. This knowledge from the previous earthquake led the national controller to

not set up the crisis management organization like it was previously. This was a good thinking but it lacked in practices, since the deviation from protocols was too big and the staff was not trained. With this in mind an improvisation from protocols might be useful. Even if the organization of crisis management agencies is altered. With regard to the crisis management training of staff, protocols should not fully be rejected.

## **6. Discussion**

The underlying research is limited to the information it could consult. A main point was that only a few newspapers wrote about issues that were politicized in the end. When starting the research politicization was expected to be high. Since it was an unprecedented crisis and the national elections were coming up in November of the same year. Thus political parties could have participated in blame games in order to weaken the public opinion of the government. The common goal seemed to be stronger than individual party goals that are followed. However this research is limited until the mid of 2011, because there was no official report for the crisis management that was conducted afterwards. This last stage of recovery is less concerned with crisis management than the response phase lasted until the 18<sup>th</sup> April 2016 when CERA was officially dissolved. During that time there were issues politicized about CERA, but at that point the focus was mostly on rebuilding than on any other issue. Lives were not at risk anymore and most of the CDEM groups were detached. The limitation of the time frame does not affect the conclusion of the research, since an evaluation of the dependent variable was a closed process. Non-adequate crisis management thereafter would have affected CERA which is not in the focus of this research. Due to consulting only official reports and articles of big newspapers is the effect of politicization on the adequacy strong in terms of reliability.

Nonetheless this research fills precisely the scientific gap by showing the effects that politicization has on the adequacy of crisis management. Especially when it comes to sensitive issues which crisis management is, primary-information gathering is not that easy. Even though much of crisis management actions and protocols were transparent. Finding an interview partner from an official agency presented obstacles. Some organizations even agreed on an interview but canceled it in the last minute. Therefore only an expert researcher from the University of Canterbury was interviewed.

This research is also limited to the depth it could analyze the collaboration between organizations. Inter-organizational collaboration can be inquired more extensively, e.g. taking the organizational culture or organizational structure under which they work into account. The thesis did not inquire all the details in this respect, but rather focused on the collaboration that was visible in publicly accessible documents. To get a more detailed picture of inter-organizational collaboration one has to interview the involved organizations and analyze the connections to other organizations during the crisis. Collaboration between agencies can be further inquired in future research, since these mechanisms effect the adequacy as well. The variable of improvisation focuses only on the higher level decision makers and could have contained the deviation from protocols by lower level staff as well to get an even more detailed picture of improvisation. Concepts of improvisation and collaboration can be set up more sophisticated and take

issues like organizational culture or else into account. Then conclusions drawn from those variables may face a validity problem, since the concepts would be too superficial.

In particular the moderating effect of social media usage on the effect of politicization on the adequacy of crisis management could not be analyzed. Available data was only partially suitable. The effect of the social media usage was already low when it was expected to moderate the effect of politicization. There might have been a moderating effect, but not according to the data that was used in this research. Thus the helping or political component stated in the theory could not be explored. The possibility to inquire this more thoroughly would be to analyze other social media outlets and other information extracted from it apart from the data used here. Due to a more extensive use of social media the spread of false information also increased. Thus a quality measure of social media content can be added to future research in order to figure out which of the messages contained valuable information. The collaboration of organizations in return increased the quality of information circulating. This is, because flawed information can be eliminated by communicating with others and so it is more difficult to feed in false information. Because the social media analysis was mainly conducted with Twitter data the conclusion might only be valid for microblog platforms like Twitter that are characterized through rapid sharing and creation of content. Therefore further research should focus on all different kinds of social media, also where the velocity of sharing new content is slower such as wikis or blogs. The limitations of this research for the effect of social media on collaboration represent a bit lowered amount of validity to the conclusion as well. Practitioners that use the outcomes of the research in the field or for scientific theory building cannot use this outcome universal for every kind of social media, but only for microblogs. However further research can be conducted in this field in order to generalize the findings for all kinds of social media.

A variable that could be influenced by politicization is the perceived accountability. When a crisis manager is assigned to a task he or she might improvise or collaborate with other organizations as the accountability is low. If issues concerning the crisis are not politicized the perceived accountability of the acting crisis manager towards the government may be low which leads to the aforementioned.

The overall research question would not change due to the limitations, since it is answered in this thesis. However the sub-question about the moderating effect of social media has to be altered. Moreover should be inquired a direct effect of social media usage on the adequacy of crisis management. It was explored that the crisis managing authorities used social media content as well. The authorities could have direct impacts on the adequacy and not only via the variables of improvisation or inter-organizational collaboration.

The result of this research is special in that sense that it analyzes a crisis in a context where these types of crises, namely earthquakes, happen often. Nevertheless was this crisis unprecedented. Especially in recent

times the outcome of the research is valuable. One can only think about aviation catastrophes or incidents in nuclear power plants. To those types of crises people and crisis managers are already used to. This is similar to what was the case in Christchurch. But when something happened with an impact that was never seen before political leaders and crisis managers are overstrained. Therefore it is valuable to know what will happen in such circumstances, where there are protocols and there is knowledge about the crisis present, but the situation is too big in impact as these would fit for. This research gives insight into these types of crises and crisis management.

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## **8. Appendices**

### Newspaper articles

<b><u>Agency</u></b>	<b><u>Author</u></b>	<b><u>Date</u></b>	<b><u>Title</u></b>
The Press/Stuff	David Williams	20.07.2011	'Outrage' over \$1000 a day pay for panel
The Press	-	12.04.2011	CERA bill due in Parliament today
NZ Herald	-	09.04.2011	Brian Gaynor: String of disasters calls for tough decisions
The Press	Sam Sachdeva & Michael Wright	12.05.2011	Fletchers defends 'slow' start to heat project
NZ Herald	-	13.04.2011	Brownlee plays down quake powers
NZ Herald	-	31.03.2011	Editorial: Time to give Christchurch back to locals
NZ Herald	-	29.03.2011	Christchurch will be 'world's most quake-safe city'
The Press	-	30.03.2011	Govt given too much 'power'
The Press	-	01.03.2011	Inquiry focus will be on why buildings failed
The Press	-	07.03.2011	Treasury forecasts rebuild will run past 2015
The Press	-	14.04.2011	Recovery bill needed because council too slow – Labour MP
NZ Herald	-	23.02.2011	Christchurch quake: What is a national state of emergency?
NZ Herald	Kevin Taylor	11.06.2004	National accuses Government of communism by stealth
NZ Herald	Kurt Bayer	05.10.2012	Christchurch quake response 'effective' - review

## Hansards

<u>Title</u>	<u>Date</u>	<u>Volume</u>	<u>Page</u>
Ministerial Statements- Earthquake- Christchurch	22.02.2011	670	16937
Ministerial Statements — Earthquake, Christchurch— Extension of State of National Emergency	05.04.2011	671	17659
Questions for Oral Answer — Questions to Ministers	05.04.2011	671	17660
General Debate	06.04.2011	671	17758
Ministerial Statements — AMI Insurance— Financial Support Package	07.04.2011	671	17825
Canterbury Earthquake Recovery Bill — First Reading	12.04.2011	671	17898
Canterbury Earthquake Recovery Bill — Second Reading, In Committee	12.04.2011	671	18129
Questions for Oral Answer — Questions to Ministers	12.04.2011	671	18182
Canterbury Earthquake Recovery Bill — In Committee, Third Reading	12.04.2011	671	18198

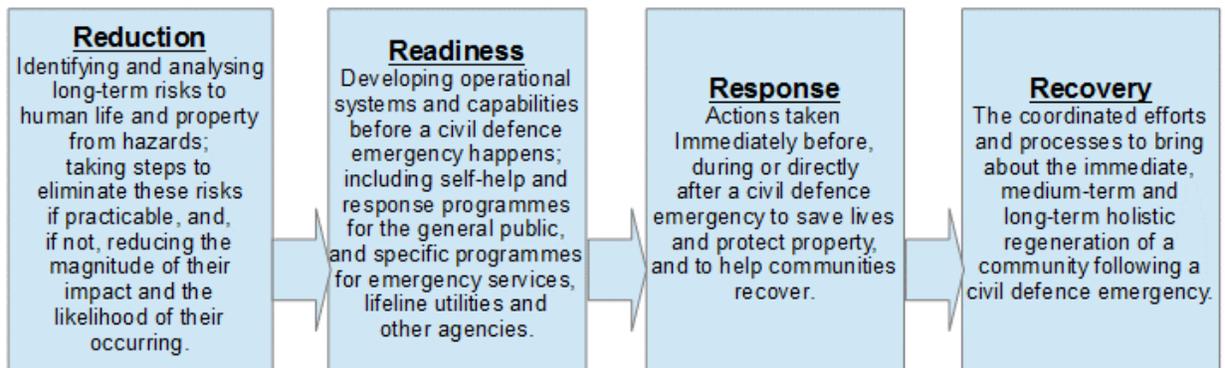
## NGO organizations

<u>Name</u>	<u>Webpage</u>	<u>Title</u>	<u>Date</u>
SCIRT	<a href="http://strongerchristchurch.govt.nz/about/structure">http://strongerchristchurch.govt.nz/about/structure</a>	Who we are	Derived: 29.06.2016
NDRF	<a href="http://www.ndrf.org.nz/emergencies/previous-emergencies/christchurch-earthquakes/">http://www.ndrf.org.nz/emergencies/previous-emergencies/christchurch-earthquakes/</a>	Christchurch earthquakes	Derived: 29.06.2016

Earthquake information (Derived: 29.06.2016)

<u>Organization</u>	<u>Title</u>	<u>Webpage</u>
Earthquake Commission IQ	Earthquake Introduction	<a href="https://web.archive.org/web/20120626134111/http://www.eq-iq.org.nz/eq-intro.aspx">https://web.archive.org/web/20120626134111/http://www.eq-iq.org.nz/eq-intro.aspx</a>
US Geological Survey	The Sciences of earthquakes	<a href="http://earthquake.usgs.gov/learn/kids/eqscience.php">http://earthquake.usgs.gov/learn/kids/eqscience.php</a>
Christchurch City Libraries	22 February 2011 Canterbury earthquake for kids	<a href="http://my.christchurchcitylibraries.com/canterbury-earthquake-2011-for-kids/">http://my.christchurchcitylibraries.com/canterbury-earthquake-2011-for-kids/</a>
New Zealand History	Christchurch Earthquake kills 185	<a href="http://www.nzhistory.net.nz/page/christchurch-earthquake-kills-185">http://www.nzhistory.net.nz/page/christchurch-earthquake-kills-185</a>

4 R's of CDEM (MCDEM, 2009)



Interview outline (full interview stored as audio file with the researcher)

**Interview request:**

Dear [REDACTED],

I am Henrik Neth a German student from the University of Twente in the Netherlands. Currently I work on my Bachelor thesis about crisis management, the title of my research is "POLITICIZATION, SOCIAL MEDIA, AND CRISIS MANAGEMENT: THE 2011 CHRISTCHURCH EARTHQUAKE". To gather more information about this topic I am asking for an interview partner that was involved in 2011s' crisis management and is willing to answer some questions about that topic in the title, as well as to inter-organizational collaboration. I briefly read through your article about [REDACTED] after the Christchurch earthquakes and consider you as an expert when it comes to the 2011 earthquake. The interview does not take longer than an hour and all information will be kept confidential.

Preferable should the interview be conducted via skype or phone.

Kind regards,

Henrik Neth

**Interview questions:**

1. In how far did the earthquake subsidy for employees and business owners represent a tool for the collaboration of organizations?
2. Did the establishment of CERA, respectively when it was known that recovery will be steered from Wellington and only includes a non-binding advisory body of locals, tie the organizations stronger together?
3. Were there any previous patterns, best practices or protocols (e.g. from the September 2010 earthquake) for collaboration where organizations could fall back to?
4. Did social media facilitate (small) organizations entering a network?
5. Did networks share accumulated information that was crisis relevant to official agencies assigned to crisis management?
6. How did networks influence decision making in crisis management agencies (e.g. building firms on rebuilding issues)?