

## Lincoln University Digital Dissertation

### Copyright Statement

The digital copy of this dissertation is protected by the Copyright Act 1994 (New Zealand).

This dissertation may be consulted by you, provided you comply with the provisions of the Act and the following conditions of use:

- you will use the copy only for the purposes of research or private study
- you will recognise the author's right to be identified as the author of the dissertation and due acknowledgement will be made to the author where appropriate
- you will obtain the author's permission before publishing any material from the dissertation.

**The Role of Central Government following the Lombok Earthquake  
2018: the planning process and ownership and control of the  
*Mataram City Post-Earthquake Reconstruction and Rehabilitation  
Plan***

---

A Dissertation  
submitted in partial fulfilment  
of the requirements for the Degree of  
Master of Planning

at  
Lincoln University  
by  
Achmad Rijal Isbatul Yakin

---

Lincoln University  
2020

Abstract of a Dissertation submitted in partial fulfilment of the  
requirements for the Degree of Master of Planning.

The Role of Central Government following the Lombok Earthquake 2018: the  
planning process and ownership and control of the *Mataram City Post-  
Earthquake Reconstruction and Rehabilitation Plan*

by

Achmad Rijal Isbatul Yakin

Recovery from disasters is a significant issue faced by all countries in the world at various times. Governments, including central and local governments, are the key actors regarding post-disaster recovery because they have the authority and responsibility to rescue affected people and recover affected areas (Yang, 2010). Planning is a critical step in the recovery process and provides the basis for defining a shared vision for recovery, clear objectives and intended results. Subsequently, the concept of collaborative planning and 'build back better' are highly desirable in recovery planning. However, in practice, these concepts are difficult to achieve. A brief description of the recovery planning in Christchurch City following the Canterbury earthquakes 2011 is provided as an example and comparison. This research aims to analyse the planning process to develop a post-disaster recovery plan in Indonesia using Mataram City's recovery plan following the Lombok Earthquakes 2018 as the case study. It will emphasise on the roles of the central and local governments and whether they collaborate or not, and the implications of decentralisation for recovery planning. The methodology comprised a combination of legislation analysis and semi-structure interviews with the representatives of the central and local governments who were involved in the planning process. The results indicate that there was no collaboration between the central and local governments when developing the recovery plan, with the former tend to dominate and control the planning process. It is because there are regulatory and institutional problems concerning disaster management in Indonesia. In order to improve the implementation of disaster management and develop a better recovery plan, some recommendations are proposed. These include amendments the disaster management law and regulations to provide a clear guideline regarding the roles and responsibilities of both the central and local governments. It is also imperative to improve the capacity and capability of the local governments in managing disaster.

**Keywords:** Disaster, earthquake, recovery planning, collaborative planning, recovery plan, central government, local government, Indonesia, Mataram City, Lombok earthquakes, disaster management.

## Acknowledgements

First of all, I would like to dedicate this dissertation to my late father (H. M. Ainul Asikin). I believe you are proud to see me from heaven. I would never achieve this dream without your support and motivation. Thank you, dad, I am so blessed to be your son. I love you.

Next, I would like to thank my family, special thanks to my best support system, my wife (Shofa) and my daughters (Naura and Aiko), for always accompanying me during this academic journey. To my mom (Nurbaity), brothers and sisters (I mean all of you guys), thank you for the pray, support and motivation. It would be a great happiness to go home and to see all of you again.

I would also like to acknowledge my supervisor, Roy Montgomery, who has very supportive and encourages me to improve this dissertation. Thank you for the valuable knowledge you shared during this research, especially how to see things from a critical perspective.

I would like to express my sincere gratitude to all participants for sharing their times to be interviewed. I wish you all safe and healthy when doing your job during this Covid-19 pandemic. You are definitely heroes for our country.

I would like to express my sincere gratitude to the Ministry of Foreign Affairs and Trade (MFAT) for giving me the opportunity to study in this amazing country. Studying in New Zealand not only improve my academic skills but also allowed me to experience different cultures and learn many valuable things that brought new perspectives to my life.

Special thanks to Sue Bowie, Jayne Borrill and Mandy Buller, who have been very supportive in both my academic and personal life. These three lovely ladies have made everything so much easier and make me and my family feel like home.

Finally, to all lecturers, staffs and my fellow Master of Planning students at Lincoln University, thank you for the knowledge, support, and discussion during my time in New Zealand.

# Table of Contents

<b>Abstract .....</b>	<b>ii</b>
<b>Acknowledgements .....</b>	<b>iv</b>
<b>Table of Contents .....</b>	<b>v</b>
<b>List of Tables .....</b>	<b>viii</b>
<b>List of Figures .....</b>	<b>ix</b>
<b>List of Abbreviations .....</b>	<b>x</b>
<b>Chapter 1 Introduction.....</b>	<b>1</b>
1.1 The Problem: Who best leads recoveries after disaster? .....	1
1.2 Background .....	2
1.2.1 Lombok Earthquakes .....	2
1.2.2 Mataram City Post-Earthquake Rehabilitation and Reconstruction Plan .....	2
1.3 Research Question .....	3
1.4 Limitation to study .....	4
1.5 Chapter outline .....	5
<b>Chapter 2 Literature Review.....</b>	<b>6</b>
2.1 Post-Disaster Recovery .....	6
2.2 Post-Disaster Policy and Planning .....	7
2.3 The Role of Government .....	8
2.4 Intergovernmental Relations in Post Disaster Recovery .....	9
2.5 Decentralisation and Planning .....	10
2.6 Collaborative Planning .....	11
2.7 Governance in Indonesia .....	12
2.8 Disaster Management in Indonesia.....	13
2.8.1 A History of Disaster Risk Governance in Indonesia .....	14
2.9 Disaster Management in New Zealand .....	15
2.9.1 The Canterbury Earthquakes .....	15
2.9.2 Government’s Policy and Planning .....	16
2.9.3 Land Use Recovery Plan .....	17
2.9.4 Christchurch Central Recovery Plan .....	18
<b>Chapter 3 Methodology .....</b>	<b>20</b>
3.1 Introduction .....	20
3.2 Research Design .....	20
3.2.1 Qualitative Method .....	20
3.2.2 Case Study .....	20
3.3 Data Collection.....	22
3.3.1 Interview .....	22
3.3.2 Document Collection .....	23
3.4 Data Analysis.....	23
3.5 Ethics.....	23

<b>Chapter 4 Analysis of Legislation and Institution for Recovery Planning in Indonesia .....</b>	<b>24</b>
4.1 Introduction .....	24
4.2 Laws and Regulations Concerning Recovery Planning in Indonesia .....	24
4.2.1 Law No. 24/2007 Concerning Disaster Management .....	24
4.2.2 President Regulation No. 8/2008 Concerning National Disaster Management Agency .....	26
4.2.3 Government Regulation No. 21/2008 Concerning Implementation of Disaster Management .....	26
4.2.4 Government Regulation No. 22/2008 Concerning Funding and Disaster Aid Management .....	27
4.2.5 Head of BNPB Regulation 17/2010 Concerning General Guidelines for Post-Disaster Rehabilitation and Reconstruction .....	28
4.2.6 BNPB Regulation No. 5/2017 Concerning Development of Post-Disaster Rehabilitation and Reconstruction Plan .....	28
4.2.7 President Instruction No.5/2018 Concerning Acceleration for Post-Earthquake Rehabilitation dan Reconstruction in West Nusa Tenggara Province .....	29
4.3 Summary .....	30
<b>Chapter 5 Interview Results .....</b>	<b>31</b>
5.1 Introduction .....	31
5.2 Recovery Planning Process .....	31
5.3 Government Role .....	33
5.3.1 The Role of Mataram City Government .....	33
5.3.2 The Role of West Nusa Tenggara Province .....	34
5.3.3 The Role of Central Government .....	35
5.4 Public Participation .....	36
5.5 Summary .....	37
<b>Chapter 6 Discussion .....</b>	<b>38</b>
6.1 Introduction .....	38
6.2 Post-Disaster Recovery .....	38
6.3 Government's Role .....	39
6.4 Public Participation in Planning for Disaster Recovery .....	41
<b>Chapter 7 Conclusion .....</b>	<b>43</b>
7.1 Recommendations .....	44
7.2 Future Research .....	44
<b>References .....</b>	<b>45</b>
<b>Appendix A Interview Information .....</b>	<b>48</b>
A.1 List of interviewees .....	48
A.2 Interview questions for the representative of the Local Development Planning Agency (BAPPEDA) of Mataram City .....	48
A.3 Interview questions for the representative of the Local Disaster Management Agency (BPBD) of Mataram City .....	49
A.4 Interview questions for the representative of the Regional Development Planning Agency (BAPPEDA) of West Nusa Tenggara Province .....	49

A.5	Interview questions for the representative of the National Disaster Management Agency (BNPB).....	49
-----	---	----

## List of Tables

Table 1 Law and regulations related to post-disaster recovery planning in Indonesia.....	29
--	----

## List of Figures

Figure 1 Administration Map of Mataram City.....	21
--	----

## List of Abbreviations

BAPPEDA      Badan Perencanaan Pembangunan Daerah (Local Development Planning Agency)

BNPB            *Badan Nasional Penanggulangan Bencana* (National Disaster Management Agency)

BPBD            Badan Penanggulangan Bencana Daerah (Local Disaster Management Agency)

# Chapter 1

## Introduction

### 1.1 The Problem: Who best leads recoveries after disaster?

Recovery from disasters is a significant issue faced by all countries in the world at various times. It is a complex process with many different challenges and problems. It is also comprised of multiple actors, including central government, local government, non-governmental organisations (NGO's) and local communities. Different types of disasters, geographic locations, and government systems are some of the variables that determine the processes of, and the successes and failures-of, recovery.

Governments, including central and local governments, are the key actors regarding post-disaster recovery because they have the authority and responsibility to rescue affected people and recover affected areas (Yang, 2010). People commonly understand that they pay central government and local government taxes and levies to provide them with protection from disasters that are not covered by private insurance or that they cannot afford in the private market. However, there is almost always an issue regarding the role of government in the post-disaster recovery process, which is focused on centralised versus decentralised approach (Cheong, 2011). On the one hand, central government is generally considered to have the resources to accelerate and/or underwrite the recovery process especially when it is declared a national disaster event. Local government, on the other hand, plays an essential role in the recovery process because it is on the frontline and responsible for the implementation of disaster management and recovery policies (Yang, 2010).

Planning is a critical step in the recovery process and provides the basis for defining a shared vision for recovery, clear objectives and intended results, a way forward, implementation timeframe and estimated the cost of recovery. "Recovery planning," although relatively new as a formalised field and a set of practices, in a post-disaster context is usually based on results of prediction of, or actual assessments of damage, and it is typically a complex process involving many actors as well as the affected communities. However, case studies have shown that it is not unusual for central government to effectively usurp the authority of local government after a disaster which causes stresses and burdens on local officials and this poses problems for local planners who are often expected to delivery recovery planning results (Beattie, 2019).

## **1.2 Background**

### **1.2.1 Lombok Earthquakes**

In August 2018, Lombok Island, which is located in Indonesia, was hit by a series of earthquakes that killed 460 people, destroyed thousands of homes and many public infrastructures (*Lombok: deadly quake hits island recovering from string of tremors, 2018*). These earthquakes also had significant impacts for Mataram city, which is located in the west part of Lombok island. Many public facilities, including government offices, schools, hospital and businesses were badly damaged. Accordingly, central government issued Presidential Instruction 5/2018 to accelerate the recovery process and support the Mataram city government to develop a recovery plan to address the impacts of this natural disaster.

There were at least three series of earthquakes that had generated significant impacts and destroyed many houses, buildings, public facilities, and infrastructure within Lombok island. These earthquakes occurred on August 5, 2018 (7 magnitudes), on August 9, 2018 (6.2 magnitudes), and August 19, 2018 (6.9 magnitudes). In addition, in between and after those earthquakes, there were thousands of aftershocks that increased the effects of this disaster (*Lombok: deadly quake hits island recovering from string of tremors, 2018*).

As of August 24, 2018, there have been 1,089 recorded aftershocks. The duration and severity of those aftershocks had created trauma and some level of distress. There were 555 casualties recorded according to the National Disaster Management Agency, with 14,033 reported injuries. 431,416 people were displaced (72,582 infants, 213,724 children under five, 59,603 pregnant women, and 31,724 elderly). The data shows that 67,857 houses, 184 health facilities, and 458 school units were damaged (National Disaster Management Agency, 2018).

For Mataram City, the impact of the earthquakes caused 13 fatalities, 47 people injured, and around 103.839 people relocated from their houses (*Mataram City Post-Earthquake Rehabilitation and Reconstruction Plan, 2018*). As the capital city of West Nusa Tenggara Province, Mataram City plays a significant role in terms of social, economics, politics, education and public services on the region. Accordingly, even though the impacts of the earthquakes not as big as the North Lombok District, the recovery of this city is significant.

### **1.2.2 Mataram City Post-Earthquake Rehabilitation and Reconstruction Plan**

Following the earthquakes, the Mataram City government declared an emergency status by issuing a Mayoral Decree. It means that the Mataram City government would focus on efforts to search for, rescue and evacuate victims, and provide basic needs such as food, clean water, and temporary

shelter (*Mataram City Post-Earthquake Rehabilitation and Reconstruction Plan, 2018*). The emergency status was operative from 5 August 2018 till 25 August 2018.

After the emergency phase, Mataram City government started to develop a Post-Earthquake Rehabilitation and Reconstruction Plan 2018 – 2019. The National Disaster Management Agency claimed that it would facilitate the process as a representative of the central government and involving West Nusa Tenggara provincial government, related institutions and stakeholders. The short-term plan was established on 15 October 2018, and the objectives are targeted to be accomplished in 2019.

The main objective of the plan is to create a framework to guide the recovery process in a short-time period (2018 – 2019), which may be too ambitious when one considers what the literature on disaster recovery has been telling us in recent years. The plan or the framework will be used not only by Mataram City government but also by the higher levels of government, including provincial and central governments. Even though it is a short-term plan, it covers almost every aspect of the rehabilitation and reconstruction process, such as:

- Policy and strategy of rehabilitation and reconstruction.
- Details of rehabilitation and reconstruction program.
- Funding schemes of every program.
- Identification of programs in every department within Mataram city government that can be used to support recovery process.
- The timeframe of the rehabilitation and reconstruction process.

Furthermore, the plan provides data from different sectors that affected by the earthquakes which are needed to recover, including housing, infrastructure, economic, and social. It also identifies the task of different institutions, from a different level of governments, in the recovery process. In terms of funding, the plan has included the funding schemes, which is all government (central, province, and city) will contribute to the rehabilitation and reconstruction process.

### **1.3 Research Question**

While agency and academic studies often analyse the outputs and outcomes of recovery planning, this research focuses on evaluating the process of putting a recovery plan into action in its formative stage. Using Mataram City's recovery plan as a case study, it considers the relationship between the central government and local governments in recovery planning and disaster management with an underlying assumption that central government will tend to dictate and override or over-stretch local government in their pursuit of being seen to provide visible assistance. The research will help address these questions:

1. What were the roles of the central government, provincial and local government in the planning process to develop Mataram city Post-Earthquake Reconstruction and Rehabilitation Plan?
2. What are the challenges of the central government and local government relationship to develop the recovery plan?
3. What were the implications of decentralisation for recovery planning in terms of collaboration between tiers of government, recovery planning capability and public participation?

This research uses a qualitative approach with semi-structured interviews and reviews of documentation as two primary methods of data gathering. A selection of government agency representatives, including central and local governments, who involved in the planning processes, will be interviewed to gain their perception related to the research questions. Official documents will be reviewed to understand the planning system and disaster management in Indonesia, including statutory legislation and Mataram City Post-Earthquake Reconstruction and Rehabilitation Plan.

#### **1.4 Limitation to study**

This research has several limitations, including time and resources. As a master's dissertation, this research was conducted together with other courses, which has meant that I have to manage my time to do this research and complete all the assessment process of the other courses. However, the main issue was the location of the case study, which is in Indonesia. It meant that ideally I needed time and funding if I wanted to go to Indonesia to collect data, especially to do face to face interviews. Hence, I utilised Whatapps application to do the audio call with the interviewees. Compared to the face to face interviews, this method has some limitations that are affecting the richness of data and information I could obtain from the interviewees.

Another issue was related to the outbreak of novel coronavirus. It is an infectious disease caused by a newly discovered coronavirus. The World Health Organisation (WHO) was declared the outbreak as a Public Health Emergency of International Concern on 30 January 2020, and announced its name as COVID-19 on 11 February 2020 (WHO, 2020). As the case of COVID-19 keep increasing around the world, the WHO then declared it as a pandemic on 11 March 2020. As per 8 August 2020, according to latest updates from the WHO website, the total number of confirmed cases was 19,187,943 people globally, including 716,075 deaths.

Accordingly, this issue has significantly affected my interview plan, including schedule and number of a participant because all of my interviewees were government officials that actively involved in Indonesian government responses on COVID-19. As per 8 August 2020, according to the official

website of Indonesian Task Force for Covid-19 (<https://covid19.go.id>) the confirmed cases in Indonesia was 123,503 people, including 5,658 deaths.

## **1.5 Chapter outline**

The dissertation is comprised of seven chapters. Chapter One covers the problem which the dissertation intends to study, it includes a brief description of the background study and research questions. Chapter Two covers relevant theoretical literature on recovery planning, the role of government, the central and local governments relation in post-disaster recovery and collaborative planning. Chapter Three covers the methodology for conducting this research, it includes case study, document analysis and semi-structured interviews. The results of this research are presented in Chapter Four and Five. Chapter Four covers the analysis of legislation and institution for recovery planning in Indonesia, while Chapter Five covers the results from the interviews conducted with officials from the Mataram City government, West Nusa Tenggara province and the central government. The results from Chapter Four and Five are then discussed in Chapter Six. It focuses on identifying the role of the central government and local governments and whether they collaborate or not when developing Mataram City's recovery plan. In Chapter Seven, the dissertation draws some conclusions in terms of the literature on disaster recovery and it also makes recommendations for future disaster recovery planning in Indonesia and for future research.

## Chapter 2

### Literature Review

#### 2.1 Post-Disaster Recovery

The United Nations Office for Disaster Risk Reduction (UNDRR) defines recovery as “The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and “*build back better*”, to avoid or reduce future disaster risk” (UNDRR, 2017). Similarly, The World Bank’s definition of recovery refers to a process, including decisions and actions which aims of returning to living conditions that were the same or better than before and also specifically includes the reduction of disaster risk in the definition (World Bank. Independent Evaluation, 2006).

Disaster Management consists of five main phases: prevention, preparedness, response, mitigation and recovery (UNDP, 2017). In terms of recovery, Olshansky & Johnson (2017) suggests that the recovery phase consists of four distinct but overlapping periods; emergency, restoration, replacement reconstruction, and major reconstruction involving betterment and commemoration. While Lloyd-Jones (2006) identifies three phases of post-disaster response and recovery (Lloyd-Jones, 2006):

1. Emergency or humanitarian relief/early recovery phase – the immediate post-recovery, which can last days, weeks or months depending on the nature of the disaster and local conditions.
2. Transitional phase – with the recovery of social institutions, the economy and the main infrastructure, transition to the longer-term recovery and reconstruction process can be implemented. If effective planning for longer-term recovery is a part of the early recovery, then the transition should be short, smooth and imperceptible.
3. Reconstruction, medium-term and long-term recovery – usually anything from six months to many years.

The recovery process is one of the most critical aspects of disaster management, and this process will significantly impact citizens, particularly affected people. Recovery aims to restore all sectors, including basic services and facilities, people wellbeing, infrastructure, economic stability, education, and public services (Kim & Olshansky, 2014; UNDP, 2017). However, reconstructing homes and infrastructure and rebuilding communities, livelihoods and entire cities devastated by disasters is a complex task (Boano & Garcia, 2011).

Several literatures suggest that post-disaster recovery can offer opportunities to promote the concept of 'building back better' by which to renew infrastructure, create new land-use arrangements, improve construction and design standards, reinvent economies, and improve governance (Kim & Olshansky, 2014; Olshansky & Johnson, 2017; UNDP, 2017; Winkworth, 2007). Furthermore, reconstruction can present a chance to reduce the effects of future disasters by improving construction quality, avoiding hazardous locations, and improving community awareness and preparedness (Olshansky & Johnson, 2017).

## **2.2 Post-Disaster Policy and Planning**

Within the context of recovery management and planning, 'recovery' is a term used to describe a specific set of government interventions (Winkworth, 2007). Current policy definitions reflect an understanding of recovery as an *intervention process to lessen the effects* of disasters. The term policy has been introduced as part of the increased state intervention in the 1930s, which is usually identified by the name of the sector, for instance, economic policy, social policy, and environmental policy (Knoepfel, Larrue, Varone, & Hill, 2011). Policies are created in order to address deeper public and social problems.

Several works of literature have defined and explained about policy (Keeley & Scoones, 2003; Knoepfel et al., 2011; Shaw, 2005). In summary, a policy can be defined as government responses to address public issue or problem through several instruments, such as rules and regulations. Shaw (2005) highlights that public policy is not solely about government activities, but he points out that government plays a central role in the policymaking process and its implementation.

On the other hand, planning is primarily about organising resources and making choices to achieve goals and objectives (Daniels, 2004). Generally, planning works for communities and society with public interest as the core (Wang, 2019). Hence, planning tasks aim to create a better life by applying multiple different kind of knowledge (Wang, 2019), through deliberation, discussion, analysis and evaluation (Beattie, 2019).

Recovery policy and planning is a significant part of disaster management because it should be developed either as a mitigation effort or restoration process (Kim & Olshansky, 2014). Alexander (2013) suggests that post-disaster planning has three main objectives. Firstly, it is the timely restoration of regular activities and living conditions. Secondly, it is the protection of the community against the future impact of hazards. Thirdly, it is the formulation and achievement of common objectives among the parties involved.

Planning is a critical step in the recovery process and provides the basis for defining a shared vision for recovery, clear objectives and intended results, a way forward, implementation timeframe and

estimated the cost of recovery. Recovery planning in a post-disaster context is supposed to be based on the results of assessments, and it is typically a complex process involving many actors as well as the affected communities. Planning must take place at both national and local levels across multiple sectors and multiple organisational boundaries. For planning efforts to succeed, it is critical to ensure coordination and facilitate trust among all the actors involved in the recovery process.

### **2.3 The Role of Government**

Policy and planning are the primary instruments for government to address the impact of a disaster, both for mitigating and post-disaster recovery (Wang, 2012). However, compared with traditional planning approaches (Lein, 2003), planning for disaster recovery has to deal with conditions of high uncertainty, rapid change, and complexity (Berke, Cooper, Aminto, Grabich, & Horney, 2014). The main goal of recovery management should be to address this uncertainty. Olshansky & Johnson (2017) suggest several efforts to tackle this issue, such as finding funds and involving all stakeholders in the planning and decision-making process (Olshansky & Johnson, 2017).

There is a large volume of published studies describing the role of both central and local government in terms of post-disaster recovery (Olshansky & Johnson, 2017; Pathak & Ahmad, 2018; Shi, 2012). These studies explained the significant role of government to address the impact of inevitable disaster. However, different political, economic and government system has led to a different approach of a country to manage public affairs, including post-disaster recovery (Shi, 2012).

Olshansky & Johnson (2017) has divided the government role in recovery management into three different categories. First, *centralised*, where the national or central government led and controlled the overall recovery management and policy-making. Second, *partly decentralised*, the national government shared their power to organisations in multiple levels of government to manage recovery and policy-making, but with tight control. Third, *decentralised*, it is where different organisations in multiple levels of government manage recovery and policy-making, with some coordination and support from the national government.

The vital role of the central government has been explained by several authors (Olshansky & Johnson, 2017; Pathak & Ahmad, 2018; Shi, 2012). Some of the essential roles of the central government are providing leadership, financial resources, technical assistance and acting as credible data repositories. It also can play as a manager to integrate actions from all the other recovery actors. In addition, compared to the local government, the central government has more resources to address the impact of a disaster, particularly for large scale disaster (Hermansson, 2019; Yang, 2010).

On the other hand, some scholars argued that it is effective and efficient if disaster recovery process is lead by local government (Gerber & Robinson, 2009; Johnston, 2012; Markham & Vallance). Olshansky & Johnson (2017) emphasise that recovery is a process rather than an outcome, and it is best accomplished at local levels. However, support from higher levels of government, including financial, human resources, and information is crucial.

Many scholars have suggested that decentralised disaster management is more efficient and effective to address the impacts of disaster (Burby, 2006; Hermansson, 2019; Johnston, 2012). They believe the most affected areas, people and communities happened in local government territorial. Thus, local government should have power and legitimacy to protect and recover their affected areas, people and communities. Decentralisation also believed could enhance participation, capacity, communication, and coordination between sectors and level of government (Hermansson, 2019). However, there are some challenges for local government to develop and implement the recovery plan. For example, a large-scale disaster needs a lot of resources, finance, time and coordination with other sectors, including another level of government.

## **2.4 Intergovernmental Relations in Post Disaster Recovery**

In terms of post-disaster recovery planning, there is a broad range of literature which is focused on community-government collaboration to develop recovery plans (Love & Vallance, 2014; Love, 2012; Marsh & ProQuest, 2018). However, there is limited literature regarding intergovernmental relations and collaboration in the recovery plan-making process, which is the focus of this dissertation. The relationship between central, provincial and local governments regarding disaster management is an important issue.

Intergovernmental collaboration is the relation that occurs between central, provincial and local government (Kusumasari, 2012). It is how this three-level of governments interact with each other based on their roles, responsibilities, and how they influence each other. Liebrecht et al (2010) state that the use of intra-governmental and inter-governmental collaboration could improve the policy process and create a better decision. Crow & Albright (2019) highlight that post-disaster recovery often involves intergovernmental collaboration. Furthermore, the relationship between central and local governments has a significant role in influencing disaster response and planning.

This research will analyse how intergovernmental collaboration operates in practice to develop a recovery plan. Using Mataram City Reconstruction and Rehabilitation Plan as a case study, I will analyse how central, provincial and local government collaborate in the plan-making process.

## 2.5 Decentralisation and Planning

Das & Luthfi (2017) argue that the main decentralisation objective is to enhance the effectiveness of governance and development by transferring political authority, governing capacity, and resources from the national government to local levels. By doing that, it will enhance community participation in planning, implementation and resource allocation towards democratising development.

Several works of literature have prescribed decentralisation in developing countries for various ends: good governance; targeting local development needs and potentials better; improving public services; reducing uneven regional development and boosting civil society and private sector roles in development (Das & Luthfi, 2017). However, countries have often neglected essential details related to human resources and other capacities when implementing administrative decentralisation, which can be of four types (Das & Luthfi, 2017):

1. Deconcentration (transfer of functions within the central government hierarchy by shifting the workload from central ministries to field officers);
2. Delegation (transfer of functions to regional or functional development authorities, parastatal organisations or special project implementation units);
3. Devolution (transfer of functions and decision-making authority to sub-national governments); and
4. Transfer of activities from the public to the private sector and other non-state actors.

Several pieces of literature highlight that decentralisation could lead to positive outcomes and improve the government capacity to provide basic services, empower local communities, and develop public facilities. On the other hand, it can also lead to some issues, such as inequality regarding financial among local governments, corruption, and coordination problem between different level of governments (central, provincial and city/district)(Das & Luthfi, 2017).

The implementation of decentralisation will have a significant impact on disaster management at local and provincial levels. Hermansson (2019) states that decentralisation has a positive effect in terms of disaster governance because it will increase local government capacity to manage every aspect of disaster management. He also points out that local governments and local communities have better perspectives and knowledge regarding disaster management in their areas (Hermansson, 2019). Besides, the Sendai Framework for Disaster Risk Reduction encourages every country to empower local governments in disaster management.

In terms of planning, Das & Luthfi (2017) argue that decentralisation could improve the capacity and capability of local planning institutions. It also enhances the local communities to participate in the planning process, implementation and evaluation. Similarly, Hermansson (2019) highlights the

benefits of administrative and political decentralisation, which could lead to a better planning process. The main reason is that local authorities know better about their community's needs. Furthermore, decentralisation could resolve the bureaucracy issues which will speed-up the decision-making process.

## 2.6 Collaborative Planning

Collaborative planning is a relatively new paradigm for planning, gaining ground since the 1960s, which is developed to accommodate the interest of different stakeholders in the planning process. The principle of collaborative planning is how to collaborate through good communication to resolve issues and achieve an agreement and consensus (Booher & Innes, 2002; Healey, 1997). In particular, Maginn (2007) argues that collaborative planning can support policymakers to decide because it encourages community participation since the beginning of the process.

Collaborative planning is a process to create development plans through collaboration between different stakeholders in different settings, such as public meeting and public-private partnerships. This concept of planning also considered has dominated planning scholarship and practice. It is because many planners agree that planning would be better if it could accommodate other stakeholder interests through collaboration process to obtain consensus.

Healey (1997) described the process of collaborative planning as an *institutional design*, which is a combination of *soft and hard infrastructure*. *Soft infrastructure* is an informal process of collaborative planning, for example, social learning, where stakeholders or communities communicate with each other in order to frame their needs and interest. Meanwhile, *Hard infrastructure* is a formal process to develop a plan through political, administrative and legal processes.

In order to achieve collaboration between actors with the interests and diverse history of the conflict, the dialogue must be genuine, not rhetorical or ritualistic (Isaacs, 1999). Everyone should say what they mean and mean what they say. To be authentic, dialogue must meet several conditions (Habermas, 1981; Fox and Miller, 1996): each speaker must legitimize interests to speak, must speak sincerely, should make a statement that comprehensive for the other, and each statement must be accurate. This condition is not obtained directly automatically, but the usual obtained by engaging a facilitator.

Anshell and Gash (2008) concluded that there are three core contingency factors: (1) time, (2) trust, and (3) where there is interdependence between the interactive effects of trust and interdependence. Interdependence fosters participation and commitment to more meaningful collaboration.

Johnston et al. (2011) then follow up these studies and prove empirically that if the process of engagement in collaborative governance structure is well managed, it can be a force in creating the strengthening cycle of trust, commitment, understanding, communication and the result, which is indicative of the success of collaborative government (Johnston, Hicks, Nan, & Auer, 2011).

## **2.7 Governance in Indonesia**

In 1998, Indonesia had experienced a significant transformation on its governance system from the authoritarian era under President Soeharto who become president for more than 30 years to democracy era (Sutiyono, Pramusinto, & Prasajo, 2018). Triggered by the economic crisis in 1997, Indonesian people led by opposition leaders and university students conducted a series of demonstrations called reformation movements around the country demanded President Soeharto to step-down and changed the authoritarian regime into democracy (Sutiyono et al., 2018). This action was succeeded to force Soeharto resigned in May 1998. As a result, there were some significant changes regarding the political and governance system, including constitutional amendments to change the election system where previously the president was voted by the Parlemt to people election. Furthermore, the president position is a limited maximum for two periods. This policy also implemented at the local level. In terms of the governance system, many of the government institutions were restructured, and the relation between the central and local governments was shifted from centralised to decentralisation (Diprose, McRae, & Hadiz, 2019; Talitha, Firman, & Hudalah, 2019).

One of the major transformations following the fall of President Soeharto is the implementation of decentralisation, where the local governments have full legal rights and authority to manage their jurisdictions (Talitha et al., 2019). The Law 22/1999 and Law 25/1999 were issued as the legal framework concerning the authority given to local governments, and fiscal arrangements between central and local governments (Diprose et al., 2019; Sutiyono et al., 2018; Talitha et al., 2019). Local governments in Indonesia consist of two levels of government; provincial and district/municipal. Based on the Law 22/1999, both the provincial and district/municipal governments have broad and responsible autonomy rights, including controlling the local budget. In addition, the provincial government considered as the representative of the central government, but it does not have a hierarchical relationship with the district/municipal government (Putra & Matsuyuki, 2019).

In general, Talitha et al. (2019) argue that the decentralisation policy has significantly changed the administrative, political system in Indonesia into democratic governance. Many of the public service delivery was transferred to the local governments, except for defence, security, judiciary, foreign relations, and monetary and fiscal policy remained the responsibility of the central government (Talitha et al., 2019). Decentralisation also changed the hierarchical relationship between the central

and local governments where the power and authority have been shared and distributed among the central, provincial, and municipalities/districts (Sutiyono et al., 2018).

However, there are several challenges regarding the implementation of the decentralisation in Indonesia. Sutiyono et al. (2018) argue that the decentralisation process was developed through top-down decision-making with little regional engagement. As a result of the central government still retain its control over the regions, primarily through the fiscal arrangements where the local governments are dependent on the central government transfer. Furthermore, Talitha et al. (2019) highlight the unclear sharing and distribution of power and authority between the central and local governments. Similarly, Sutiyono et al. (2018) argue that the central government still continue to conduct programs which overlap with local governments' programs.

## **2.8 Disaster Management in Indonesia**

Indonesia is the world's largest archipelago and straddles the equator, between the continents of Asia and Australia. The country is considered one of the most disaster-prone countries, given its high exposure to a range of natural and climatic hazards as well as considerable social vulnerabilities (Djalante, Garschagen, Thomalla, & Shaw, 2017). Disasters caused by environmental hazards are becoming increasingly costly and severe in Indonesia. Hydro-meteorological hazards, such as floods, typhoons, and droughts, are the most frequent examples and affect the highest number of people, while geophysical hazards have caused the most deaths in Indonesia.

Located between the tectonic plates of Asia and Australia, the country lies in a zone of high tectonic activity which frequently results in earthquakes and tsunami. Furthermore, rows of mountains and active volcanoes spread across the islands, which form part of the Pacific Ring of Fire (Djalante et al., 2017). It is, therefore, crucial for Indonesia to reduce disaster risks and build disaster resilience amongst the nation and its communities. This progress was in part due to the establishment of regulatory and institutional frameworks for Disaster Risk Reduction (DRR), marked noticeably by the adoption of Law 24/2007 on Disaster Management, as well as the formation of National and Local Disaster Management Agencies. These newly formed agencies have more power and mandates, along with the financial and technical capacity to plan and implement DRR strategies.

In line with the decentralisation in the development and planning approach, the responsibility for DRR and Disaster Management is shared across different levels of government, from heavy reliance on national governments to greater responsibility of local governments (Djalante et al., 2017).

### **2.8.1 A History of Disaster Risk Governance in Indonesia**

Historically, disaster risk governance in Indonesia has been significantly influenced by the roles of presidential leadership as well as social and political changes (Djalante et al., 2017). Djalante et al. (2017) propose six periods of institutional and governance changes in terms of disaster management in Indonesia. *First*, the period before 1945 under Dutch colonialism, during this period, the colonial government response to disasters was based on religious, cross-cultural interaction and cooperation amongst the indigenous and island communities.

*Second*, the period after Indonesian independence (1945-1966) under president Soekarno. At the beginning of this period, the Indonesian government mixed the disaster management with a dangerous situation such as war, war victims and displaced people. The Agency for Welfare of War Victims and Their Families was the institution that managed those issues, including natural disasters. In 1966, the government established the National Consultative Board for Natural Disaster Management. It was the first agency with a specific task to deal with the natural disaster. However, its primary role and responsibility were only to manage emergency response and the distribution of humanitarian aid.

*Third*, the period between 1967 and 1998 under president Soeharto. The increased frequency of natural disasters and its impacts has made the new government shift the focus of disaster management from emergency response to include preparedness, rehabilitation and reconstruction. During this period the government formed the National Coordination Team for Disaster Management in 1967, this national agency then upgraded in 1979 by the establishment of the National Coordination Board for Natural Disaster Management. The fundamental change regarding disaster management in this period was the establishment of the Coordinating Agency for Disaster Management at the provincial level.

*Fourth*, the period between 1998 and 2004, which is the reform era of three presidents. During this period, disaster management in Indonesia did not change significantly due to political and social issues, including separatism and religious-ethnic conflicts.

*Fifth*, the period between 2004 and 2014 under president Yudhoyono. At this period, a magnitude 8.9 earthquake occurred in the Indian Ocean off the coast of Sumatra and caused a tsunami, particularly in Aceh province. The earthquake and tsunami had caused enormous impacts with hundreds of thousands dead tolls and damaged almost the whole area of Aceh province. This unprecedented scale of the disaster had influenced the transformational changes regarding disaster management in Indonesia. A new law on disaster management was created (Law 24/2007), and the National Disaster Management Agency was established, including the Disaster Management Agency

at the provincial and city/district level. These institutions are the leading sector for coordinating, planning and implementing disaster management in Indonesia.

*Sixth*, the period from 2014 to now under president Joko Widodo. During this period, the government do not make changes in terms of disaster management. It still uses the law and institutions from the previous government. However, the government tries to strengthen the capability of the Disaster Management Agency, from national, provincial and local government levels.

## **2.9 Disaster Management in New Zealand**

This section describes the experience of the New Zealand government when addressing the impacts of the Canterbury earthquakes. It gives a valuable example of how a democratic and developed country implemented disaster management, especially related to the relation between the central and local government when developing recovery plans. Hence, it can be compared with the case study of this research.

### **2.9.1 The Canterbury Earthquakes**

The earthquakes that happened throughout 2010 and 2011 have significantly affected Christchurch city and surrounding areas, including infrastructures, economic, social, cultural and the environment. The 2011 earthquake caused hundreds of deaths and damaged or destroyed Christchurch's central business district, many residential areas and infrastructure (Siembieda & Johnson, 2015). Beginning with a 7.1 magnitude earthquake on the fourth of September in 2010, minor property and land damaged occurred. However, on the 22nd of February 2011, a 6.3 magnitude earthquake hit close to the city and at a shallow depth. The extreme shaking from this earthquake did extensive damage to the inner city and surrounding suburbs and resulted in the loss of 185 lives. Further large earthquakes over magnitude 6.0 occurred on the 13th of June and the 23rd of December 2011.

These earthquakes have had an undeniable effect on the economy, infrastructure and wellbeing of those living in and connected to the region. The New Zealand Treasury and the Canterbury Earthquake Recovery Authority estimated that the earthquakes would cost \$NZ40b in 2011 dollars. Overall, the earthquakes resulted in damage to 168,000 homes, 500km of wastewater pipes and 1,000km of roads (Olshansky & Johnson, 2017).

One of the biggest challenges arising from the Canterbury earthquake sequence has been the resulting land damage. This produced remarkable damage to both residential and business properties in the city, with the worst damage located in the eastern suburbs and the Central Business District (CBD). This land damage due to the process of soil liquefaction is caused by intense ground

shaking. It occurs in areas of soft soil and is made worse by a high-water content in the soil. Soil liquefaction in Christchurch not only resulted in damage to the foundation and structures of the building but also caused extensive damage to horizontal infrastructures such as water, power and sewage provision.

### **2.9.2 Government's Policy and Planning**

Following those catastrophic disasters, the national government took some strategic policies to rebuild the city and surrounding areas. The first significant policy was appointed an extraordinary Minister for Canterbury Earthquake Recovery, who later established an agency called Canterbury Earthquake Recovery Authority (CERA), which is plays as a leading sector in the recovery processes. Second, the central government passed a special legislations called The Canterbury Earthquake Response and Recovery Act 2010, then replaced by the Canterbury Earthquake Recovery Act 2011 (Olshansky & Johnson, 2017; Siembieda & Johnson, 2015). The enactment of the Canterbury Earthquake Recovery Act 2011 gives an extensive power for the Minister for Canterbury Earthquake Recovery. It allowed the minister to acquire land compulsorily, suspend any part of a variety of local government planning acts and direct any local authority to take specific actions (Olshansky & Johnson, 2017).

Some of the Minister for Canterbury Earthquake Recovery programmes through CERA was directed the Canterbury Regional Council to prepare a Land Use Recovery Plan for Greater Christchurch (*Direction to Canterbury Regional Council to Develop a Land Use Recovery Plan for Greater Christchurch, 2012*), and also directed the Christchurch City Council to develop a draft of recovery plan for the central city (Siembieda & Johnson, 2015). The main reason was that the existing Regional and district planning frameworks were not suited to address the earthquakes' effects, which has changed many aspects of the affected areas. The purpose of this Recovery Plan is to ensure all programmes and efforts to rebuild, revitalise and enhance greater Christchurch are well coordinated (New Zealand. Canterbury Earthquake Recovery, 2013a). The timeframe for this recovery plan to be implemented is ten to 15 years, which focuses on residential and business needs.

However, the establishment of CERA has caused frictions between local and central government. In New Zealand, local government is the level of government below parliament (central government). There are two primary forms of local government: territorial bodies such as city or district councils; and regional councils, the boundaries of which are based on river catchments. Regional councils focus mainly on resource management, land transport planning, biosecurity and emergency management, while city and district councils have a broader range of functions including community well-being, public health and safety, infrastructure and cultural and recreation activities.

### 2.9.3 Land Use Recovery Plan

The Land Use Recovery Plan covers specific geographic areas, including the urban area of Christchurch and towns stretching from Lincoln, Prebbleton and Rolleston in the south to Kaiapoi, Rangiora and Woodend/Pegasus in the north (New Zealand. Canterbury Earthquake Recovery, 2013a). It does not cover the central city area because it covered by another particular plan called the Christchurch Central Recovery Plan. It also does not manage the land use of the red zone areas.

The Land Use Recovery Plan was developed under the Canterbury Earthquake Recovery Act, which has extraordinary power where all planning instruments under the Resource Management Act 1991, regional transport policies under the Land Transport Management Act 2003 and to various conservation policies and strategies must be consistent with this recovery plan (New Zealand. Canterbury Earthquake Recovery, 2013b).

Based on the Minister for Canterbury Earthquake Recovery directions, dated on 6th November 2012, the Canterbury Regional Council was directed to develop a Land Use Recovery Plan. It is highlighted that Canterbury Regional District has to work collaboratively with Christchurch City Council, Selwyn and Waimakariri District Councils, Te Runanga o Ngai Tahu, NZ Transport Agency and Canterbury Earthquake Recovery Authority (*Direction to Canterbury Regional Council to Develop a Land Use Recovery Plan for Greater Christchurch, 2012*). The Minister's Direction also sets out a timeframe and provides guidance on how to prepare the plan's draft.

At the first stages, The Canterbury Regional Council, together with strategic partners, conducted research to make an Issues Paper and a Context Paper as background documents (New Zealand. Canterbury Earthquake Recovery, 2013c). These documents analysed the existing condition of affected areas and identified priority issues regarding land use to support recovery strategies.

The next stage was public consultations to collect data and conducted several workshops involving targeted stakeholders to discuss the issues, and then identify the challenges and options of the recovery programmes (New Zealand. Canterbury Earthquake Recovery, 2013c). The majority of the participants in the workshops agreed that both the Issues Paper and Context Paper had accommodated the actual and vital issues concerning recovery efforts within greater Christchurch. On the other hand, people had different views regarding solutions and options to tackle the challenges. However, the workshops have had produced valuable inputs and feedback to develop the draft of the Land Use Recovery Plan. All the stakeholders agreed to work together. They supported the Canterbury Regional Council in order to achieve better coordination between councils, government agencies and communities, and between different regulations (New Zealand. Canterbury Earthquake Recovery, 2013c).

All the information and feedback gathered through the workshops has been used to optimise the draft of Land Use Recovery Plan before it is submitted to the Minister for Canterbury Earthquake Recovery on 7 June 2013 (New Zealand. Canterbury Earthquake Recovery, 2013c). The Canterbury Regional District also provided a consultation report to the Minister describing responses, feedback, inputs, solutions, and options received in the consultation process and how they were incorporated into the final draft of Land Use Recovery Plan. The final process was under the Minister for Canterbury Earthquake Recovery's authority, who had considered written comments before approved the draft and then made a commencement notice on 6th December 2013.

The Land Use Recovery Plan plays a significant role in the earthquake's recovery strategies in terms of providing framework and guidance about how to address the earthquake impacts in short and medium-term (10 – 15 years), particularly regarding housing and business issues. Furthermore, it also reviewed the existing regional and district planning and policy frameworks to ensure that proposed land-use changes followed by district plans and policies to provide effective and efficient support to the earthquake recovery process.

It is expected that the framework and actions provided by the Land Use Recovery Plan will give certainty for the people, communities, land-owners, and businessman in the Greater Christchurch areas regarding their choices and options for housing and business. Finally, this plan will be interconnected with other earthquake recovery plans to assist the redevelopment in greater Christchurch.

#### **2.9.4 Christchurch Central Recovery Plan**

The Canterbury Earthquake Recovery Act 2011 also required Christchurch City Council to develop a draft of the recovery plan for the Christchurch central business district and present it to the Minister for Earthquake Recovery for approval (Cretney, 2017; Olshansky & Johnson, 2017). The CCC then undertook an extensive process of consultation, participation and engagement with the residents of Christchurch through what became known as the Share an Idea campaign in May 2012. This material was collated and presented by Gehl Architects in the draft Central City Plan which was then opened for a further round of feedback from the public in August 2012, and then presented to Minister Brownlee in December (Cretney, 2017).

However, this plan was not accepted by the Minister, and the government instead chose to re-develop the plan using a panel of developers and planners in 100 days through the 100-day Blueprint process that also established the Christchurch City Development Unit (CCDU). The new plan removed a lot of the integrated approach to regulation in the Christchurch City Council plan and redeveloped the spatial orientation of the plan to include precincts and 18 major anchor projects such as a large sports stadium and convention centre (Cretney, 2017; Olshansky & Johnson, 2017).

The CCDU has played a significant role in the recovery process of Christchurch City Centre. It led the implementation of the plan, which involves funding, land acquisition, demolitions and site clearance, decisions on all development proposals, and reconstruction management (Olshansky & Johnson, 2017).

In terms of the relationship between the central and local government, Beattie (2019) highlights that there was a tension between the central government and Christchurch City Council when developing the Christchurch Central Recovery Plan. The extensive powers given by the CER Act 2011 to the Minister for the Canterbury Earthquake Recovery and CERA has made them as the controller of the recovery, including the planning process. It means the Minister has the authority to determine the planning process and what the council can or cannot do (Beattie, 2019). Furthermore, the enactment of the CER Act had causing disempowerment of Christchurch City Council (Beattie, 2019). In overall, there was no collaboration between the central government and Christchurch City Council when developing the recovery plan.

# Chapter 3

## Methodology

### 3.1 Introduction

This chapter outlines the research design adopted for the study. The research design will provide a framework and procedures to undertake a research study (Creswell, 2014). Besides, it also describes the methods used for data collection and how the data was analysed.

### 3.2 Research Design

#### 3.2.1 Qualitative Method

This research will use qualitative research methodology. Qualitative research methods can be used to produce empirical studies with 'locally, temporally and situationally limited narratives' studied as local practices and knowledge, from which theories are developed (Flick, 2006). In addition, Mohajan (2018) argues that qualitative research is a type of social science research that collects and works with non-numerical data that seek to interpret meaning from these data that helps us to understand social life through the study of targeted populations or places. The process of research involves emerging questions and procedures, data typically collected in the participant's setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data (Creswell, 2014).

#### 3.2.2 Case Study

The objective of the study is to provide insight into the planning process to develop a recovery plan. Particularly, it will assess and examine the role of Indonesia central government in planning process to develop a recovery plan at local level. Hence, the research design of this study is the case study, which is one of qualitative research types (Mohajan, 2018). In order to conduct a qualitative case study, Creswell (2014) argues that "Researcher develops an in-depth analysis of a case, often a program, event, activity, process, or one or more individuals".

In this study, the planning process to develop Mataram City Post-Earthquake Rehabilitation and Reconstruction Plan 2018 is the case study of this research. Even though it focuses on single case, this study is expected to explore the complexity of this case, including to investigate in more detail regarding the role of each level of government and their relations in planning process in the context of disaster management. A single case study involves the collection of data related to past

phenomenon where the researcher looks back on a situation or event and investigates it in its historical integrity (Mohajan, 2018).

In overall, the case study approach was adopted because the research questions require in-depth knowledge and data from specific individuals or groups who were directly involved in the recovery planning process in Mataram city.

Mataram city is the capital of West Nusa Tenggara province, which is located in the west part of Lombok island. It covers an area of 61.30 square kilometres or 0.30 % of the total area of the province. This city stretches along the equator between 08°33' - 08°38' south latitude and 116°04' - 116°10' east longitude. The average temperature is between 22.5 °C to 31.7 °C, and the highest rainfalls were recorded at 473 mm in November (Statistic of Mataram Municipality, 2018).

The population in Mataram city was 468,509 people in 2017. With the total area of 61.30 square kilometres, it means that the population density was around 7,643 people per km<sup>2</sup>. Trade and services are the main sectors of domestic income where around 65 % of the working population were working on those sectors, which accounted for 38.90 % and 26.61 % respectively (Statistic of Mataram Municipality, 2018).

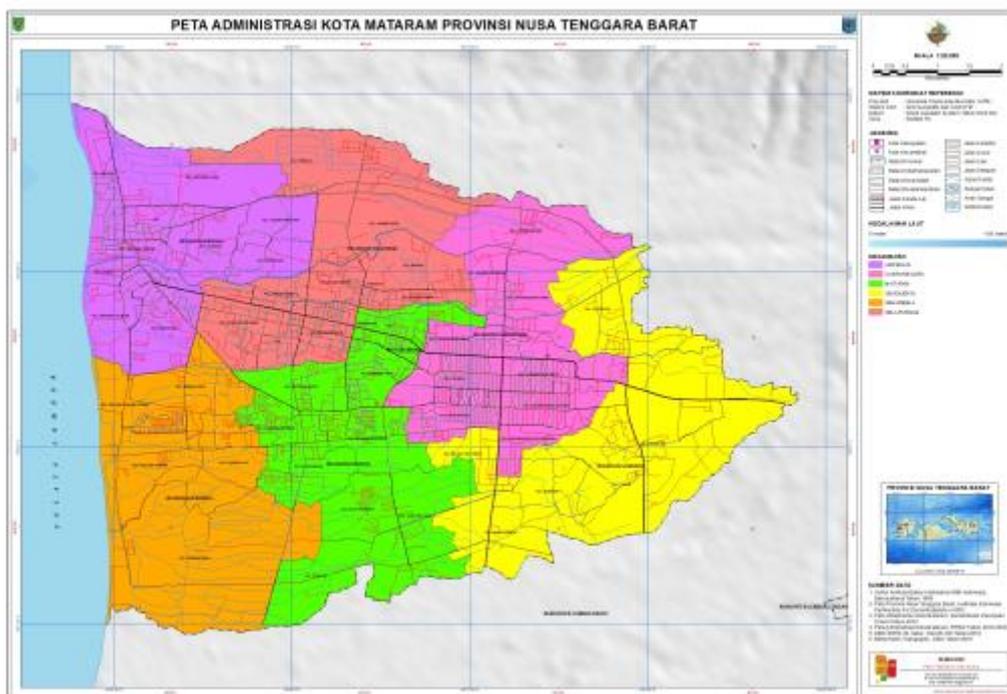


Figure 1 Administration Map of Mataram City

Source: <https://petatematikindo.wordpress.com/2014/10/18/administrasi-kota-mataram/>

### 3.3 Data Collection

Creswell (2014) identifies four types of data collection in qualitative research. First, observation, where the researcher takes field notes regarding behaviour or activities at the research site. Second, interviews, where the researcher undertakes several forms of interviews, including face-to-face, telephone, or focus group interviews. Third, documents, where the researcher collects related documents to support the research. It includes public documents or private documents. Fourth, audio-visual and digital materials, this type of data includes photographs, videotapes, and any forms of sound.

Following those types of data collection, this study used interviews and document collection as the primary data sources as described in the following sections.

#### 3.3.1 Interview

Semi-structured interviews were used in this research to gather information, opinion and perspective from the individual interviewees who has knowledge, capacity and direct interest related to the research topic. Semi-structured interviews are verbal interchanges where one person, the interviewer, attempts to obtain information from another person by asking questions. Although the interviewer prepares a list of predetermined questions, semi-structured interviews tend to unfold conversationally. It offers participants the opportunity to explore issues they feel are significant (Longhurst, 2009).

The interviewees were chosen because of their knowledge on, and close relationship with the research topic. According to the research topic, the participants for interviews were selected from the representatives of government agencies from local, regional and central governments who involved in the planning process to develop the Mataram City Post-Earthquake Rehabilitation and Reconstruction Plan 2018. The participants from Mataram City were two representatives of Local Development Planning Agency (*Badan Perencanaan Pembangunan Daerah/BAPPEDA*) and one representative of Local Disaster Management Agency (*Badan Penanggulangan Bencana Daerah/BPBD*). The participant from West Nusa Tenggara Province was one representative of the Regional Planning Development Agency (*Badan Perencanaan Pembangunan Daerah/BAPPEDA*). The participants from central government were two representatives of the National Disaster Management Agency (*Badan Nasional Penanggulangan Bencana/BNPB*).

Initial phone calls were undertaken to explain the research project and request an interview with selected participants. The initial phone call then follows up with an email containing information about the research and sample of the proposed questions. Due to constrain in terms of location, the

interviews were conducted by telephone using Whatapps application. The result recorded then transcribed for further analysis.

### **3.3.2 Document Collection**

In conjunction with the primary data resulted from the interviews, this study also utilised available documents as the secondary data. It includes the Mataram City Post-Earthquake Rehabilitation and Reconstruction Plan 2018, disaster management legislation and regulations, books, research articles, news articles, and other relevant documents. These documents were collected through the Google internet browser based on interviewees suggestions and using a series of key terms.

### **3.4 Data Analysis**

This study uses thematic analysis as the method for data analysis. Clark & Braun (2017) define thematic analysis as 'a method for identifying, analysing, and interpreting patterns (themes) within qualitative data'. Subsequently, themes provide a framework for the researcher to organise and reporting the research findings (Clarke & Braun, 2017).

### **3.5 Ethics**

Regarding ethical research involving human participants, this research was conducted following the guidelines from Lincoln University. Under the 2018 Human Ethics Committee guidelines, Human Ethics Approval was not required for this research because the participants for interviews were public officials, and they were interviewed in their professional capacity about professional matters.

# Chapter 4

## Analysis of Legislation and Institution for Recovery Planning in Indonesia

### 4.1 Introduction

The result of the research undertaken for this study is split into the analysis of legislation, regulations and institution for recovery planning and analysis of the interviews conducted. This chapter presents the analysis of legislation, regulations and institutions for recovery planning in Indonesia. Based on the objectives of this study, this analysis focuses only on legislations and regulations that currently operative and provide legal basis and direction for the implementation of recovery planning in Indonesia, particularly on the role of central and local government and the planning process to develop a recovery plan.

### 4.2 Laws and Regulations Concerning Recovery Planning in Indonesia

#### 4.2.1 Law No. 24/2007 Concerning Disaster Management

The Law No.24/2007 is the legal umbrella for disaster management in Indonesia, which mean that every regulation, action and development regarding disaster management must in line with this law. The Law was enacted on 26th April 2007 replacing The Presidential Decree 3/2001, which is considered as a significant legislative reform especially related to disaster governance (Djalante et al., 2017). Chapter 1, article 1.5, defines disaster management as:

*'a series of efforts encompassing policies on development with disaster risk, disaster prevention, emergency response, and rehabilitation'.*

Accordingly, it means that this law recognises the importance to manage disaster at every phase, including pre-disaster, emergency response, and post-disaster. In general, the purpose of this law is to protect the citizen from disaster threat by implementing disaster management that is well-planned, integrated, coordinated, and comprehensive. Article 4 sets out the objectives that shall be achieved by the implementation of disaster management, where at point e, clearly states *'to encourage participation and partnership of both public and private sector'*.

In order to foster the implementation of disaster management, Law No. 24/2007 mandates the creation of a new disaster management agency called the National Disaster Management Agency (BNPB). Additionally, Law No. 24/2007 also requires the creation of regulations for that agency's operation, disaster funding, local disaster management capacity building, and coordination of international assistance.

In terms of responsibility and authority, this law has divided the role between the central government and local government. The central government's responsibility includes DRR, protecting communities, maintaining excellent minimum services in disaster-affected areas, recovery from disaster, and providing sufficient funds in the national budget. Additionally, the central government have the authority to develop disaster management policy and planning and make decisions on the status of national and regional disasters. The disaster status, whether its national, provincial or local disaster, depends on several indicators, such as the number of victims, damage to facilities and infrastructure, coverage of the disaster-affected area and socio-economic impacts.

Chapter 3, Articles 8 and 9 set out the responsibility and authority of regional governments as follows:

**Article 8**

*The responsibility of regional governments for disaster management shall include:*

- a. guarantee of disaster-affected community members and refugees rights in a fair manner and in accordance with minimum service standard;*
- b. protection for community against disaster impact;*
- c. disaster risk reduction and integration thereof into the development program; and*
- d. allocation of sufficient disaster management budget in APBD.*

**Article 9**

*The authority of regional governments over disaster management shall include:*

- a. decision on disaster management policy in line with regional development policy;*
- b. development planning that include elements of disaster management policy;*
- c. implementation of policy on disaster management cooperation with other provinces and/or Regencies/cities;*
- d. regulation on use of technologies with potential sources of disaster threat or danger in its territory;*
- e. formulation of policy on preventing natural resource control and depletion beyond nature ability of recovery; and*
- f. check on money or goods collection and channeling on a provincial, Regency/city scale.*

In overall, the law recognised the importance of DRR, shares responsibility between national, regional, and local stakeholders and recognises the important role of international actors in all phases of disaster management.

#### **4.2.2 President Regulation No. 8/2008 Concerning National Disaster Management Agency**

Law No. 24/2007 required the establishment of a national disaster management agency to lead and coordinate disaster management activities in Indonesia. Subsequently, the government issued President Regulation No. 8/2008 to provide a legal basis for the creation of this agency, which is called the National Disaster Management Agency (*Badan Penanggulangan Bencana Nasional/BNPB*). This regulation also provides detail guidelines regarding the agency's organisation and responsibilities.

This regulation states that the Head of BNPB is appointed by and reports directly to the President. In general, the responsible of BNPB is to provide guidelines, policy, and legislation on all matters concerning disaster management. BNPB is also responsible for accounting for State Budget and national and international contributions and aid.

In line with decentralisation policy, Chapter 6 of this regulation requires the creation of disaster management agencies at local level called Local Disaster Management Agency (*Badan Penanggulangan Bencana Daerah/BPBD*). This agency is responsible for coordination, command and execution of disaster management within its territory during the pre-disaster period, emergency response, and post-disaster period. However, there are some challenges in this decentralised system. Putra & Matsuyuki (2019) argue that the broad responsibility given to BPBD is not supported by an adequate resources, particularly financial and human resources.

Another critical challenge is to build information systems that are robust and operate throughout the disaster management system. It includes developing skilled staff, facilities and technical infrastructure. Furthermore, a collaborative and coordinated national and local capacity for risk management, vulnerability assessment, monitoring and evaluating disaster management activities needs to be developed.

#### **4.2.3 Government Regulation No. 21/2008 Concerning Implementation of Disaster Management**

Following the Law No. 24/2007, Government Regulation No. 21/2008 was issued to provide detailed direction on disaster management scope and activities. This regulation explores disaster management from pre-disaster, emergency response and post-disaster stages. An important direction includes disaster management planning as a part of development planning. It describes a study of threat, understanding vulnerabilities, analysing potential risks and disaster impacts, designing warning and alertness systems as the responsibility of the BNPB at the national level and the BPBD at the provincial and district/city level.

The pre-disaster stage includes prevention, risk analysis and reduction, planning and development, education and training, and spatial planning for situations without disaster and situations with potential disaster. The emergency response begins with rapid assessment- disaster area coverage, number of victims, damage to essential facilities and infrastructures, disturbance to community and capacity of resources which is performed at the direction of BNPB and BPBD. Following the assessment report, a decision and declaration of disaster emergency status are made by the President at the national level, Governor at the provincial level, or Regent/Mayor at regency/city level. The declaration provides access for; rescue and evacuation, the fulfilment of basic needs, protection of the vulnerable population, and recovery of essential facilities and infrastructure.

The post-disaster period is concerned with rehabilitation and reconstruction. It shall include improvement of disaster environment; repair to public facilities; aid for community housing repair; psychosocial support; healthcare; and recovery of society, order, security, and government.

#### **4.2.4 Government Regulation No. 22/2008 Concerning Funding and Disaster Aid Management**

This regulation provides detail regarding disaster funding and disaster aid management. It includes detail on disaster management fund sources and use, disaster aid management, supervision, reporting, and accountability. Funding of disaster management activities shall be shared between central and local governments, coming from Anggaran Pendapatan dan Belanja Negara (State Budget, APBN), Anggaran Pendapatan, dan Belanja Daerah (Local Budget, APBD), and the community. The central and local governments are responsible for allocating sufficient funds in APBN or APBD budgets to cover pre-disaster, emergency response and post-disaster needs. They also need to allocate funds in their budgets for the Disaster Contingency Fund, Ready Fund, and Grant-Patterned Social Assistance Fund.

Funds used for the pre-disaster stage are for planning, mitigation, prevention, integration of disaster management into development, risk analysis, spatial design, disaster management training and education, preparation of technical standards, alertness activities, and development of early warning systems (Gov. Reg. 22/2008, Chapter 3, Part 2).

Funds used for emergency response provide financing for assessment of disaster, rescue and evacuation, provision of basic needs, protection of vulnerable populations, and emergency recovery of facilities and infrastructure. Funds available for response include disaster management fund allocation in APBN or APBD and Ready Fund of BNPB and BPBD. Reports accounting for funds in emergency response are due no later than three months after an emergency. Post-disaster funds shall be used for rehabilitation and reconstruction.

Disaster aid shall be provided to disaster victims by central and local governments. Disaster aid may consist of donation to a relative of a deceased person, compensation money for disability, soft loan for business, and aid for necessities. These funds are controlled by BNPB at the national level and BPBD at a regional level.

Many areas of this law need further clarification, specifically funding allocations based on disaster level, responsibilities for Ready Fund and disaster aid. Article 5 states that APBN and APBD shall sufficiently allocate a disaster management budget. The regulation then discusses how these funds are spent, without delineating whether the funds will be APNB, APBD or a combination. Will this be based on the disaster status declaration? Or possible the region/district availability of funds? Article 6 states regional governments may provide a ready fund and Article 18 discusses the use of those funds if allocated. For local and regional budgeting, it may be useful for those analysing budget requirements to have a better concept of their fiscal responsibility.

#### **4.2.5 Head of BNPB Regulation 17/2010 Concerning General Guidelines for Post-Disaster Rehabilitation and Reconstruction**

This regulation provides general guidelines for the implementation of post-disaster rehabilitation and reconstruction. It includes planning, funding, implementation, monitoring and evaluation proses. Chapter 2, Article 2 sets out the purpose of this regulation which is to establish the implementation of rehabilitation and reconstruction that is integrated with the national or local development plan and to encourage the role of communities and international bodies.

This regulation also stresses that rehabilitation and reconstruction are government responsible, and the proses should incorporate the concept of build back better. The process of rehabilitation and reconstruction will involve many stakeholders, including public and private sectors under the coordination of BNPB at the national level and BPBD at the regional and local level.

The implementation of rehabilitation and reconstruction requires a planning document called an action plan for rehabilitation and reconstruction. However, the detail guidelines to develop the action plan will be provided under another regulation.

#### **4.2.6 BNPB Regulation No. 5/2017 Concerning Development of Post-Disaster Rehabilitation and Reconstruction Plan**

This regulation provides details of how to develop a post-disaster rehabilitation and reconstruction plan. Chapter 1, article 1.6 defines post-disaster rehabilitation and reconstruction plan as a planning document which is developed by BNPB/BPBD together with ministries, regional/local agencies and other stakeholders based on damage and loss assessment or post-disaster need assessment.

Chapter 2 of this regulation sets up stages and team to conduct the planning process. Article 2.1 specifies the stages to develop the rehabilitation and reconstruction plan, which are: preparation, drafting, consultation, finalisation, and enactment. Furthermore, article 2.2 states that this process should be completed no less than ninety (90) days.

Regarding the team who responsible for conducting this recovery planning process is divided into the national and local level (provincial and district/city). The national level consists of BNPB, National Development Planning Agency (*Badan Perencanaan Pembangunan Nasional/BAPPENAS*), related ministries and other stakeholders. On the other hand, for the local level, the team comprises BPBD, BAPPEDA, related agencies and other stakeholders at the local level.

The other chapters explain the structure, scope, funding, post-disaster need assessment, and also highlight other aspects that this recovery plan must consider, such as development planning, land use plan, environment, and other legislations.

#### **4.2.7 President Instruction No.5/2018 Concerning Acceleration for Post-Earthquake Rehabilitation dan Reconstruction in West Nusa Tenggara Province**

This regulation was issued to provide the legal basis for the implementation of the recovery process in West Nusa Tenggara province, including Mataram City. It includes central and local governments' roles and responsibilities, funding for rehabilitation and reconstruction.

Generally speaking, this policy sets the objectives of each rehabilitation and reconstruction that need to be achieved. Subsequently, it provides instructions to those ministries, agencies, and local governments about their tasks and responsibilities to achieve those objectives. In particular, for local governments roles, including Mataram City, the policy gives exclusive authority to National Disaster Management Agency to be the coordinator and leading the development process of the recovery plan that will support the implementation of the President Instruction 5/2018.

**Table 1 Law and regulations related to post-disaster recovery planning in Indonesia**

Category	Number	Content
Law	24/2007	Disaster Management
Government Regulation	21/2008	Implementation of Disaster Management
	22/2008	Funding and Disaster Aid Management
President Regulation	8/2008	National Disaster Management Agency
Head of BNPB Regulation	17/2010	General Guidelines for Post-Disaster Rehabilitation and Reconstruction

Head of BNPB Regulation	5/2017	Development of Post-Disaster Rehabilitation and Reconstruction Plan
President Instruction	5/2018	Acceleration for Post-Earthquake Rehabilitation dan Reconstruction in West Nusa Tenggara Province

### 4.3 Summary

In overall, Indonesia has sufficient legal frameworks which regulated disaster management. In terms of post-disaster recovery, the regulations described above have adequately provided legal basis and guidelines regarding the development of rehabilitation and reconstruction plan. These include the responsibility of the central and local governments, institutions and funding arrangements. However, there are some issues regarding its implementation, namely, lack of institutional coordination which resulted in overlapping authority whether between the central and local governments or between institutions at the national level (Kartika, 2017). Similarly, Putra & Matsuyuki (2019) point out the regulation problem at the local level, where the local governments must follow regulations issued by BNPB and Ministry of Home Affairs, which at some point overlap. It is because structurally local governments are under coordination of the Ministry of Home affairs. For instance, to develop local regulations concerning disaster management, local governments have to follow regulations issued by the Ministry of Home Affairs and at the same time must also follow the guidelines issued by BNPB (Putra & Matsuyuki, 2019).

## Chapter 5

### Interview Results

#### 5.1 Introduction

This chapter presents the results of the interviews undertaken with the government officials who involved in the planning process to develop Mataram City Post-Earthquake Rehabilitation and Reconstruction Plan 2018. A series of structured questions were used for the interviews as a guidance to answer the research questions (see Appendix A: Interview questions). In order to collect a comprehensive data, the interviewees were selected from all level of governments, including Mataram City, West Nusa Tenggara Province and central government.

The following are the interviewee names and roles:

1. Lalu Bramantio Ganeru, a planner at the Local Development Planning Agency of Mataram City.
2. Dewi Adriani Waas, a planner at the Local Development Planning Agency of Mataram City.
3. Akhmad Muzaki, secretary of the Local Disaster Management Agency of Mataram City.
4. Suryani Eka Wijaya, a planner at the Regional Development Planning Agency of West Nusa Tenggara Province.
5. Nugroho Retno, a planner at the National Disaster Management Agency.
6. Asfirmanto Adi, a staff at the National Disaster Management Agency.

The results of the interviews are broken down into several key themes based on the research questions. It includes the planning process, the role of government and public participation.

#### 5.2 Recovery Planning Process

The detail process to develop a recovery plan is regulated in the Head of BNPB Regulation No.5/2017 concerning Development of Post-Disaster Rehabilitation And Reconstruction Plan. When asked about the planning process to develop a recovery plan in Mataram City, every interviewee indicate that it was following the direction from that regulation.

*" The process started by doing damage and loss assessment; this includes housing and public facilities. It was conducted by several relevant local agencies in Mataram City, together with affected communities. For public facilities, such as government offices, hospitals, schools and public infrastructure, the assessment was conducted by Mataram City Public Work Agency because this agency has the expertise to do this kind of assessment. Based on the results of damage and loss assessment, BAPPEDA together with BPBD and BNPB developed the recovery plan" (BAPPEDA of Mataram City, Lalu Bramantio Ganeru)*

Dewi Andriani Waas from BAPPEDA of Mataram City describes the process in more detail:

*"The first step was Mayor of Mataram City formed a team, which is consists of BAPPEDA, BPBD and other relevant agencies to develop the recovery plan. This team was conducted the damage and loss assessment on five sectors: infrastructure, housing, economy, social, and cross-sectoral. The results of this assessment brought into coordination meeting to be finalised. The final data used to develop the recovery plan. The Mayor Decree enacted the final document of the recovery plan."*

However, because of the circumstances at that time, the process cannot be done appropriately. There are several issues related to the planning process in Mataram City. First, Mataram City does not have sufficient resources to develop a robust recovery plan. The leading sectors to develop a recovery plan at the local level are BPBD and BAPPEDA; however, these agencies have limited resources, especially with regards to human resources and budget. The capability of BPBD of Mataram City to implement disaster management at the local level is still focuses on emergency response. When it comes to the recovery process, this agency has some difficulties with all the process.

*"We understand that there are some regulations in terms of disaster management and the newly enacted Head of BNPB regulation concerning the development of post-disaster rehabilitation and Reconstruction Plan. However, we have some issues with implementing those regulations and developing a recovery plan. Our resources are limited, and this is a new experience for us. We need supports from other agencies and the central government." (BPBD of Mataram City, Akhmad Muzaki )*

Therefore, the role of BPBD in the recovery planning process was to collect and compile the damage and loss assessment results from other relevant agencies. Subsequently, together with BAPPEDA doing coordination with the representative of BNPB to start the drafting process.

BAPPEDA, on the other hand, is the leading sector to conduct development planning in Mataram City. Its main task and responsibility are to develop Mataram City's development plan, which is divided into an annual plan, medium-term plan and long-term plan. However, this agency has no experience to develop a recovery plan, where many aspects including process, format, steps and timeframe are different from the regular development plan.

*"It was a new experience for us to develop a recovery plan. Moreover, the problem was that we need to make the recovery plan as soon as possible. Based on the legislation and regulations, it is the responsibility of BPBD to implement disaster management at the local level, including for post-disaster recovery planning. However, we realised that BPBD also has some limitations." (BAPPEDA of Mataram City, Dewi Andriani Waas)*

Based on the explanation of the interviewees, it is clear that the central government plays a significant role to support Mataram City local government to develop the recovery plan. There is some reason why the central government's role is important. First, as part of the decentralisation

process in Indonesia, disaster management is expected to implement at the local level by the establishment of BPBD. Accordingly, this local disaster management agency should be able to do all activities regarding disaster management at the local level, including pre-disaster, emergency response when a disaster occurs, and post-disaster recovery. However, the establishment of local disaster management agency does not follow by adequate resources. As a result, many local governments are not capable of developing a robust recovery plan, which is based on the "build back better" concept.

Second, even though Indonesia is prone to natural disaster, many local governments do not prioritise disaster management in their development planning and policy.

Third, legislations and regulations regarding disaster management in Indonesia have provided detail information about how to implement disaster management, including pre-disaster, emergency response and post-disaster. However, there is a big gap with regards to the capability of institutions between disaster management agency at the national level and local level.

### **5.3 Government Role**

Lombok earthquakes were categorised as a regional disaster, which means that the recovery process shall be led by the local government (district/city) under the coordination of the West Nusa Tenggara province government. However, because of the scale of affected areas, the number of casualties, the scale of damage and loss and the inability of local governments make central government step in and provide supports to assist the recovery process.

*"According to disaster management law and regulations, there is a different category of disaster: local, regional and national. The Lombok earthquake was categorised as a regional disaster. However, the central government has made a policy to support the recovery process fully. The central government issued President Instruction No.5/2018 concerning Acceleration of Post-Earthquake Rehabilitation and Reconstruction in West Nusa Tenggara Province." (BAPPEDA of Mataram City, Lalu Bramantio Ganeru)*

#### **5.3.1 The Role of Mataram City Government**

The impacts of Lombok earthquakes happened in 7 districts/city in West Nusa Tenggara Province, including Mataram City. When asking the role of Mataram City government in the planning process to develop Mataram recovery plan, all of the interviewees argue that Mataram City government is responsible for developing its recovery plan with the support from provincial and central government.

*"Mataram City, represented by BPBD and BAPPEDA, played a significant role in the recovery process; this includes in the planning process to develop the recovery plan. In essence, Mataram City was the coordinator that led the whole planning process from preparation, damage and loss assessment,*

*drafting, finalisation and enactment.” (BAPPEDA of Mataram City, Dewi Andriani Waas)*

The disaster management law has regulated the role of each tier of government on disaster management. In general, if the local government is still able to operate, it will lead the whole recovery process. Hence, when developing the Mataram City recovery plan, despite many challenges, Mataram Citi government still played its role and took the responsibility to lead the recovery process in general and particularly recovery planning.

*“Despite the impacts of the earthquakes, to some extent, Mataram City government still able to play its role to govern Mataram City. Regarding recovery planning, there are some limitations that we faced during that time. For example, many of the government offices were damaged, and it affected the way we were working at that time. At the same time, we were expected to develop a recovery plan in a short time.”(BAPPEDA of Mataram City, Lalu Bramantio Ganeru)*

On the other hand, the representative of BNPB stated the opposite argument.

*“At that time Mataram City and other local governments in West Nusa Tenggara Province were paralysed and unable to develop the recovery plan. Hence the central government represented by BNPB steps in to lead the process.” (BNPB, Nugroho Retno)*

### **5.3.2 The Role of West Nusa Tenggara Province**

With regards to the role of the West Nusa Tenggara province, I was told that it has a limited role when developing Mataram City recovery plan. In the planning process, the province government' role was to provide data regarding their assets which is under Mataram City administrative territory. Besides, the West Nusa Tenggara province facilitates Mataram City to coordinate its recovery plan's draft with the central government (BNPB and other ministries). The purpose of this coordination was to ensure relevant ministries will provide funds for rehabilitation and reconstruction based on their sector. As stated by the representatives of BAPPEDA of Mataram City as follows.

*“The province government conducted its damage and loss assessment with regards to their assets in Mataram City. Subsequently, the result was inserted in the recovery plan document because those assets were located in Mataram City administrative. Additionally, the province also facilitated to accelerate the recovery planning process. It was done by supporting Mataram City at the coordination meeting with BNPB and ministries in Jakarta.” (BAPPEDA of Mataram City, Lalu Bramantio Ganeru)*

*“Supplied data regarding province assets in Mataram City. In terms of the recovery plan development, the provincial government did not actively involve.” (BAPPEDA of Mataram City, Dewi Andriani Waas)*

Comparatively, the representative of BAPPEDA of West Nusa Tenggara province argues that every local government, including West Nusa Tenggara province, was developed their recovery plan. Accordingly, the West Nusa Tenggara province was focused on developing its recovery plan.

However, as a regional government and considered as the representative of the central government as well, it has the responsibility to support all the districts/cities under its administrative territory.

*"In terms of the post-earthquake recovery plan, the province government need to develop its recovery plan. However, as a regional government, we also support all districts and cities affected by the earthquake to develop their recovery plan. Furthermore, the province government played as a coordinator to assist all districts and cities in consultation with the central government, in this case, with BNPB and relevant ministries." (BAPPEDA of West Nusa Tenggara province, Suryani Eka Wijaya)*

*"The province government acts as a coordinator to make sure all affected districts and cities could complete their recovery plan on time. It also supports those local governments in coordination meeting with relevant ministries in Jakarta. This coordination meeting was important because some of the recovery funding came from relevant ministries budget. For instance, The ministry of education will fund the rehabilitation and reconstruction of schools."(BAPPEDA of West Nusa Tenggara province, Suryani Eka Wijaya)*

### **5.3.3 The Role of Central Government**

The central government play a significant role in the recovery process following the Lombok earthquakes, its commitment proven by the issued of the President Instruction No.5/2018 concerning Acceleration of the Post- Earthquake Rehabilitation and Reconstruction in Lombok. The purpose of this regulation is to provide a legal foundation for nineteen (19) ministries to fully support the recovery process in Lombok by providing aids which include human resources, finance, technical assistance and types of equipment.

The representative of BNPB states that the enactment of the President Instruction was important to direct all parties that involved in the recovery process.

*"The enactment of President Instruction No.5/2018 provided detail guides with regards to the authority and responsibilities of the central government represented by BNPB in coordination with several ministries and local governments." (BNPB, Nugroho Retno)*

Additionally, Asfirmanto Adi described the rationale why, in many cases, the central government always involved to support local governments to address the impact of the disaster.

*"The Lombok earthquake was declared as a regional or provincial disaster. It means that the responsibility for emergency responses and recovery process should be under the authority of West Nusa Tenggara province together with the affected districts and cities. However, based on our experiences, despite the status, local governments were overwhelmed to address the impacts of disaster. It mostly happens due to lack of resources at the local government level. That is why, in many cases, the central government represented by BNPB always involved when the disaster occurred. In terms of the Lombok earthquake, based on the enormous impacts, the central government decided to support the emergency responses and recovery process fully." (BNPB, Asfirmanto Adi).*

In terms of the planning process, Nugroho Retno describes the central government role as follows.

*"Regarding the recovery planning process, BNPB played as facilitator and coordinator to make sure the Mataram City Government could develop the recovery plan and get funding from the central government through relevant ministries. In practice, Mataram City government led by BPBD and BAPPEDA was conducted damage and loss assessment in 5 sectors: housing, economy, infrastructure, social and cross-sectoral. This assessment results then used as the main data for the recovery plan. BNPB led the drafting process by providing template and guidelines, and assisted BAPPEDA of Mataram City to finalise the document."*

#### **5.4 Public Participation**

In terms of public participation, each of the interviewees stated that they realised the importance of conducting public participation in the recovery planning process. Moreover, they understand that the regulation requires public participation in the recovery planning process. However, considering the uncertain situation at that time, it was difficult to conduct a public consultation.

*"In terms of public participation in the planning concept, we cannot do that because the condition at that time was not possible. First, we must complete the recovery plan no less than three months. It means that we did not have much time. Second, we did not have sufficient resources to conduct a public consultation. Even the government officials who involved in the planning process were also victims or affected by the earthquake."  
(BAPPEDA, Lalu. Bramantio Ganeru)*

Dewi Andriani Waas added:

*"Considering the situation at that time, it was difficult to undertake such public consultation in the planning process, but there was community involvement in the damage and loss assessment. For instance, the community helped the government to identify the impacts of the earthquake on housing and public facilities."*

When asking about public participation, the representative of BNPB (Nugroho Retno) stated:

*"Mataram City government was unable to conduct public consultation because at that time Mataram City government can be considered as paralysed and cannot run its normal functions". Furthermore, when I asked about the regulation for conducting public participation, she argues "In terms of recovery planning, disaster management regulations have provided the legal basis and directions to ensure public participation in the process."*

In summary, the importance of public participation in post-disaster recovery planning has been incorporated into disaster management's law and regulation. The interviewed local planners also indicate that public participation could improve the recovery plan's quality. However, in practice, due to some challenges in the wake of a disaster, Mataram City local government was unable to conduct a public consultation. This evident shows that there is inconsistency between the regulations and the implementation.

## 5.5 Summary

Overall, the results presented indicate that there are significant issues regarding decentralisation and disaster management in Indonesia, which affected recovery planning following a disaster. The primary purpose to decentralised disaster management is to enhance the capability of local governments to manage disaster at all phase, including pre-disaster, emergency response and post-disaster recovery. However, the recovery planning process in Mataram City suggests that the local government does not has the capability to develop a recovery plan based on the “build back better” concept. This issue has led the central government to step in and control the recovery process, including when developing the recovery plan. The results also suggest that there are significant gaps between laws and regulations concerning disaster management and its implementation. It includes the roles of the central and local government and how they collaborate, and the importance to conduct public participation when developing a recovery plan.

## Chapter 6

### Discussion

#### 6.1 Introduction

The main objective of this research is to examine the central government role in the planning process to develop a recovery plan in Mataram City. This chapter interprets the results of this study presented in the previous chapter 4 and chapter 5 in order to answer the research questions. The interpretation of the results than compared and contrast with other studies described in the literature review in chapter 2. The discussion is broken down into three main sections, post-disaster recovery, government's role and public participation in planning for disaster recovery.

#### 6.2 Post-Disaster Recovery

The UNDP (2017) classifies disaster management into five main phases: prevention, preparedness, response, mitigation, recovery. Similarly, the Indonesia government, through the enactment of Law No.24/2007 divides disaster management activities into pre-disaster, emergency response and post-disaster. Furthermore, Indonesia has regulated and provides detail information regarding the implementation of disaster management in every phase. It includes the responsibility and authority of the central and local governments, institutions that lead the implementation, funding and timeframes.

In terms of post-disaster recovery, Several pieces of the literature suggest that post-disaster recovery can offer opportunities to promote the concept of 'build back better' by which to renew infrastructure, create new land-use arrangements, improve construction and design standards, reinvent economies, and improve governance (Kim & Olshansky, 2014; Olshansky & Johnson, 2017; UNDP, 2017; Winkworth, 2007). The United Nations Office for Disaster Risk Reduction (UNDRR) also highlights the importance to integrate the principles of sustainable development and 'build back better' concept into recovery process to avoid or reduce future disaster risks (UNDRR, 2017). My research found that Indonesia has incorporated the concept of build back better into its disaster management regulations. The Law 24/2007 defines recovery as "*a series of activities aiming at bringing the conditions of the disaster-affected community and the environment back to pre-disaster conditions by restoring the function of institutions, infrastructure, and facilities through rehabilitation and reconstruction*" (Republic of Indonesia, 2007). In addition, the Head of BNPB Regulation 17/2010 stresses that the rehabilitation and reconstruction process should incorporated the concept of build back better.

However, in practice, when developing Mataram City's recovery plan the concept of build back better was put aside because the recovery plan focuses on how to rebuild the damaged houses, infrastructure and public facilities into its pre-disaster condition. It shows the inconsistency between the regulation and its implementation, which could lead to a severe problem in disaster management in Indonesia. This issue also proved that there are regulatory problems in disaster management in Indonesia, as well as the implementation. In terms of post-disaster recovery, as the focus of this dissertation, this issue is critical considering Indonesia as a disaster-prone country.

One of the key challenges of post-disaster recovery planning is balancing speed and deliberation (Platt & So, 2017). When a disaster occurs, the government has to make a choice between undertaking recovery as soon as possible to pre-disaster condition or take the opportunity to improve the pre-disaster condition. The decision will significantly affect the recovery planning process. My interview results show that in Mataram City the recovery planning process was focusing on speed, where the local planner stated that "*we need to be fast so the redevelopment process could be started as quickly as possible*". This evident indicates that the planning process conducted to develop Mataram City's recovery plan did not considered significant aspects of recovery, such as the concept of 'build back better' and how to reduce disaster risk in the future.

### **6.3 Government's Role**

Recalling the earlier literature review, Olshansky & Johnson (2017) classify the government role in recovery management into three different categories. First, *centralised*, where the national or central government led and controlled the overall recovery management and policy-making. Second, *partly decentralised*, the national government shared their power to organisations in multiple levels of government to manage recovery and policy-making, but with tight control. Third, *decentralised*, it is where different organisations in multiple levels of government manage recovery and policy-making, with some coordination and support from the national government.

Based on those categories, my results found that, theoretically, recovery planning in Indonesia can be classified as decentralised. The enactment of Law No.24/2007 has shifted the disaster management framework from centralised to decentralised. It also mandates the establishment of disaster management agency at the national level (BNPB), provincial and district/city levels (BPBD). These particular agencies are responsible for implementing disaster management, including post-disaster recovery, based on the scale of the disaster. In other words, the National Disaster Management Agency responsible for the disaster at the national level, while the Local Disaster Management Agency responsible for the disaster at the local level. However, practically, recovery planning in Mataram City was more like centralised because even though it was declared as a

regional disaster, which mean that the recovery process led by West Nusa Tenggara province, most of the recovery process was directed by the central government.

Burby (2006) and Johnston (2012) suggest that decentralised disaster management is more efficient and effective to address the impact of the disaster. Similarly, Hermansson (2019) states that decentralisation has a positive effect in terms of disaster governance because it will increase local government capacity to manage every aspect of disaster management. In terms of planning, Das & Luthfi (2017) argue that decentralisation could improve the capacity and capability of local planning institutions. It also enhances the local communities to participate in the planning process, implementation and evaluation. Similarly, Hermansson (2019) highlights the benefits of administrative and political decentralisation, which could lead to a better planning process.

My analysis of legislation and regulations show that Indonesia has decentralised its disaster management by shared the responsibility and authority to manage disaster to local governments. This policy in line with the decentralisation system implemented as the result of the reformation movement as described in the literature review chapter. However, several studies suggest that both the governance and disaster management decentralisation developed by the central government have some problems, including government's role (Kartika, 2017; Mardiah, Lovett, & Evanty, 2017; Putra & Matsuyuki, 2019). The creation of disaster management agency at regional and local levels did not follow by adequate human resource, financial and a clear guidances regarding their roles, authority and responsibility.

Accordingly, my interview results show that local government of Mataram City still has some issues when conducting recovery planning. All the participants from Mataram City government acknowledge that the main issue is related to human resources and financial capacity needed to implement disaster management at the local level. As a result, Mataram City government cannot play its role as expected by the disaster management regulations to develop a recovery plan. In addition, the representative of the National Disaster Management Agency (*Badan Penanggulangan Bencana Nasional/BNPB*) acknowledges that many local governments, including provincial and cities/districts in Indonesia, do not have adequate resources to address the impacts of disaster. Hence, in many cases, the central government through BNPB has to take the responsibility to manage disaster at the local level, regardless of the disaster status.

Regarding the government's role, the case study used in this research, which is the recovery planning in Mataram City can be compared with the recovery planning in Christchurch City following the Canterbury earthquake 2011. In Christchurch, the government' role in post-disaster recovery can be classified as centralised because the central government took over the local government's responsibility to address the impacts of the earthquake. The issuance of CERA Act 2011 and the

extensive power given to the Minister for Canterbury Earthquake have allowed the central government to lead and control the recovery process, including the development of recovery plans. As a result, Beattie (2019) argues that the approach taken by the central government had caused tension between the central government and Christchurch City Council. It is because the central government disempowered the Christchurch City Council, ignoring the fact that Christchurch City Council wants to involve in the recovery planning process and able to develop a draft for central city plan, which has incorporated its residents and communities aspirations. In overall, Beattie (2019) found that there was no collaboration between the central and local government, even though the local authority wants to collaborate and implement integrated planning.

Comparatively, in the context of Mataram City recovery planning, the scale and impacts of the earthquakes were not as big as Christchurch. Subsequently, the regulation gives authority and responsibility to the local government to develop its recovery plan. Hence, the central government not necessarily took over the planning responsibility from Mataram City. However, Mataram City did not take the opportunities to develop its recovery plan, which could improve many aspects and reduce future disaster risks. The problems of decentralised disaster management in Indonesia has made the central government step-in and led the recovery planning process. My interview results indicate that, to some extent, there was cooperation between Mataram City, West Nusa Tenggara Province and the central government when developing the recovery plan. However, considering the significant roles of the central government and the lack capacity of Mataram City, in principle, there was no collaboration between the central and local government.

#### **6.4 Public Participation in Planning for Disaster Recovery**

Policy and planning are the primary instruments for government to address the impact of a disaster, both for mitigating and post-disaster recovery (Wang, 2012). However, compared with traditional planning approaches, planning for disaster recovery has to deal with conditions of high uncertainty, rapid change, and complexity (Berke et al., 2014). In other words, there is a big gap when conducting regular planning, for example, a development plan or land use plan, with planning for disaster recovery. However, despite the uncertain and complex condition in the wake of a disaster, several pieces of literature suggest that public participation is a significant process to develop a recovery plan (Berke et al., 2014; Love, 2012; Vallance, 2015).

With regards to public participation in post-disaster recovery, my research found that Indonesia has acknowledged the importance of community involvement in disaster recovery by incorporating this issue into its national law system. Furthermore, my interview results indicate that community has actively participated in the recovery process, such as providing food and clean water for refugees, and make a donation. However, there was no public participation in the planning process to develop

the recovery plan. It is a critical issue considering Indonesia has implementing decentralised disaster management since 2007, where public participation supposed to be a significant objective.

Public participation in planning for disaster recovery in Mataram City can be compared and contrast with the studies on the Christchurch Central Recovery Plan. Olshansky & Johnson (2017) state that the public engagement for recovery planning collected around 106,000 suggestions from communities and ten thousand people attended the planning expo. Moreover, Siembieda & Johnson (2015) suggest that the draft for the Christchurch Central Recovery Plan was highly recognised for its extensive public participation process. Those studies highlight the importance of public participation in the planning process to produce valuable inputs and feedback from communities in order to enhance the quality of the recovery plan.

In contrast, the results from the interview conducted in this research show that there was no public participation undertaken by the Mataram City government in the planning process to develop the recovery plan. This process not consistent with the regulation issued by the Head of BNPB, which clearly states that the process to develop a recovery plan must include public consultation. My results also suggest that in the time of the disaster, local governments in Indonesia always have problems to undertake public participation in recovery planning. There are two main reasons for this issue, first, planning institution at local government (BAPPEDA) only focus on regular development planning. Second, the responsibility to implement disaster management, including recovery planning at the local level is at the local disaster management agency (BPBD). However, this disaster management institution does not have adequate resources to conduct recovery planning appropriately. Furthermore, my result indicates that the recovery plan produced by Mataram City government only focus on how to fix the damage properties and the funding as well.

## Chapter 7

### Conclusion

The primary purpose of this research was to identify the role of the central and local governments and whether they collaborate or not when developing *Mataram City Post-Earthquake Rehabilitation and Reconstruction Plan 2018* following the Lombok earthquakes. The key findings of my research have led me to conclude that the central government plays a dominant role in the planning process with little cooperation from Mataram City government and West Nusa Tenggara Province. In other words, it means that there was no collaboration between the central and local governments in the recovery planning process. Furthermore, the relationship between the central and local governments is unclear. It is because of the inconsistency between the regulation and its implementation. The analysis of regulations shows that the recovery process is supposed to be led by Mataram City government under the coordination of West Nusa Tenggara province. However, the interview results indicate that whether Mataram City or West Nusa Tenggara province cannot play their roles and responsibilities. Subsequently, the central government, through the enactment of Presidential Instruction 5/2018 and led by the National Disaster Management Agency (BNPB) took over the planning responsibility from Mataram City.

This condition happened because of three main reasons. Firstly, the disaster management act and its derivative regulations have integrated decentralised system; however, the roles and responsibilities between all levels of government are mostly fuzzy. Secondly, the lack of capacity of local governments to conduct recovery planning. Particularly in terms of human resource and financial capacity. Thirdly, the outcome of the recovery plan focuses only on how to rebuild the damaged houses, infrastructure and public facilities into its pre-disaster condition. Hence, the central government directed Mataram City to rush the process without considering the concept of collaboration planning, build back better, and public participation.

In terms of public participation, it can be concluded that there was no public participation in any means when developing the recovery plan. As a democratic country, which adopted decentralisation in its governance and disaster management systems for more than 20 years, this becomes a critical issue that needs serious attention from the policy-makers and the public as well.

## 7.1 Recommendations

Indonesia is a disaster-prone country, which has experienced a lot of disasters, including natural and human-made disasters. Therefore, it is essential to improve its disaster management framework. This research shows that there are significant problems with regards to the implementation of disaster management in Indonesia, particularly when developing a recovery plan at a local level. Based on the findings of this research, there are several recommendations offered to improve post-disaster recovery in Indonesia. These include:

- Amend the disaster management law and its derivative regulations to provide clear guidelines regarding roles and responsibilities between the central and local governments, such as who does what, why, how and when.
- Improved capacity and capability of the Regional and Local Disaster Management (BPBD), in particular availability of human resources, financial and facilities. It is the responsibility of both the central and local governments. The central government, as part of decentralised disaster management, must ensure these local institutions have adequate resources. It can be done by setting a certain standard through regulation, such as minimum budget allocation, number of expertise, and minimum equipment or facilities, the local authority must follow that with full support from the central government.
- The local government should promote disaster risk reduction activities to reduce the impacts of future disaster. It is also necessary to collaborate with other stakeholders, such as local universities and communities, to develop an action plan regarding disaster management.
- With regards to recovery planning, both the central and local government need to implement the concept of collaboration and participatory planning, which integrated the 'build back better' concept as well.

## 7.2 Future Research

This research focuses on the roles of the central and local governments, including their relationship when developing a recovery plan. The result shows that there was no collaboration between the central and local governments and no public participation in the planning process. Thus future research is expected to evaluate the outcome of this recovery plan. It is also interesting to investigate the roles of private sectors in the recovery process, especially how they can collaborate with or influence government in the decision-making process.

## References

- Beattie, N., &. (2019). *The role of the planner in recovery after disaster: A case study of the Canterbury Earthquake Recovery Act 2011 and its impact on planners operating in post-quake Christchurch : A Dissertation submitted in partial fulfilment of the requirements for the Degree of Master of Planning*: Lincoln University.
- Berke, P., Cooper, J., Aminto, M., Grabich, S., & Horney, J. (2014). Adaptive Planning for Disaster Recovery and Resiliency: An Evaluation of 87 Local Recovery Plans in Eight States. *Journal of the American Planning Association*, 80(4), 310-323. doi:10.1080/01944363.2014.976585
- Boano, C., & Garcia, M. (2011). Lost in translation? The challenges of an equitable post-disaster reconstruction process: Lessons from Chile. *Environ. Hazards*, 10(3-4), 293-309. doi:10.1080/17477891.2011.594493
- Booher, D. E., & Innes, J. E. (2002). Network Power in Collaborative Planning. *Journal of Planning Education and Research*, 21(3), 221-236. doi:10.1177/0739456X0202100301
- Burby, R. J. (2006). Hurricane Katrina and the Paradoxes of Government Disaster Policy: Bringing About Wise Governmental Decisions for Hazardous Areas. *The Annals of the American Academy of Political and Social Science*, 604(1), 171-191. doi:10.1177/0002716205284676
- Cheong, S.-M. (2011). The Role of Government in Disaster Management: The Case of the Hebei Spirit Oil Spill Compensation. *Environment and Planning C: Government and Policy*, 29(6), 1073-1086. doi:10.1068/c10170
- Clarke, V., & Braun, V. (2017). Thematic analysis. *The Journal of Positive Psychology: Qualitative Positive Psychology*. Edited by Kate Hefferon and Arabella Ashfield, 12(3), 297-298. doi:10.1080/17439760.2016.1262613
- Creswell, J. W. (2014). *Research design : qualitative, quantitative, and mixed methods approaches* (4th ed.. ed.). Thousand Oaks: Thousand Oaks : SAGE Publications.
- Cretny, R., &. (2017). *The post disaster city: crisis politics and social change in community led earthquake recovery*: RMIT University.
- Daniels, T. L. (2004). *The environmental planning handbook for sustainable communities and regions*. Chicago, Ill.: Chicago, Ill. : Planners Press, American Planning Association.
- Das, A., & Luthfi, A. (2017). Disaster Risk Reduction in Post-Decentralisation Indonesia: Institutional Arrangements and Changes. In R. Djalante, M. Garschagen, F. Thomalla & R. Shaw (Eds.), *Disaster Risk Reduction in Indonesia: Progress, Challenges, and Issues* (pp. 85-125). Cham: Springer International Publishing. Retrieved from [https://doi.org/10.1007/978-3-319-54466-3\\_4](https://doi.org/10.1007/978-3-319-54466-3_4). doi:10.1007/978-3-319-54466-3\_4
- Diprose, R., McRae, D., & Hadiz, V. R. (2019). Two Decades of Reformasi in Indonesia: Its Illiberal Turn. *Journal of Contemporary Asia*, 49(5), 691-712. doi:10.1080/00472336.2019.1637922
- Direction to Canterbury Regional Council to Develop a Land Use Recovery Plan for Greater Christchurch*, &. (2012).
- Djalante, R., Garschagen, M., Thomalla, F., & Shaw, R. (2017). *Disaster Risk Reduction in Indonesia: Progress, Challenges, and Issues*. Cham: Springer International Publishing, Cham. doi:10.1007/978-3-319-54466-3
- Flick, U. (2006). *An introduction to qualitative research* (3rd ed.. ed.). London: London : SAGE.
- Gerber, B. J., & Robinson, S. E. (2009). Local Government Performance and the Challenges of Regional Preparedness for Disasters. *Public Performance & Management Review*, 32(3), 345-371. doi:10.2753/PMR1530-9576320301
- Healey, P. (1997). *Collaborative planning : shaping places in fragmented societies*. Houndsmills, England: Houndsmills, England : Macmillan.
- Hermansson, H. (2019). Challenges to Decentralization of Disaster Management in Turkey: The Role of Political-Administrative Context. *International Journal of Public Administration*, 42(5), 417-431. doi:10.1080/01900692.2018.1466898
- Johnston, E. W., Hicks, D., Nan, N., & Auer, J. C. (2011). Managing the Inclusion Process in Collaborative Governance. *Journal of Public Administration Research and Theory*, 21(4), 699-721. doi:10.1093/jopart/muq045

- Johnston, J. S. (2012). Disasters and Decentralisation. *The Geneva Papers on Risk and Insurance Issues and Practice*, 37(2), 228-256. doi:10.1057/gpp.2012.13
- Kartika, S. (2017). Regulatory Problems of Disaster Management in Indonesia. *Jurnal Dinamika Hukum*, 17, 96. doi:10.20884/1.jdh.2017.17.1.371
- Keeley, J., & Scoones, I. (2003). *Understanding Environmental Policy Processes : Cases from Africa*. London: London: Routledge. doi:10.4324/9781849773621
- Kim, K., & Olshansky, R. B. (2014). The Theory and Practice of Building Back Better. *Journal of the American Planning Association*, 80(4), 289-292. doi:10.1080/01944363.2014.988597
- Knoepfel, P., Larrue, C., Varone, F., & Hill, M. (2011). *Public policy*: Policy Press. doi:10.1332/policypress/9781861349071.003.0002
- Kusumasari, B., & B. Kusumasari, Q. Alam, U. Monash & M. Monash University. Department of. (2012). *Resource capability of local government in managing a disaster: evidence from Indonesia*: Management.
- Lein, J. K. (2003). *Integrated environmental planning*. Oxford: Blackwell Science. doi:10.1002/9780470999233
- Lloyd-Jones, T. (2006). *Mind the Gap! Post-disaster reconstruction and the transition from humanitarian relief*. London, UK: RICS. Retrieved from <http://www.rics.org/NR/rdonlyres/E1209248-7F4E-43B0-80C7-43971B551E6D/0/MindtheGapFullreport.pdf>
- Lombok: deadly quake hits island recovering from string of tremors. (2018). Retrieved 20 August, 2018, from <https://www.theguardian.com/world/2018/aug/20/lombok-deadly-earthquake-hits-island-recovering-tremors-indonesia>.
- Longhurst, R. (2009). Interviews: In-Depth, Semi-Structured. In R. Kitchin & N. Thrift (Eds.), *International Encyclopedia of Human Geography* (pp. 580-584). Oxford: Elsevier. Retrieved from <http://www.sciencedirect.com/science/article/pii/B9780080449104004582>. doi:<https://doi.org/10.1016/B978-008044910-4.00458-2>
- Love, R., & Vallance, S. A. (2014). The role of communities in post-disaster recovery planning: A Diamond Harbour case study.
- Love, R. G., &. (2012). *Community-led planning in post-disaster recovery: a Diamond Harbour case study : a dissertation submitted in partial fulfilment of the requirements for the Degree of Master of Applied Science at Lincoln University*: Lincoln University.
- Mardiah, A. N. R., Lovett, J. C., & Evanty, N. (2017). Toward Integrated and Inclusive Disaster Risk Reduction in Indonesia: Review of Regulatory Frameworks and Institutional Networks. In R. Djalante, M. Garschagen, F. Thomalla & R. Shaw (Eds.), *Disaster Risk Reduction in Indonesia: Progress, Challenges, and Issues* (pp. 57-84). Cham: Springer International Publishing. Retrieved from [https://doi.org/10.1007/978-3-319-54466-3\\_3](https://doi.org/10.1007/978-3-319-54466-3_3). doi:10.1007/978-3-319-54466-3\_3
- Markham, S., & Vallance, S. A., &. *Some roles for local government in disaster recovery*: Brisbane, Australia.
- Marsh, G., & ProQuest. (2018). *Community engagement in post-disaster recovery*. LONDON: LONDON ROUTLEDGE.
- . *Mataram City Post-Earthquake Rehabilitation and Reconstruction Plan*. (2018). Mataram, Indonesia: Mataram City Government.
- Mohajan, H. (2018). Qualitative research methodology in social sciences and related subjects. *Journal of Economic Development, Environment and People*, 7, 23-48. doi:10.26458/jedep.v7i1.571
- National Disaster Management Agency. (2018). *Victim Data Update*. Retrieved from <https://www.bnpb.go.id/english-lombok-earthquake>.
- New Zealand. Canterbury Earthquake Recovery, A. (2013a). *Draft Land Use Recovery Plan*: Christchurch, N.Z. : Canterbury Earthquake Recovery Authority CERA
- New Zealand. Canterbury Earthquake Recovery, A. (2013b). *Land use recovery plan*: Christchurch, N.Z. : Canterbury Earthquake Recovery Authority CERA.
- New Zealand. Canterbury Earthquake Recovery, A. (2013c). *Preliminary Draft Land Use Recovery Plan*: Christchurch, N.Z. : Canterbury Earthquake Recovery Authority CERA.

- Olshansky, R., & Johnson, L. (2017). *After Great Disasters: An In-Depth Analysis of How Six Countries Managed Community Recovery*
- Pathak, S., & Ahmad, M. M. (2018). Role of government in flood disaster recovery for SMEs in Pathumthani province, Thailand. *Natural Hazards*, 93(2), 957-966. doi:10.1007/s11069-018-3335-7
- Platt, S., & So, E. (2017). Speed or deliberation: a comparison of post-disaster recovery in Japan, Turkey, and Chile. *Disasters*, 41(4), 696-727. doi:10.1111/disa.12219
- Putra, D., & Matsuyuki, M. (2019). Disaster Management Following Decentralization in Indonesia: Regulation, Institutional Establishment, Planning, and Budgeting. *Journal of Disaster Research*, 14, 173-187. doi:10.20965/jdr.2019.p0173
- Law No.24/2007 Concerning Disaster Management (2007).
- Shaw, R. (2005). *Public policy in New Zealand : institutions, processes and outcomes*. Auckland, N.Z.: Auckland, N.Z. : Pearson Education.
- Shi, P. (2012). On the role of government in integrated disaster risk governance—Based on practices in China. *International Journal of Disaster Risk Science*, 3(3), 139-146. doi:10.1007/s13753-012-0014-2
- Siembieda, W., & Johnson, L. (2015). CHRISTCHURCH RECOVERS. *Planning*, 81(8), 37-40.
- Statistic of Mataram Municipality. (2018). *Mataram Municipality in Figures 2018*. Mataram: BPS-Statistic of Mataram Municipality.
- Sutiyono, W., Pramusinto, A., & Prasojo, E. (2018). Introduction to the mini special issue: understanding governance in Indonesia. *Policy Studies: Understanding Governance in Indonesia*, 39(6), 581-588. doi:10.1080/01442872.2018.1530416
- Talitha, T., Firman, T., & Hudalah, D. (2019). Welcoming two decades of decentralization in Indonesia: a regional development perspective. *Territory, Politics, Governance*, 1-19. doi:10.1080/21622671.2019.1601595
- UNDP. (2017). *Guidance Note: National Post-Disaster Recovery Planning and Coordination*. Retrieved 20 September, 2019, from <https://www.undp.org/content/undp/en/home/librarypage/climate-and-disaster-resilience/recovery-guidance-note.html>.
- UNDRR. (2017). *Terminology*. Retrieved 20 September, 2019, from <https://www.unisdr.org/we/inform/terminology#letter-r>.
- Vallance, S. (2015). Disaster recovery as participation: lessons from the Shaky Isles. *Journal of the International Society for the Prevention and Mitigation of Natural Hazards*, 75(2), 1287-1301. doi:10.1007/s11069-014-1361-7
- Wang, J.-J. (2012). Integrated model combined land-use planning and disaster management. *Disaster Prevention and Management: An International Journal*, 21(1), 110-123. doi:10.1108/09653561211202746
- Wang, S., &. (2019). *Diversity public engagement in New Zealand planning - A case study of Christchurch the Chinese ethnic group: A dissertation submitted in partial fulfilment of the requirements for the Degree of Master of Planning at Lincoln University*: Lincoln University.
- WHO. (2020). *Rolling update on coronavirus disease (COVID-19)*. Retrieved 15 June, 2020, from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>.
- Winkworth, G. (2007). *Disaster Recovery A Review of the Literature*: Australian Catholic University. Retrieved from [http://www.acu.edu.au/\\_data/assets/pdf\\_file/0004/469255/Disaster\\_RecoveryLiterature\\_Review1.pdf](http://www.acu.edu.au/_data/assets/pdf_file/0004/469255/Disaster_RecoveryLiterature_Review1.pdf)
- World Bank. Independent Evaluation, G. (2006). *Hazards of nature, risks to development an IEG evaluation of World Bank assistance for natural disasters*. Washington, D.C.: Washington, D.C. : World Bank.
- Yang, Y. (2010). The 9/21 earthquake in Taiwan: a local government disaster rescue system1. *Disasters*, 34(1), 112-136. doi:10.1111/j.1467-7717.2009.01117.x

## Appendix A

### Interview Information

#### A.1 List of interviewees

No	Name	Institution
1	Lalu Bramantio Ganeru	Local Development Planning Agency (BAPPEDA) of Mataram City
2	Dewi Andriani Waas	Local Development Planning Agency (BAPPEDA) of Mataram City
3	Akhmad Muzaki	Local Disaster Management Agency (BPBD) of Mataram City
4	Suryani Eka Wijaya	Regional Development Planning Agency (BAPPEDA) of West Nusa Tenggara Province
5	Nugroho Ratna	National Disaster Management Agency (BNPB)
6	Asfirmanto Adi	National Disaster Management Agency (BNPB)

#### A.2 Interview questions for the representative of the Local Development Planning Agency (BAPPEDA) of Mataram City

1. Can you please explain the stages in the planning process to develop Mataram City's recovery plan?
2. Who was involved in that process?
3. Can you please explain the role of Mataram City government in that process?
4. Can you please explain the role of BAPPEDA and BPBD in that process?
5. Can you please explain the role of West Nusa Tenggara province in that process?
6. Can you please explain the role of the central government in that process?
7. Was there any public participation in the planning process? If yes, in what format and stage? If not, explain why?
8. What were the challenges with regards to the relation between the central and local governments when developing the recovery plan?
9. In your opinion, do you think the central government approach was effective to create a good recovery plan?

### **A.3 Interview questions for the representative of the Local Disaster Management Agency (BPBD) of Mataram City**

1. Can you please explain the planning process to develop Mataram City's recovery plan?
2. Who was involved in that process?
3. Can you please explain the role of Mataram City government in that process?
4. Can you please explain the role of BPBD in that process?
5. What were the challenges faced by BPBD as the leading sector in post-disaster management in Mataram City?
6. Can you please explain the role of the central and provincial governments in the planning process?
7. What were the challenges with regards to the relation between the central and local governments when developing the recovery plan?
8. In your opinion, do you think the central government approach was effective to create a good recovery plan?

### **A.4 Interview questions for the representative of the Regional Development Planning Agency (BAPPEDA) of West Nusa Tenggara Province**

1. Can you please explain the role of West Nusa Tenggara province in the planning process to develop Mataram City's recovery plan?
2. Did West Nusa Tenggara province influence the decision-making process concerning the recovery plan?
3. What were the challenges with regards to the relation between the central and local governments when developing Mataram City's recovery plan?
4. In your opinion, do you think the central government approach was effective to create a good recovery plan?

### **A.5 Interview questions for the representative of the National Disaster Management Agency (BNPB)**

1. Can you please explain the role of the central government in post-disaster management in Indonesia?
2. How about its role in Mataram City's recovery process following the Lombok earthquake?
3. Why the central government has to involve in Mataram City's recovery process?
4. What was the specific role of BNPB in that process?
5. Can you please explain the legal frameworks to develop Mataram City's recovery plan?

6. According to that legal frameworks, is there any regulation or guideline which require public participation when developing a recovery plan?
7. Was there any public participation in the recovery planning process in Mataram City? If yes, in what format and stage? If not, explain why?
8. What were the challenges with regards to the relation between the central and local governments when developing Mataram City's recovery plan?