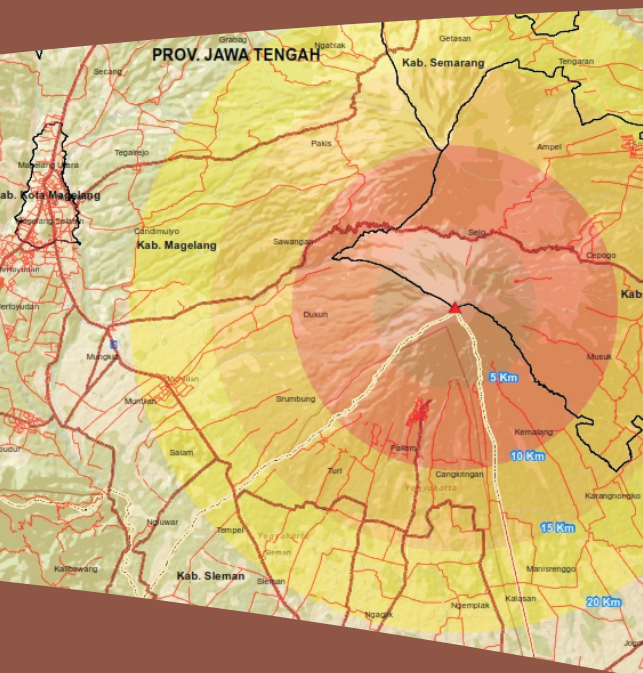# THE POST-DISASTER PLANNING IN RESETTLEMENT PROJECT

Case study of Sleman Regency

THESIS
By:
ARUMININGSIH

Supervisor :

KARINA CASTRO ARCE

**ENVIRONMENTAL AND INFRASTRUCTURE PLANNING
FACULTY OF SPATIAL SCIENCES
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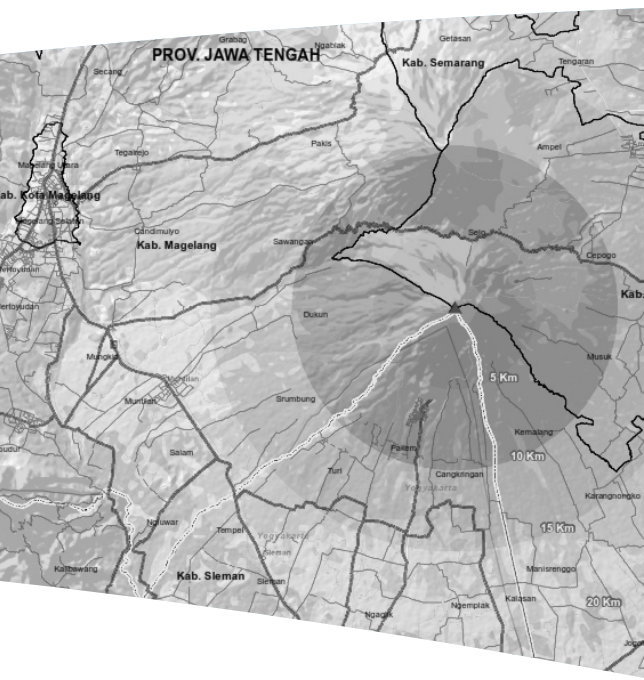UNIVERSITY OF GRONINGEN**

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I would like to say Alhamdulillah and praise to Allah for blessing me a great life. This thesis is dedicated for my husband Mahar Cita, who always trusting and supporting me during my study in Netherlands. Many people have influenced and helped me in this research. Firstly, I would like to thank my supervisor Karina Castro Arce, for guiding me through the process of writing thesis and having patience to discuss ideas of thesis, while at the same time leaving me enough space to construct my path. Secondly, I would like to thank all the respondents from Bappenas, Bappeda, BPBD, Rekompak, ITB, UGM, Kyoto University, World Bank, MDMC and Sleman residents, whom sharing me lot of data, information and views of the case. My appreciation goes to Spirit-Bappenas for giving me an opportunity to study at Rijksuniversiteit Groningen, Constanza Parra for giving academic advices, and also Melanie Bakema as the second reader of this thesis. I would also like to thank to all my friends in Groningen and EIP program, for sharing moments in this student city. Finally, I would like to thank my big family in Bekasi and Bogor for being supportive. May joy and happiness always come as we are expecting a wonderful surprise in January 2015.

Groningen, August 2014

Aruminingsih

THE POST-DISASTER PLANNING IN RESETTLEMENT PROJECT

Case Study of Sleman Regency, Indonesia

Abstract

Post-disaster recovery is an effort to rehabilitate the affected community by providing a safer environment. In certain area, the recovery often deals with relocation and resettlement if the source of danger cannot be removed. In order to pursue a quick recovery in relocation and resettlement, a top-down planning approach with hierarchal structure is generally applied. In the midst of the complex problem of conducting resettlement and providing a safer environment for community, this top-down planning is modified or even complemented with different planning approaches to address the dynamics of the situation. Furthermore, the aim of this research is to understand the planning process during the post-disaster recovery and to acknowledge the difficulties that top-down planning is confronted when dealing with resettlement project. This paper captures the most affected area of densely populated in Sleman Regency in Indonesia that face a volcanic eruption as the study case. The paper uses the method of qualitative research through the selection of secondary data, primary data, and in-depth interview to give a comprehensive picture of the case. This thesis concludes that the top-down planning adapts to the complex situation by applying a community-based approach to allow more flexible coordination among stakeholders and active participation in the community. Hence, the strengths and weaknesses of the implementation of top-down planning with community-based program are expected to be lessons-learned for further post-disaster planning policy.

Keywords: top-down planning, post-disaster recovery, resettlement, community-based.

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Acronyms and Abbreviations

Bappeda	:	Regional Development Planning Agency/Badan Perencanaan Pembangunan Daerah
Bappenas	:	Ministry for National Development Planning/ Badan Perencanaan Pembangunan Nasional
BPPD	:	Regional Disaster Management Board
Huntap	:	Hunian tetap/permanent house
Huntara	:	Hunian sementara/temporary house
KRB	:	Disaster Prone Area/Kawasan Rawan Bencana
NGO's	:	Non-Governmental Organization
PP	:	Construction Committee/Panitia Pembangunan
Rekompak	:	Community-based Settlement and Community Rehabilitation and Reconstruction / Rehabilitasi dan Rekonstruksi Masyarakat dan Permukiman Berbasis Komunitas
Renaksi	:	Action Plan for Rehabilitation and Reconstruction/ Rencana Aksi Rehabilitasi dan Rekonstruksi
RKP	:	Annual Working Plan
RPJPN	:	Long-term Development Plan
RPJMN	:	Mid-term Development Plan

CHAPTER 1

INTRODUCTION

1.1 Aim and research question

1.2 Research objective

1.3 Research case

1.4 Thesis structure

Chapter overview

The first chapter of this thesis elaborates the aim of the study, research question and objective, brief overview on the research case and also thesis structure to show work plan of thesis. This chapter presents general idea on the concepts of top-down planning and community-based approach related with post-disaster recovery process, specifically in the resettlement development. The discussion explains the type of top-down planning and its linkage to community-based approach in conducting the recovery process of relocation and resettlement for the affected community. The discussion emphasizes several aspects namely recovery process, coordination and resettlement which further conveyed in the Chapter 2. The brief description of the case study functions as illustration of this research.

1.1 Aim and Research Question

Disasters have devastating impacts to people's life and environment, thus immediate response is required to recover them to their normal condition. According to the definition of Center for Research on the Epidemiology of Disasters (CRED, 2007), "Disaster is a situation or event, which overwhelms local capacity, necessitating a request to national or international level for external assistance; an unforeseen and often sudden event that causes great damage, destruction and human suffering". Therefore, disaster which are occurring in an increasing frequency in the world with devastating impact (Shaw, 2006 in Karunasena, et. al., 2010) have stimulates several planning approaches from the national and international level to overcome the impacts. In attempt to achieve immediate response and recovery, planning approaches are selected and examined by planners and policy-maker. One of the approaches to manage a quick response in effective way is top-down planning approach. Subsequently, planning processes in post-disaster situation can be regarded as functional rational rather than as communicative rational (De Roo, 2001). He further elaborates traditionally this situation is solved by using a functionality reasoning, which means not much more than top-down policy urging a central government giving directives to local authorities. Functional rationality is concerned with means and efficiency – it is seek to meet ends in the most effective and efficient way (Allmendinger, 2002). Hummel and Ahlers (2007) also argue that the centralized management and support is vital to effective and efficient reconstruction, emergency funding can be appropriated and distributed to areas affected by the disaster, and myriad agencies are coordinated to move reconstruction forward. This reflects the top down-

planning is still generally applied in post-disaster recovery; since it is believed the functional rational behind this planning approach support functional yet quick recovery.

Along with its functionality, top-down planning also receives criticism on its limitation on dealing with complex problem that usually occur in post-disaster recovery. Allmendinger (2009) argues the functional rationality behind the top-down planning is akin to command rather than collaboration. While the fuzzy nature of planning in the complex situation requires collaborative act of actor-consulting to address differences (Roo & Porter, 2012), top-down planning gives little space for different actors involved in the planning process. Healey (1997) supports the idea that communicative rationality takes as an ethical commitment to enabling all stakeholders to have a voice, which then offers a way of mobilising for change through collective efforts. In the contrary, the public and leaders often clamor to re-build quickly yet better than before, by using the common practice of command and directives from centralized government (Comfort, 2005 in Ingram et. al., 2006). This idea is generally framed with a phrase of 'build back better'. It means recreate or rebuild the community or environment with better condition than before. The doubt still remains on whether it is feasible for top-down planning to unlock the phrase 'build back better' into realization due to the complex characteristic of post-disaster recovery. Khasalamwa (2009) argues that despite the engaging mantra 'build back better', the disaster response in some cases have not lived up to expectations. In many cases this phrase is difficult to be brought into reality, particularly when a top-down planning in the process. For instance, the government's top-down policy of reservoir resettlement in Yangtze River (China) resulted in rural-urban migrants being marginalized as a community. Instead of becoming better, the quality of the resettlement in new area is degraded (Heming, Waley, & Rees, 2001). The criticism is basically derived from the perspective that top-down planning approach with its command and hierarchal characteristics has limited function to deal with complex issue (e.g. post-disaster recovery).

Post-disaster recovery in resettlement project is complex issue since several different issues emerge altogether. Post-disaster recovery is not just a single issue of rebuilding houses and buildings, but often it also consists of several different issues of relocating and rehabilitating community. The act of relocating residents from the hazard zone in resettlement project happens when the danger cannot be removed. Disaster caused by volcanic eruption is the possible option for recovery is by moving people to safer environment. Chan (1995) in Whiteford and Tobin (2004) explains to protect populations from hazards, relocating population is one of the most common practices. Nevertheless, the

difficult part for planner is to make sure the quick recovery and collaborative act are both embraced in the post-disaster planning.

Thus, this research reviews the practice of post-disaster planning and its strategy to live up the expectation of 'build back better'. The aim of this research is to understand the planning process during the post-disaster recovery and to acknowledge the challenges that top-down planning is confronted when dealing with resettlement project. Case study of community-based resettlement in Sleman Regency, Yogyakarta, Indonesia is selected to demonstrate the practice of top-down planning in recovery process. Further, the paper seeks some lessons-learned extracted from the case study. Therefore, the following research questions are defined to address the planning process and the confronted challenges during the post-disaster recovery.

1. How and why is top-down planning process implemented typically in resettlement projects during post-disaster recovery?
2. How community-based approach influences top-down planning used in the resettlement project, specifically in the case of Rekompak program in the Sleman Regency, Yogyakarta, Indonesia?
3. Are there key factors in the Sleman's resettlement planning process which can be a lessons-learned for further post-disaster planning policy, specifically for Indonesia's context?

Those empirical questions are addressed by a theoretical approach based on theories as the followings:

- The concept of post disaster recovery in disaster management cycle.
- The concept of top down planning.
- The concept of community-based approach.

1.2 Research Objective

As mentioned in the previous explanation, this paper aims to provide insight on the approach of top-down planning in post-disaster recovery in effort to provide safer environment for the community. On addressing the research questions, the set of objectives are stated in the following lines:

- Identify the government's approach in conducting the resettlement project in Sleman Regency.
- Identify the practice of community-based resettlement from the case study and how it affects the line of coordination in top-down planning.

- Identify the role of stakeholders and how they influence the recovery process.
- Identify the strengths and weaknesses of the post-disaster planning based on the case study.

Hereafter, these objectives guide the flow of discussion from understanding the concept and theoretical background, then to put it into the context by the illustration of the case study. It is hoped that the output of this study can be an additional reference for all stakeholders from practitioner, government officials, academics, to NGO's on the implementation of planning policy in post-disaster situation and how it affects the execution of project.

1.3 Research Case

Mount Merapi (2,968 amsl) is located in the provinces of Central Java and Yogyakarta in Indonesia. It is the most active stratovolcano in this archipelago country; it erupts more than 80 times between Year 1672 to 2010 (Bappenas & BNPB, 2011). On average, it erupts once in just every 4 years. In its ordinary patten, Mount Merapi activity starts from lava development, followed by dome collapse to create pyroclastic flow (Kusumayudha, 2012). More than 200,000 people live in the disaster-prone are of Merapi (Statistic Bureau, 2008 in Bappenas & BNPB, 2011) with acquaintance towards Merapi's ordinary pattern. Kusumayudha (2012) says in most villages there are community association that well-trained on volcanic hazard mitigation. Villagers have commonly known to live their daily life harmoniously with the nature of Merapi. It has been providing valuable natural resources for people's life. It has been among Indonesia greatest givers of life and prosperity for some of the earth materials, energy and fertile soils (Murphy, 2010). Merapi's volcanic ash contains fine material which play important role in feeding the soil (Suriadikarta, et. al., 2011). Consequently, villagers benefit the abundance crops yield to gain profit and income.

Mount Merapi, however, depicts a perfect picture of two-sided phenomenon. In spite of providing lavish natural sources, it also bring hazard to people whom live in the slopes. Kusumayudha (2012) utters the unexpected event where the character of Merapi eruption in the year 2010 was inconsistent from its ordinary eruption pattern. Between Octover and November 2010, there was much higher gas pressure, much longer distant of pyroclastic flow, and much larger volume of volcanic material poured from the crater wiping out villages in provinces of Yogyakarta and Central Java. Overall the eruption claimed 339 human lives and further destroyed 5,059 residential houses in Yogyakarta and Central Java (IMDFF-DR,

2012). It struck Magelang, Klaten, Boyolali Municipalities in Central Java and Sleman Regency in Yogyakarta, resulting in a financial loss to over US$374 Million (Bappenas & BNPB, 2011).

Figure 1.1 Higher gas pressure, pyroclastic flow and volcanic material in Merapi's 2010 eruption generate a larger southward crater. Source: Bahagia, 2013.

The main issue on the post-disaster recovery in Mount Merapi affected area is to provide houses and safer environment for the affected residents. Government's Action Plan for Rehabilitation and Reconstruction (Renaksi) is implementing ways for creating sustainable and safer relocation sites for the affected populations (IMDFF-DR, 2012). Several government projects in collaboration with NGO's, professionals and private sectors are being done in coping with numerous problems such as economy, culture, mitigation and other issues during the recovery processes. Furthermore, government programme involving range list of international donors has been established in answer to the medium to longer-term recovery needs of the affected inhabitants in term of housing and settlement. Government initiates a recovery program name "Rekompak" (Community-based Settlement and Community Rehabilitation and Reconstruction) which focusing on the rehabilitation of community through reconstructing community-based and supporting other community-based activities. The community-based activities may include the activities on livelihoods recovery, capacity building of local government, and the community resilience. The time-range of the Rekompak project is designed for 4 fiscal years, and closed in 2014 (Bappenas & BNPB, 2011).

Along with its advantage and disadvantage, Mount Merapi still catches people attention to live on its fertile slopes. This challenging condition triggers government to create initiatives to educate and facilitate villagers on post-disaster recovery. The top-down initiative on community-based program of Rekompak has become an interesting case to be studied. The linkage between these two different planning approaches may result in a dynamic planning process on post-disaster recovery. Hence, this study focuses in the most

affected area of densely populated in Sleman Regency, Yogyakarta. Up until 2014, there are 2,040 permanent houses/*huntap* built in Sleman regency through Rekompak program (Rekompak, 2014). Furthermore, the systematic of thesis structure is explained in the diagram of workplan.

1.4 Thesis structure

The structure of the master thesis is related to the research questions presented in previous section. Chapter 1 introduces the aims of thesis, research questions and objective, and the brief information of the study case. Chapter 2 provides theoretical frameworks to address the research questions. The concepts of post disaster recovery in disaster management cycle, top down planning, and community-based approach are shaping the theoretical framework. The methodology used in this thesis elaborated within the Chapter 3, which gives a description of the methods taken to answer the three main research questions. Subsequently, Chapter 4 presents the research result. It examines the government structure, community participation as well as coordination line and the role of actors. Chapter 5 contains the analysis of post-disaster planning. Eventually, the research result and analysis of the findings are extracted in Chapter 6. This final chapter presents conclusion, reflexion of the thesis, and recommendation for further post-disaster planning policy. The thesis structure is described on the next diagram.
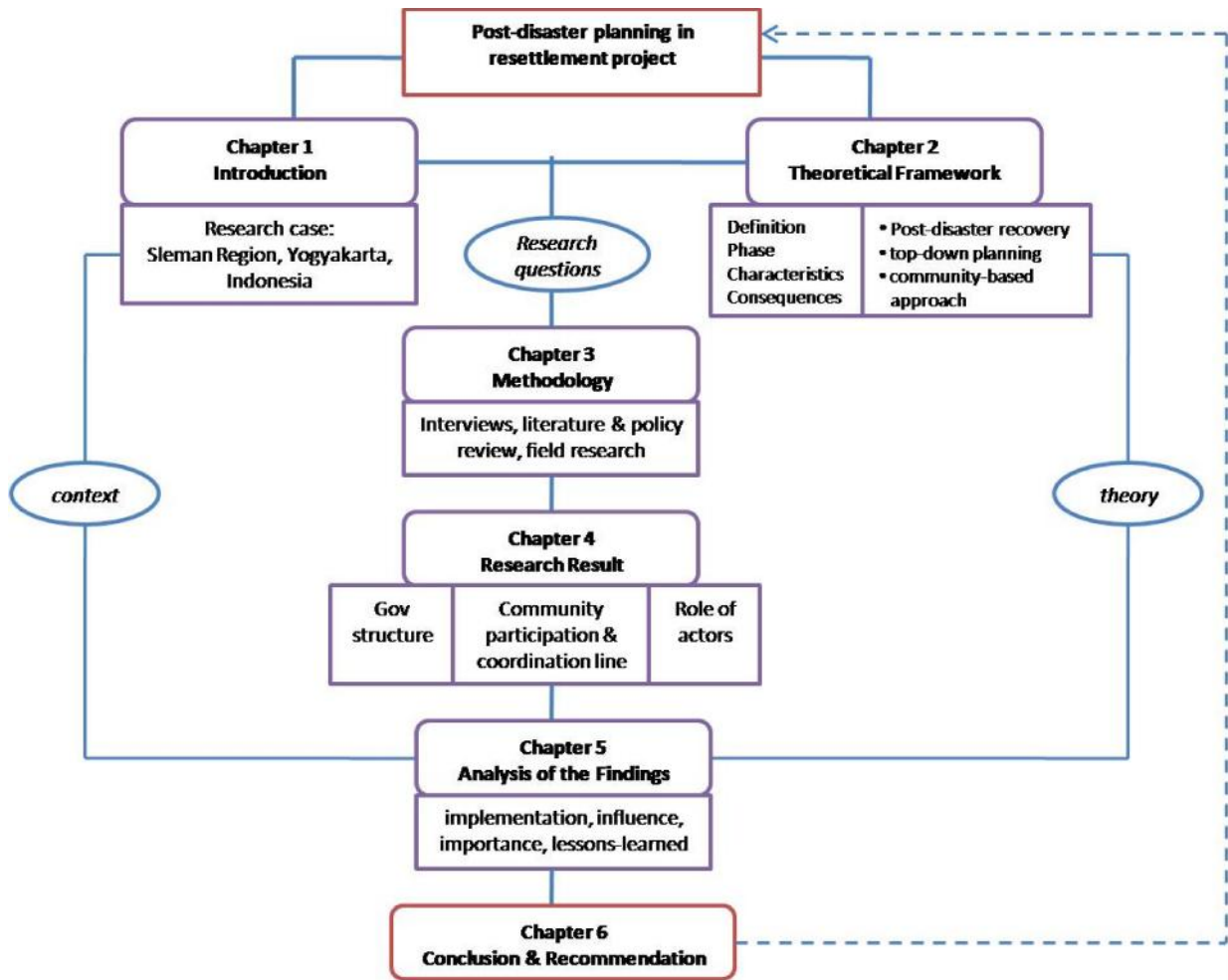
Figure 1.2 Thesis structure. Source: Author

The thesis structure also illustrates the work plan of the thesis. Chapters are functions to create a systematic flow of discussion. Therefore, the above diagram presents the relationship between chapters and research questions.

CHAPTER 2

THEORETICAL FRAMEWORK

2.1   Introduction

2.2   Post-disaster recovery

    2.2.1 Phase and transition

    2.2.2 Practice of resettlement

2.3   The dynamics of planning process

    2.3.1 Top-down planning

    2.3.2 Community-based approach

2.4   Concluding remarks

Chapter overview

Planning in post disaster-disaster recovery means planning within a complex issue, and subsequently requires adaptive planning approaches to deal with the situation. This chapter therefore introduce the concept of post disaster recovery, top-down planning approach, and also community-based resettlement to build the theoretical framework for this paper. This theoretical framework is the basis for analyzing the concepts into the context of the case study.

2.1   Introduction

The main focus of this research is post-disaster recovery and planning process. In order to understand these terms and their significant in this situation, a literature study is made to present the principal characteristics of these concepts. Therefore, this chapter presents a literature study on theories on 'planning in post-disaster recovery processes'. The concepts of post-disaster recovery, top-down planning and community-based approach are used to build the theoretical framework. Each literature study is presented in sequential sub-chapters. The first subchapter discusses the phase and transition of post-disaster recovery and the also resettlement project in the recovery process. The next subchapter elaborates the theoretical concept of top-down planning and community-based approach and their characteristics.

2.2   Post-disaster Recovery

Post-disaster recovery is generally considered to be an effort to restore community to their normal lives after the disaster. Specifically, post-disaster can be seen with three distinctive but interrelating meanings (Lindell, 2013). First, the recovery's goal is re-establishing normal community that was disrupted by disaster impact. Second, it is a stage in the disaster management cycle that begins with stabilization of the disaster condition and ends when the community has restored to normal routines. Third, recovery process involves both activities that were planned before disaster and that were developed after disaster. From this point of view, post-disaster recovery certainly refers to a well-planned effort to redevelop the community. The well-planned effort can be manifested through rebuilding infrastructures of roads, bridges, and settlement or even improving the community's capacity. In this part, the post-disaster recovery is examined through its phase and transition; whilst, the resettlement aspect is used to describe the effort in post-disaster recovery on supporting the community to pursue a normal lives.

2.2.1 Phase and transition

According to Law on Disaster Management Number 24/2007, disaster is "a serious disruption of the functioning of a community causing widespread human, material or environmental losses as well as psychological distress which exceed the ability of the affected community to cope using its own resources". The disaster thus needs a disaster management to bring back community from their losses and psychological distress. Disaster management cycle illustrate the different between stages starting from the reactive to proactive responses toward the event of disaster. According to Asian Disaster Preparedness Center in Sudibiyakto (2013) disaster management cycle consist of these following stages: (1) disaster; (2) emergency response; (3) rehabilitation; (4) reconstruction; (5) disaster prevention; (6) disaster mitigation; (7) preparedness; and (8) warning. This cycle can be divided into two parts: (a) crisis management covers emergency response to reconstruction; and (b) risk management covers prevention to preparedness (BNPB, 2013). The reactive response starts from impact assessment to reconstruction stage, while the proactive one starts from mitigation to early warning.
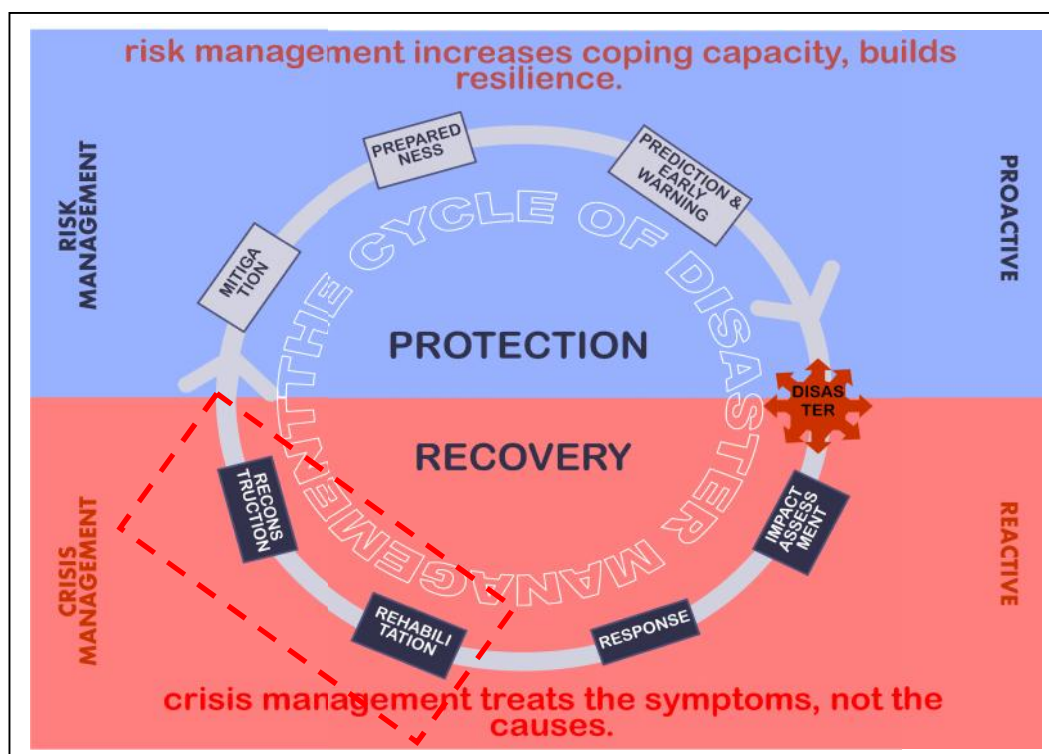
Figure 2.1 Crisis management and risk managemeni in the disaster management cycle. Source: BNPB (2013)

From Figure 2.1, we might question the division of crisis management and crisis management in the disaster management cycle. Why the first half-cycle is called a crisis management? And why the other half is called a risk management? This difference positioned on the profile of treatment to each situation. The crisis management aims to overcome the

hazard with approach of recovering the devastating impact. The risk management emphasizes on minimizing the future risk of disaster by prevention technique. The post-disaster recovery is part of the crisis management. This post-disaster recovery process consists of two phases namely rehabilitation and reconstruction. In these phases, there is endeavor to do the recovery by rehabilitating people and reconstructing building and infrastructure.

Planning a post-disaster recovery means developing a set of strategies to assist community in rebuilding its place and living after a disaster take place (University of Oregon's Community Service Center, 2007). Henceforward, the strategies may include developing and implementing post-disaster recovery plans, recovery ordinances, business and government continuity plans, post-disaster buildable land inventories, utility recovery and reconstruction plans, and the establishment of a coordinating organization and guiding principle for reconstruction. The challenge here for planners is to assists the community through the stages in smooth transition without abrupt shift. It is cycle in natural since disaster has pattern. Ingram et. al. (2006) stresses that during the 'transitional phase, it is critical that communities are consistently supported, consulted and informed as longer-term plans are developed to reduce anxiety and frustration associated with uncertainty. Clearly, the task to do is to design a plan and to strengthen the function of coordination and assistance in order to create a well-informed and well-prepared community that knows exactly what things to do in each stage of transition. A recovery plan requires an understandable goals and an implementation strategy, preferably one that does not reproduce the community's pre-impact hazard vulnerability (Smith and Wenger, 2006 in Lindell, 2013).

In short, the form of recovery is determined by the goals that being set earlier on the early planning process. Different aim results in different strategy used in post-disaster recovery. In the case of post-disaster recovery in Sleman regency, the catchphrase 'build back safer' is set as the vision of the program. This vision of post-disaster recovery in Sleman regency is tried to be accomplished through the implementation of resettlement project. It is, therefore, bound to the face the two critical aspect of relocating and resettling population.

2.2.2 Practice of resettlement

The major challenges experienced during the resettlement project in year 2011 to 2014 in Sleman region are not only concerning the work of housing construction, but also involving the social and economic issue occurred in the new built settlement. While such

relocation of people is generally regarded as a consequence of certain recovery process, in fact it also takes place as a factor that triggers the changes of people's way of living. Relocating means moving people to a new settlement with different environment. The cluster form in the new settlement is different with their original dwelling. Therefore, relocation in resettlement project leads to the changes of people's way of living. In most cases, previously villagers have large field suitable for the cattle farm in their own backyard; now, due to limited space in the new location, they have to adjust to work on the communal cattle farm.

Cernea (1999) argues government and technical agencies must understand the economics of dispossession, impoverishment, and recovery and plan for growth in the resettlement. He notes that the least addressed in recovery planning are the sources of economic recovery— although in the case of relocation, people are removed from their socio-economi structure (Mutton and Haque, 2004). Because of this issue, the resettlement project often faces a specific set of risks as follows: (1) *landlessness*. Expropriation of land removes the main foundation upon which people's productive system and activities are constructed. (2) *joblessness.* Unemployment or underemployment resulting from resettlement tends to linger long after the physical relocation. (3) *placelessness*. Loss of housing and shelter can cause risk of losing group's cultural space and identity. (4) *marginalization*. Marginalization expressed in a drop in social status and increased vulnerability. (5) *food insecurity.* The risk when the food-intake is below the minimum necessary for normal growth and work. (6) *increased morbidity and mortality.* The outbreak of relocation-related diseases from malnutrition, stress and psychological traumas threaten the weakest population segment – infants, children, and elderly. (7) *loss of access to common property.* Loss access to commonly owned assets as forested lands, water sources and so on. (8) *social disarticulation*. Dismantle of original structure of social organization. These relocation and resettlement-caused problems are possibly happen when the authorities are not putting lot of effort to anticipate these risks. There are examples of the fault on resettlement project caused by less-detailed planning by the government. In the resettlement scheme located in Laos, a situation of limited sources of income has forced people in the lower slopes become an impoverished labor force and exploited for the benefit of the politically and economically dominant lowlanders (Cohen, 2000). Cernea (1988) underlines the key areas for strengthening resettlement project including preparation and detailed planning of resettlement component, attention to economically and socially viable preferences for developing the productive capacity of affected population, and supervision towards the implementation of resettlement operations.

In conclusion, the practice of resettlement in the post-disaster recovery can be described as dependent, by being reliant to the external assistance and resources provided; and also complex, by being influence not only to the physical recovery but also social-economic recovery. This characteristic showing early planning is important to overcome the current problem or anticipate potential risk. Also, the planning process plays a key role to bring a high chance of success on the disaster recovery primarily on resettling community.

2.3   The Dynamics of Planning Process

As mentioned in the previous section, the practice of resettlement in the post-disaster recovery can be described as dependent and complex. Moreover, post-disaster planning is requisite to be able to deal with these characteristics. It is recognized that post-disaster planning basically entail four recovery efforts including assessing the damage, stabilizing the environment, activating the recovery team, and restoring the community (Ruyle & Schobernd, 1997). In coping with these recovery efforts, the practice of top-down planning can be typically seen during the process of constructing a solution. However, it is difficult for centralized government to deal with all the interrelated issues and policies that may happen in all layers of institution or community. The dependent and complex character of resettlement project in the post-disaster recovery requires the dynamics yet adaptive planning process. This section digs into the dynamics of planning process by examining the top-down planning and community-based approach in post-disaster context. First, it describes their characteristics for decision-making process and further the consequences from each planning approach.

2.3.1   Top-down planning approach

As Conyers et. al., 1984 (cited in Cooksey and Kikula, 2005) argue, planning is by definition a continuous process that involves making decisions or choices about alternative ways of using available resources, with the aim of achieving particular goals in the future. In attempt to achieving particular goals, several planning approaches are selected and examined. Allmendinger (2002) also says planners to pick and choose theory since the different justification and approaches conflicting are required in different circumstances. This means, the pressure from professional, public and state drive certain planning approach to be taken considerately. Forester (1988) argues that to be rational in practice, planners must be able to think and act politically in the practical context of power relation or conflicting desires and interest. Therefore, planning approach is carefully chosen to deal with the characteristic

or resettlement in post-disaster recovery. By the indication of the resettlement's dependency characteristic towards external assistance and resources, top-down planning is often carried out to make sure the assistance or directive is given. Subsequently, the characteristics and consequences of top-down planning are presented.

Characteristics of top-down planning

The so-called top-down or technical rational planning model is still dominant in some countries. The particular reasons for this dominance of the top-down planning approach because it is seen to encourage a welfare state. Healey (1998) argues the top-down planning use the approaches of commanding resources and regulatory power. In this situation government is powerful managers structuring their development plan. There is emphasize of sectoral divisions between the different social and infrastructure program, a clear division between public provision and private action, and hierarchal 'top-down' forms of organization. The hierarchal sectoralism infused both national and governmental structure. Healey utters the governmental institutions are advised by experts who designed program, and staffed by administrators and experts who ensured the effective delivery of these program. Aside its relation to the power significance, the top down planning in the form of hierarchal control of central government had long been assured by academics and practitioners as the most effective and efficient practice (Busscher et. al., 2014). In many Western planning systems or in particular cases of reclamation in New Mexico and disaster recovery in Katrina (see e.g. Alfasi, 2006; Jacobs, 1978; Quarantelli, 2005), top down planning in form of regulatory system is used. The implementation of top-down approach gives government planners, donors and the bureaucrats a sense of control and efficiency (Cooksey and Kikula, 2005). Thus, this control and efficiency in top-down planning approach related to the power and functionality characteristics.

Giddensian concept of the structuration theory captures the phenomenon of power and functionality characteristics in planning process. Giddens (1984) as cited in Healey (2006) identifies key the formative interaction between structures and agency. Giddens identifies key linkages through which this interaction flows, and which in turn shape the identities of actors and create the structural forces which they experience. The first is the flow of material resources as such goods and assets and finance. The second is the flow of authoritative resources or regulatory power, the power to regulate the actions of others through formal and informal norms, codes, or laws. The third is the flow of ideas and frames of reference, the power to generate new imaginations and shape identities and values. When these flows follow stable patterns, they generate the "structural forces" that exert such a

powerful influence on opportunities for particular people in particular places. To the extent, power and functionality characteristics have consequence and further influence the output of planning.

Consequences of top-down planning

As the top-down planning approach and centralized policy-making believe strongly in cause-effect relationship, it is then managed in hierarchal structure of organization. Bulka and desJardins (2006) describe the hierarchical structure in planning is to reduce the complexity of the planning problem by hiding irrelevant details and allows the sub-task sharing. In brief, some of the main features of top-down planning approach are as follows: planning decisions are centrally made by organizations that are remote from the project area, participation of stakeholders is typically adhering to what has already been planned, plans are also generally based on quantitative data through feasibility studies or project formulation missions, planning as well as implementation follow a pre-conceived project design or a master plan type (see e.g., Korten, 1980; Rudquist, 1992; Burkey, 1993 in Cooksey and Kikula, 2005).

Although hierarchal structure organization emerges as a concrete practice of top-down planning, the form of its implementation may vary. It is not simply pictured as straight-directive order organization as kind of dictatorial form. Hierarchal organization structures are indeed can be categorized in different group of characteristics. Alexander (1994) in Sager (2001) associates different planning characteristic with ``forms of organization that differ in their size, complexity, and degree of hierarchy''. Organizational profiles specified so as to be in accordance with the procedures of a familiar and important mode of planning. In Figure 2.2, the hierarchal structure of organization is being corresponded with four profiles of planning namely *synoptic, incremental, advocacy and communicative.*

Variable	Synoptic Profile	Incremental profile	Communicative profile	Advocacy profile
Category: hierarchal structure				
Reporting lines	One line, the organization chart is a well-ordered tree structure	Several lines, reducing managers reliance on particular specialists	No restrictions on the communication lines, and no tree structure	Planner reports directly both to client and to manager
Information asymmetry	Yes, stress on expertise and analytical technique	Emphasis on lack of information for everybody	Counteracts information asymmetries in any direction	Levels out information asymmetry between client and planners

Table 2.1 The characteristic of hierarchal organization structure corresponding to four modes of planning. (Source: Sager, 2001)

Hierarchal structure in top-down planning resembles a synoptic profile. Midgley (2013) correlates the synoptic profile with functional rational (as rationality behind top-down planning) since it use the most cost-effective strategy and directive approach to identifying problems and specifying goals. With this synoptic profile, top-down planning point toward a well-ordered tree structure of organization to ensure the one line reporting lines and expertise and analytical technique being conducted. This synoptic profile in top-down planning is indeed use scientific methods and analytical techniques to ensure the outcomes of the program. Mohammadi (2010) alerts this kind of 'outcome-oriented' planning commonly puts citizens in the lower levels of participation ladder (Mohammadi, H., 2010). Aside the synoptic profile, the other profiles are also enriching the shape of hierarchal structures. Various profiles in above table are categorized to illustrate the degree of hierarchy. Sager (2012) further elaborates incremental profile considers planner less as the 'expert'. As a consequence, the form of hierarchal structure is made to mediate between different views and interests to reach a solution. The Advocacy profile makes local government less discriminatory by giving voice to marginalized groups whose interest would not otherwise be conveyed to political decision-makers. The efforts to give voice for marginalized groups is attained by creating a fair reporting line, where planner report directly both to client and managers in hierarchal structure. Last, the communicative profile commanded as a discursive practice that prevents any stakeholder or group from legitimately forcing its preferred solutions to collective problems on other groups. Subsequently, there is no restriction on the communication lines on the hierarchal structure of communicative

profile. With all of these profiles, top-down planning conclusively is closely-linked with a synoptic profile because it uses functional rationality as the core principle of planning.

2.3.2 Community-based approach

As described before, the characteristic of resettlement project is dependent yet complex. This complexity of the case cannot be responded solely by central-government's top-down planning approach. In the case of resettlement in Sleman regency, the practice of community-based resettlement is then designed to deal with complexity by involving community during the resettlement project. Mansuri & Rao (2004) refer the term *community-based* to community as the setting for interventions. As setting, the community is primarily defined geographically and is the location in which interventions are implemented. These community-based interventions may also engage community input through advisory committees or community coalitions to adapt programs to community characteristics. The concept of community-based approach is also utilized in the recovery program for resettlement named Rekompak in Sleman, Indonesia. Secretariat for MDF-JFR (2012) identifies this concept into the resettlement project. It defines this community-based as: "a community-based approach places the responsibility for the process of rebuilding, including the management of the funds, directly into the hands of household groups in communities affected by the disaster." Therefore, community-based approach conceptually viewed as a settlement whereas the community holds responsibility and right to actively participate on its development and progress. The point of view on involving community in the process of rebuilding including managing the funds affect the specific characteristic of this kind of community-based approach. In this research, it is important to understand the characteristics and consequences of community-based approach to see how it can influences the top-down planning used in the resettlement project in Sleman Regency, Indonesia. The following paragraphs define the community-based approach in term of its characteristics and consequences in the planning process for resettlement project.

Characteristics of community-based approach

Community-based approach seeks involve community in the development process. By residents' active participation in the development process, Sanoff (2000) argue there will be a better-maintained physical environment, greater public satisfaction and spirit, and significant financial savings. The main purposes of participation are as follows: (1) to involve people in design decision-making process and, as a result increase their trust and confidence

in organization; (2) to provide people with in design and decision making in order to improve plans, decisions and service delivery, and to promote a sense of community by bringing people together. Cornwall and Gaventa (2011) also argue the involvement in social and community participation has inevitably brought citizen in closer contact with the institution and process of governance. The range of community participation is characterized by the term: level of participation. Further, Sanoff carefully point out the participation is contextual and may vary in its level of intensity, extent, and frequency. The participation might occur as 'genuine' relates to real participation or 'pseudo' relates to artificial participation. The real participation gives the substance of empowerment and cooperation through citizen control, delegated power and partnership. Rather involving community actively, the pseudo-participation is applying assistencialism and domestication through placation, consultation, informing, therapy and manipulation.

Related with the level of participation, Deshler and Sock (1985) in Selener (1997) propose a framework demonstrate types of participation categorized on the basis of the degree of control possessed by people (Figure 2.2). The type of participation is also described in Arnstein's Ladder of citizen participation (in Voogd & Linden, 2004), whereas the highest level of participation namely partnership, delegated power and citizen control provide opportunity for community to discuss and debate a plan. It positioned community as active stakeholders, not as passive beneficiary in the planning process.
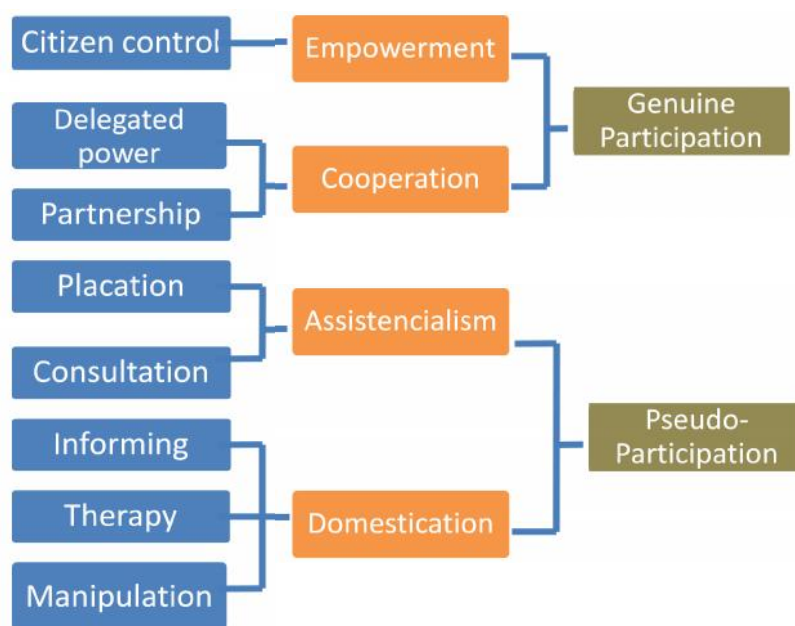
Figure 2.2 Type of community participation in development planning. (Source: Selener, 1997)

The model of community-based in Rekompak covers a shared-responsibility or authority with government for managing construction and funds. In some extent, this model represents logic that shared-responsibility will encourage community' sense of ownership. This would be the important issue whether the community's shared-responsibility in community-based resettlement really does giving space for genuine participation to develop, and further can provoke the sense of ownership from community towards the resettlement in Sleman's case.

Consequences of community-based approach

The purposes of participation have been moderately defined to include information exchange and supplementation of planning and design (Sanoff, 2000). In the top-down planning, naturally the exchange of information is limited to certain authorities. As described earlier, community-based approach allows participation to take part in the planning process. This is to say, this kind of community-based approach allow the flow of information to spread deliberately not just to the administrative institutions, but also to the community itself. The reason behind the sharing of knowledge and information is because the community-based approach supports the cross-interaction between level and scale. In Cash, et. al. (2006), the interactions may occur within or across scales, leading to substantial complexity in dynamics.

The "cross-level" interactions associated with interactions among levels within a scale, whereas "cross-scale" means interactions across different scales. The urge on pushing the stream of coordination and cooperation induce the pattern of cross-scale and cross-level of governance. Shown in Figure 2.3, three variables (single-, multi- and cross-) both in level and scale are forming variety of interaction within the governance. For example, the coordination in national – provincial – municipality level forms a hierarchal organization of multi-level government. Subsequently, the community-based approach open has opened an access for more flexible type of coordination. Specifically, the concept of community-based resettlement in Sleman regency used through Rekompak program promotes the fluid coordination and interaction in the planning process.

	LEVEL	SCALE
	Multi-	Single-
	Cross-	Single-
	Multi-	Multi-
	Cross-	Multi-
	Cross-	Cross-
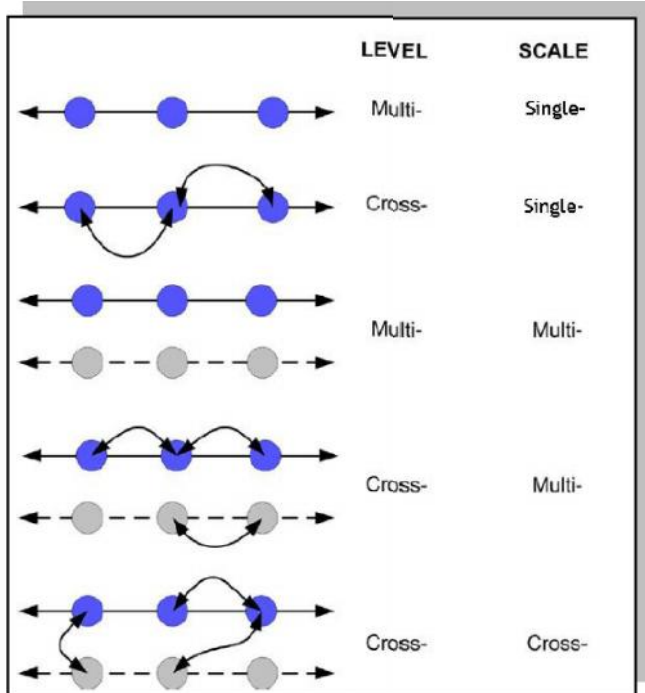
Definition of Scale and Level

As mentioned by Gibson et. al. (2000) in Cash et.al. (2006), "scale" seen as the spatial, temporal, quantitative or analytical dimensions used to measure and study any phenomenon. "Levels" is referred as the units of analysis that are located at different positions on a scale.

Figure 2.3 Schematic illustration of cross-level, cross-scale, multi-level and multi scale interactions. Source: Cash, et. al.,(2006)

2.4   Concluding remarks

The conceptual model of this research intended at showing the connection between all the presented theoretical concepts. This conceptual model helps to visualizing the interconnection of concepts in understanding the post-disaster planning in resettlement project, as well as showing the characteristics and consequences of planning approach to investigate the implementation of top-down planning and how community-based approach affect top-down planning.
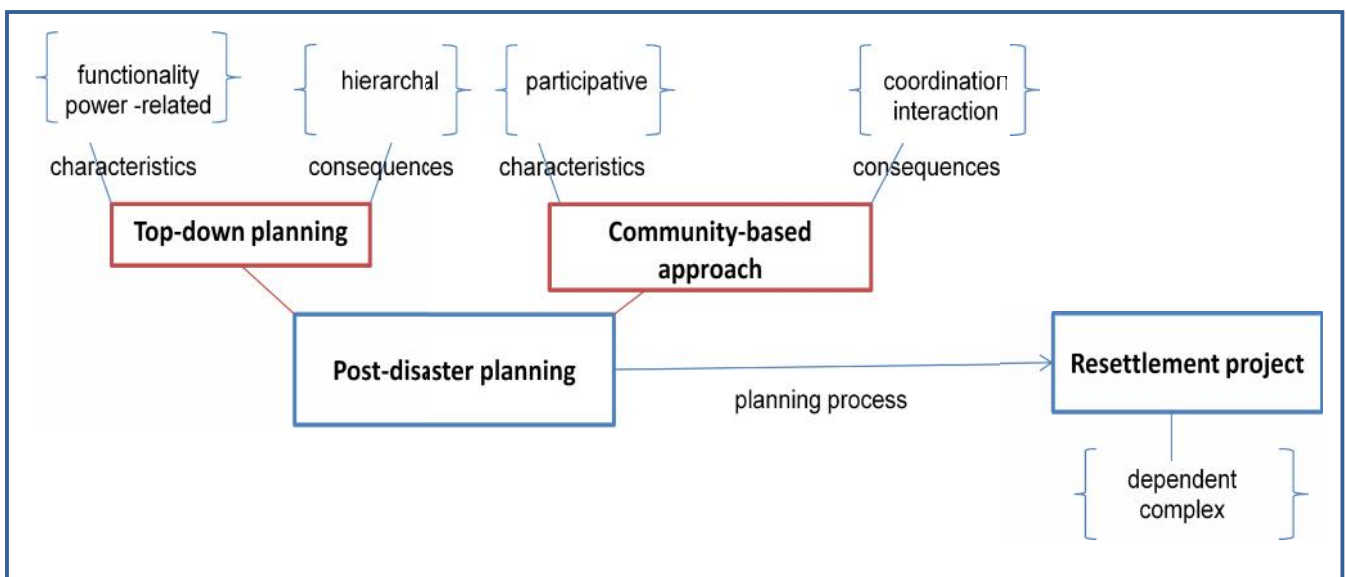
Figure 2.4 Conceptual model of the thesis. Source: Author.

The planning process in the post-disaster planning in resettlement project is much influenced by the interaction between top-down planning and community-based approach. This interaction might be contradictory or complementary due to their characteristics and consequences. As the top-down planning in form of centralized government is still a dominant scheme in Indonesia, the presence of community-based approach in resettlement has indeed brought a valuable influence. Stakeholders including community are expected to involved in the process of developing resettlement project, therefore, their way of coordination are linked with the practice of top-down and community-based approach. This explains plan are seen as dynamic that can be adapts, shift and evolve.

The analysis of this research starts from understanding the strong practice of top-down planning of hierarchal structure of government, through the implementation of community-based resettlement on disaster recovery program, to the outcome resulted from these planning approaches for supporting the planning process.

METHODOLOGY

3.1   Introduction

3.2   Qualitative research

3.3   Methods of collecting qualitative data

       3.3.1   Secondary data

       3.3.2   Primary data

       3.3.3   Selection of stakeholders

       3.3.4   In-depth Interview

Chapter overview

This chapter aims to explain the type of methodology used to gain the data and information required to answer the research questions. In order to do further explanation, the research questions are resumed: the main research questions address the top-down planning process in resettlement projects during post-disaster recovery, the influences of community-based approach towards top-down planning in the resettlement project – specifically in the case of Rekompak program in the Sleman Regency, as well as to find whether there are key factors in the Sleman's resettlement planning process which can be a lessons-learned for further post-disaster planning policy, specifically for Indonesia's context. To provide answers to those questions, different types of collected data are made through the selection of secondary data, primary data and in-depth interview. This research also put concern on the value of ethical context within the in-depth interview.

3.1   Introduction

According to Newman (1998), research question guides the methods the researcher select. Khotari (2004) underlines the task of data collection begins after a research problem has been designed and research design chalked out. The research questions of this paper intended to describe the planning process through a study case of Sleman region. Therefore, the qualitative research method is used in this research since it involves the collection of a variety of empirical cases (see e.g. Newman, 1998; Merriam, 1988). The organization of the following subchapters reflects, in general, the steps of a research investigation. First, the secondary data is used to describe the current planning practice. Second, the stakeholder selection defines the source of information related with post-disaster planning. Next, the primary data is gathered by observation on the affected villages and the new settlements. Last, the in-depth interview is carried out to dig deeper the real situation and to find a clear explanation on the planning practice for the recovery process.

3.2   Qualitative Research

This study uses qualitative method in the analytical process. Qualitative research method is used in this research to find the explanation and real situation that can't be completely described by secondary data. As described in CSULB (2013), a qualitative research is aimed at gaining a deep understanding of a specific organization or event, rather than surface description of a large sample of a population. Kaczynski et. al. (2014) emphasizes qualitative research is based on a very different frame of meaning construction

that allows the researcher to explore and better understand social science issues at a deeper level. They further define the qualitative inquiry means staying inductively open to the unknown while exploring, seeking to discover a deeper understanding of intricate relation within the issue.

The form of qualitative design is fluid rather than linear (Patton, 2002; Schram, 2006 in Kacznyski et. al., 2014). This flexible emergent design allows researcher to build insights and explore increasingly deeper understandings – at any stage of the study. This has become an advantage; in this study, this flexible characteristic of qualitative research allows the author to examine the relation between aspects and comparing the findings between the secondary data and primary data. Whilst, the qualitative research interviews involve gathering information and facts (Targum, 2011; Weiss, 1994 in Rosetto, 2014), eliciting stories (Birch & Miller, 2000; Romanoff, 2001 in Rosetto, 2014), and learning about meanings, emotions, experiences, and relationships (Weiss, 1994 in Rosetto, 2014) that cannot easily be observed (Baxter & Babbie, 2003 in Rosetto, 2014). With those purposes, interviews are done within this research to gather information from the respondents as comprehensive as possible. The selections of respondents are ranging from officials, academics, donors to villagers. The Figure 3.1 describes every aspect of method of data-collection complements each other within this research.
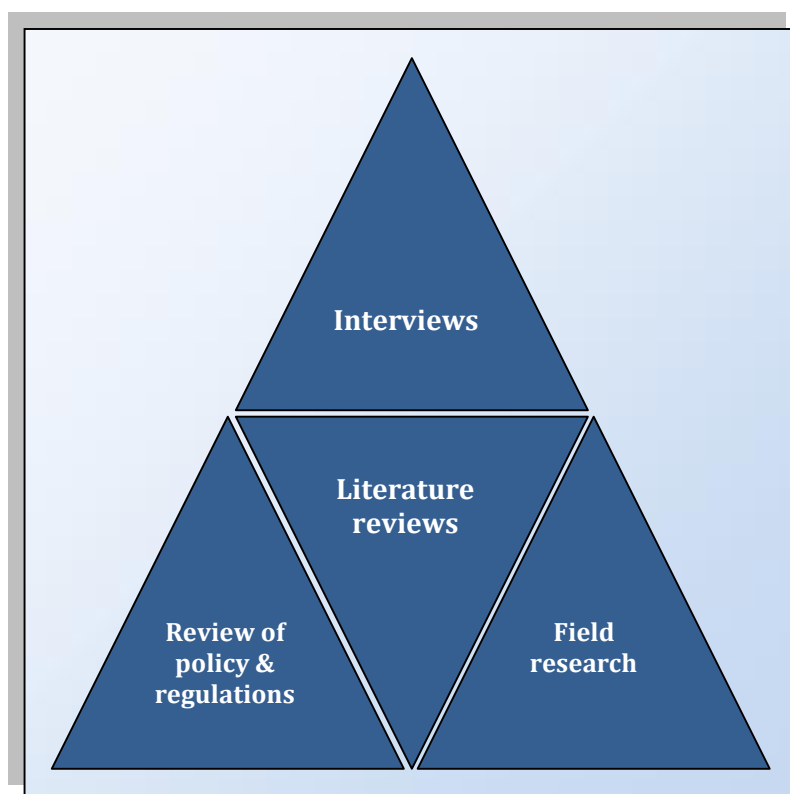

Figure 3.1 Building credible evidence from multiple data sources in qualitative research. Source: Kacznyski et. al., 2014. Modified by author.

To conduct the qualitative research, several stages should be taken as the followings: (1) selection of a site and definition of problems, concepts, and indicators; (2) build a strategy to move into the research setting; (3) selecting source of information and events to observe; (4) selecting source of information and events to observe; (5) developing relation and trust with participants; and (6) final analysis and interpretation (CSULB, 2013). It is best to answer the research question of this empirical study with qualitative method since it use multiple data sources including secondary data from desk review of policy, regulation and literature, observation from field research, and transcripts of interviews. The selection of stakeholders itself is used to analyze the actors to be interviewed.

3.3   Methods of Collecting Qualitative Data

In obtaining a clear idea of the study case, primary and secondary data collection is important. In this paper, secondary data is used to build initial information on the planning phenomena of the case, while the primary data is used to verify and give more comprehensive understanding of the case. Therefore, obtaining the concept used as well as the planning process and its implementation is regarded as important information. The methods of collecting qualitative data are described below.

3.3.1 Secondary Data

Secondary sources are sources of data that has been collected by others, not specifically for the research question at hand (Franfort-Nachmias and Nachmias, 1996 in Harris, 2001) The type of sources are varied from published academic research to items appearing in the press and other media. Rasmussen et. al. (2006) distinguishes sources into internal source and external source. Swash (1997) defines internal source as information within the organization with focused and closely aligned to operational requirement. Within this study, the internal source is the resettlement plan of Rekompak program, regulation about the resettlement, authorized map of disaster prone area of Sleman and the information on the task and coordination between institutions of government on the project. The main government institutions involve in Rekompak for recovery process are Ministry for National Development Planning, Ministry of Public Works, Regional Development Planning Agency (Bappeda Province), Regional Disaster Management Board of Yogyakarta Province, Regional Development Planning Agency of Sleman Regency, Regional Disaster Management Board of Sleman Regency.

In addition, the external source is information that is outside the organization and typically contained in publication. In this study, the external sources are excerpted from varied sources as expert assessment, archive from NGOs that related to the resettlement project, and previous studies of the current issues. Hence, these forms of secondary data are used to support the preliminary findings. Further, it is being interpolated with primary data.

3.3.2   Primary Data

The primary data are those which are collected afresh and for the first time, and thus happen to be original in character (Khotari, 2004). He further explains there are several methods of collecting primary data including: (i) observation method; (ii) interview method; (iii) through questionnaires; (iv)through schedules; and (v) depth interview. In this study, the in-depth interview is the most suitable method to be done. Due to the complexity of the case and various backgrounds of stakeholders involved, in-depth interview can bring detail information and sometime new information that cannot exposed by the secondary data. The interview is guided with thematic questions relating with conducting the post-disaster recovery, the role of stakeholders and its coordination, the condition of the residents, the planning policy that regulates the process as well as the strengths and weaknesses of the recovery program. It is formulated in a semi-structured form that allows open answers. These thematic questions lead to next findings in order to drawn a conclusion.

3.3.3   Selection of stakeholders

In this research, selection of stakeholders is a compulsory step to identify relevant stakeholders to be interviewed. Stakeholders stand for 'individuals, groups, and organizations that have an interest/stake and the potential to influence the actions and aims of an organization, project or policy direction' (Brugha & Varvasovszzky, 2000 in Mehrizi et. al., 2009). In step for selecting stakeholder involves identifying the relevant stakeholders involved in specific situations, whereas the practice of stakeholder in the organization is concerned with incorporating the interests and anticipated responses of these stakeholders into the decision-making process of the organization at the center of the situation (Freeman, 1991 in Jones & Flemming, 2003). Hence, the relevant stakeholders that largely influence the decision-making is government institution in central, provincial and local also academics with range expertise related with disaster management and community development, the international NGO's as the main sources for funding and local NGO's as the active organization for empowering community. Villagers are the target-group of the recovery

process; whereas they are people who experience the disaster event and undergo the stages of relocation, rehabilitation and reconstruction on the recovery process.

Herewith is the list of stakeholders that is being interviewed to share the information and views on post-disaster recovery.

No.	Stakeholders/Experts in the Recovery Process of Merapi Eruption In Sleman	
	Government	**Roles**
1	Rekompak (Community-based Settlement Rehabilitation and Reconstruction Project)	Project-executants
2	Bappenas/Ministry of National Development Planning	Central Government
3	Bappeda Provinsi Yogyakarta (provincial development planning agency)	Local Government at provincial level
4	Bappeda Kabupaten Sleman (municipality development planning agency)	Local Government at Municipality Level
5	BPBD Province	Regional Disaster Management Board at provincial level
6	BPBD Sleman	Regional Disaster Management Board at regency
	Experts	
7	Kyoto University	University
8	Universitas Gadjah Mada	University
9	Institut Teknologi Bandung	University
	Villagers	
10	Villagers who participate the resettlements	Residents
11	Villager who don't participate the resettlement	Residents
	NGO's	
12	International NGO	Donors and actor
13	Local NGO	Donors and actor

Table 3.1 Stakeholders of the recovery process. Source: Author

The respondents give explanation, views, and information based on their specific role, experience and expertise. The answers then being compared to see a situation from different perspective, and analyzed with the secondary data.

3.3.4 In-depth Interview

Exploring at its characteristic, qualitative research acknowledge in-depth interview as one the methods of data collection. It aims to achieve breadth of coverage across key issues, and depth coverage within each. (Legard, Keegan & Ward, 2003). These aims are grasped by its key-characteristics of in-depth interviews: open-ended questions, semi-structured format, seek understanding and interpretation and recording responses (Guion, Diehl and McDonald, 2011). Furthermore, they underline that the type of open-ended and discovery-oriented

method allows the interviewer to deeply explore the respondent's perspective then provide rich background information.

As the stakeholders are enlisted, the interviews are conducted with consideration that qualitative research interviewers are more equal partners in an inter-subjective storytelling experience (Haynes, 2006; Weiss, 1994 in Rossetto, 2014) and participate in the "joint construction of meaning" (Gubrium & Holstein, 2002 in Rossetto, 2014). This position has its own advantage as such it reproduce a essential process through which knowledge about the social world is constructed within a conversation with a purpose (Rorty, 1980 in Legard, et. al., 2003).

While conducting the in-depth interview, several ethics in research norms need to be pointed out. Vanclay, Baines and Taylor (2013) underline several principles for ethical social research as followings: respect for participants; informed consent; specific permission required for audio- or video- researchers should be cognizant of what is recording; voluntary participation and no coercion; participants have the right to withdraw; full disclosure of funding sources; no harm to participants; avoidance of undue intrusion; no use of deception; presumption and preservation of anonymity; right to check and modify a transcript; confidentiality of personal matters; data protection; enabling participation; ethical governance; grievance procedure; appropriateness of research methodology; and full reporting of methods. This research ethic guides the sequences of in-depth interview for this paper.
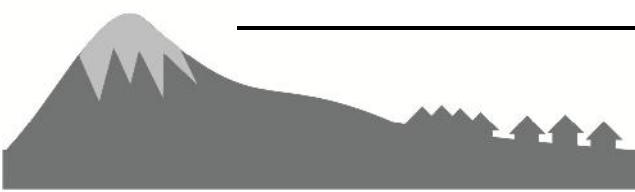
RESEARCH RESULT

4.1 Introduction

4.2 The hierarchal government structure in Indonesia

4.3 The resettlement plan

    4.3.1 Practice of top-down planning

    4.3.2 Planning process and community-based implementation

    4.3.3 Role of stakeholders through Rekompak program

4.4 Concluding remarks

Chapter overview

In accordance with the thesis structure, this chapter the research result to explain the resettlement plan in Sleman's case. This explanation is firstly presented by elaborating the hierarchal government structure in Indonesia to understand the strong practice of top down planning in Indonesia. Next the resettlement plan extracted from the research result is presented through three subchapters: practice of top-down planning, planning process and community-based implementation and the role of stakeholders through Rekompak program. This structure of details enfolds the analysis of the findings.

4.1 Introduction

This chapter presents the findings or research results after desk review with primary and secondary sources are being completed and after the interviews with stakeholders related with post-disaster planning are being conducted. This section is to present an elaboration on the practice of the current planning practice constructed and organized in term of resolving the issue of rebuilding area after the disaster.

This research results are based on an analysis of the transcripts of the interviews that are conducted for the purpose of this study. Aside from transcripts, the description is also based on participant observations, document analysis and the literature study, documents and regulations.

4.2 The hierarchal government structure in Indonesia

Planning system in Indonesia

Sanyal (2005) suggest that the way of doing planning in a nation can changes and evolves with political-economic changes, sometimes becoming more democratic and participatory but at other times changing in opposite direction. It is affected not only by political changes but also by other changes, such as technological innovations, demographic shifts, and the emergence of new problems or sudden deterioration of any existing problems. Due to the long history of strong feudalism of Javanese's culture as the dominant ethnic group and the Dutch's influences through colonialism, Indonesia's planning system is fundamentally formed in the direction as commanded from above and supported by association (see Cowherd, 2002 in Sanyal, 2005). Adding up, the Yogyakarta province itself comes from two traditional kingdoms, which have pledged alliance to the Republic of Indonesia since 1945. Although it joined up with Indonesia, the monarchical system existed through special law of Yogyakarta that set the appointment of Sultan, its traditional ruler, as the governor of the

province (Harsono, 2011). Although the government is gradually shifted from centralization to decentralization, the top-down planning is the foundation of Indonesia's planning system.

The Indonesia system of governmental is a hierarchal system with different levels of administrations (central, province, municipality/regency). The central government designs 3 types of national development plans. These national plans are: Long-term Development Plan/RPJPN for Year 2005 - 2025, Mid-term Development Plan/RPJMN which constructed in every 5 years, and Annual Working Plan/RKP. In Mid-term Development Plan Year 2010 - 2014, theme "Environment and Disaster Management" is selected as one the 11 national priorities (see Figure 4.1).

Figure 4.1 National priorities in National Development Planning of Year 2010 – 2014. Source: Bappenas, 2013.

Regulatory and Institutional framework are built to manage the disaster event including disaster reduction and disaster mitigation.
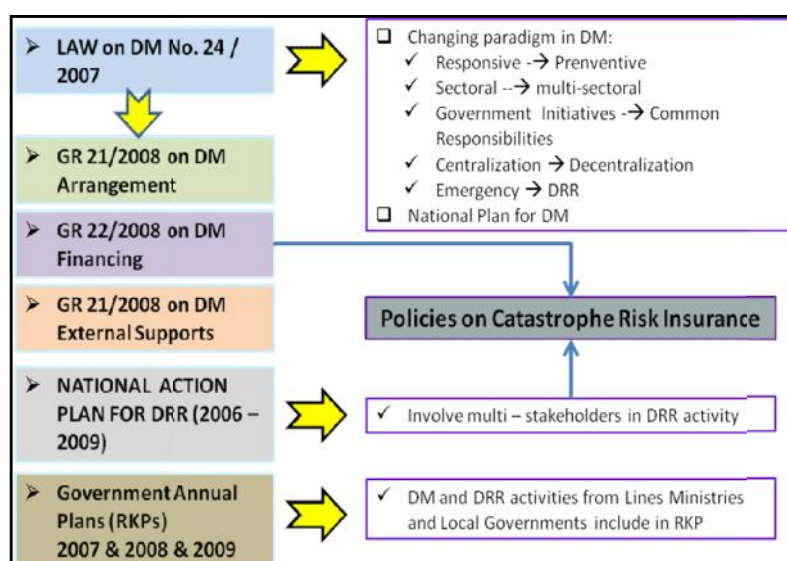

Figure 4.2 Regulatory frameworks on disaster management. Source: Bappenas, 2008.

From the previous figure, the highest law for disaster management is Law No 24 year 2007. The Law of disaster management emphasizes on the shifted paradigms on disaster planning including the changing act from responsive to preventive, sectoral to multilateral, centralization to decentralization, emergency to disaster risk management, and government initiatives to common responsibilities. Related to this Law, there are several regulations which attached to disaster management including the regulation for disaster management operations, funding and management of disaster assistance, participation of international institutions and foreign non-government institution in disaster management, national, and presidential regulation. Whilst, the institutional reform on disaster management is captured through the establishment of BNPB, establishment of BPBD in a number of provincial and district, establishment on National Platform on Disaster Risk Reduction and establishment of Mitigation Forum (Bappenas, 2013). These changing paradigms incite the more comprehensive regulatory frameworks for disaster management throughout Indonesia's planning system. It also promotes a multi-stakeholders involvement in disaster risk reduction and disaster management.

Rehabilitation and reconstruction plans in Sleman Regency, Yogyakarta

The national policy and planning for disaster management is legitimately designed to be implemented in the provinces. In the recovery process in Yogyakarta, numerous plans are created to support these comprehensive regulatory frameworks to a concrete implementation in their regencies – including Sleman regency. The plans for rehabilitation and reconstruction in Yogyakarta are inscribed in the followings: (1) Action Plan for Rehabilitation and Reconstruction after Merapi's Eruption: Yogyakarta and Central Java Provinces; (2) Map of disaster-prone area of Merapi eruption; (3) Rekompak program for resettlement project.

The first plan for rehabilitation and reconstruction for Yogyakarta is written on the 'Action Plan for Rehabilitation and Reconstruction after Merapi's Eruption: Yogyakarta and Central Java Provinces'. These following aspects are being prioritized on the Action Plan: (a) land use planning as the basis for deciding the safe location for housing; (b) the settlement design use disaster reduction approach; (c) infrastructure plan related with disaster management; (d) government's aid scheme related with the location and level of house' destruction; (e) recovery scheme related with people's economy; (f) mechanism on the funding coordination and implementation on the Action Plan (Bappenas & BNPB, 2011).

Second plan is the 'map of disaster-prone area of Merapi eruption'. The map is planned by central and provincial governments (Ministry of Public Works, National Board for Disaster Management, Ministry of Energy and Mineral Resources, Ministry of National Development Planning, Ministry of Forestry, Governor of Yogyakarta and Governor of Central Java) in coordination with professionals and local government (Bappenas & BNPB, 2011). The Action Plan for Rehabilitation and Reconstruction after Merapi's eruption and the Maps of disaster-prone areas in Merapi are become the guidelines for the post-disaster recovery process.

The below picture is the map of Merapi's disaster prone-area in Sleman regency. The buffer zones for Merapi's disaster-prone area in Sleman regency indicates low-risk prone area (KRB I), medium-risk prone area (KRB II), and high-risk prone area (KRB III). According to the Action Plan, the buffer zone is delineated based on the calculated-model of pyroclastic flow from the peak of Merapi to downslope.

Figure 4.3. Map of Merapi's disaster-prone area in Sleman regency. Map with high-resolution is attached on the appendix. Source: BNPB, 2011.

In Bappenas & BNPB (2011), the resettlement should follow certain criteria as: (a) located in a safe area, outside the KRB III; (b) located in the area with maximum tilt of 30%; (c) located outside the agriculture area; (d) located in the same district as the origin house, in order to maintain community's social-economic condition. In these criteria, people are expected to live in a safer environment without having to experience drastic changes of their social-economic condition.

The third plan is the Rekompak program for resettlement project. Rekompak (Community-based Settlement Rehabilitation and Reconstruction Project) is a governmental project and funded by the international donors and State's Budget. Initially, it was created as a response to the Tsunami Aceh occurred on 26 December 2004. As the project is proven to be well-executed, Rekompak continue its expertise in prone areas in provinces of Yogyakarta and Central Java. In 2011, Rekompak started to work on housing project as as part of the recovery process after the Merapi eruption in 2010 (Bappenas & BNPB, 2011). The discussion about planning through Rekompak program is described in the next subchapter.

Rekompak plans in Sleman Regency, Yogyakarta

As mentioned in the previous subchapter, Rekompak program is one of the leading plans for disaster recovery in Yogyakarta and Central Java. It is expected that Rekompak can foster a community whom later can develop their neighbourhood and environment with qualified infrastructure in accordance with mitigation strategy (Rekompak–JRF & Rekompak Merapi, 2011).

In the case of resettlement project in Sleman, Rekompak are working with 7 assisted-villages in Sleman regency as the followings: (1) Glagaharjo, (2) Kepuharjo, (3) Umbulharjo, (4) Wukirsari, (5) Argomulyo, (6) Sindumartani, dan (7) Sendangagung. These 7 villages are located on the Disaster-prone Areas/Kawasan Rawan Bencana (KRB). After the 3 years of completion, there are 2,040 permanent houses built through Rekompak assistance. On table 4.1, the percentage of house built is approximately 70 percents of the target. It means more than two third of the residents are being relocated to the Huntap.

Generally, Rekompak program is carried out by planners, consultants, and governmental officials. Together they do the planning for resettlement by doing survey and assessments during the early recovery process. Respondent from Regional Disaster Management Board (BPBD) of Sleman Regency explains Rekompak's rehabilitation and reconstruction plan is

created by prior assessment on the damage and loss and human recovery needs. After this series of assessment, list of planned houses are made for targeted households.

No	Village/ subdistrict	Target/ planned houses
	Permanent houses in Sleman Regency	
1	Kepuharjo	822
2	Glagaharjo	818
3	Umbulharjo	315
4	Argomulyo	484
5	Wukirsari	394
6	Sindumartani	68
7	Sendangagung	23
	Total	
	Target of houses/total affected houses	2,924
	Houses built by Rekompak	2,040
	Percentage of house built	**69.77%**

Table 4.1 Permanent houses in Sleman Regency. Source: Rekompak, 2014, modified by Author.

4.3   The resettlement plan

The resettlement plan can be different or incoherent with the blue print initially planned. During the process, the works might face obstacle and challenges. In (Oliver-Smith, 1991), the whole process of resettlement is much more complex than is seen in the approach employed by many reconstruction authorities after disasters. The consequences of resettlement itself may even be more overwhelming than the impact of the disaster. This long process of carrying out the resettlement project also occurs in the resettlement case in Sleman Regency.

In this part, planning process on the resettlement project is explained through discussions on: (1) practice of top-down planning; (2) planning process and community-based implementation; and (3) role of stakeholders through Rekompak program.

4.3.1   Practice of top-down planning

In the general context of resettlement plan for Merapi's affected region, Sleman regency as the most-affected area has receives major assistance from central government. Moreover, as mentioned on the conceptual model in previous chapter, the emergency

situation after the disaster made people really dependent on the external assistance. Though, the main issue here is the early planning for resettlement could not be done without the intervention from central government, as the institution with highest authority or power and also with the most available resources. In addition, strong top-down planning has a high influence on this resettlement project during the recovery process.

The list central governments whom handling resettlement plan in Merapi's 2010 eruption:

- Ministry of Public Works
- National Board for Disaster Management
- Ministry of Energy and Mineral Resources
- Ministry of National Development Planning/Bappenas
- Ministry of Forestry

Although the above ministries have the common concern on providing a safer environment for affected community, the planning process on agreeing the kind of resettlement includes negotiation succession. Each ministry or governmental institution has its own domain and authority or officially called as the 'main function'. This 'main function' set clear rules for each ministry on doing its works as well as create an obvious task division to avoid an overlap. For example, Ministry for National Development Planning is responsible for guiding the macro plan of development for entire regions in Indonesia; due to this main function, Ministry for National Development Plan is so powerful on designing a macro development plan in coordination with all the line ministries in Indonesia, yet it is prohibited on creating development plan in micro scale or doing coordination directly with municipality without involving the provincial government. Thus, the 'main function' is also limited the flexibility for ministries to answer a more complex issues as such in resettlement plan. It illustrates the power owned by central government to give directives to the lower administrative institutions is also bounded by the function it posses. The form of these ministries in resettlement plan can be characterized as top-down planning process with hierarchal structure with one-systematic reporting line of synoptic profile (characteristic and consequences of top-down planning – see Theoretical Framework Chapter).

In general, the hierarchal structure in Indonesia is therefore shaped by these characteristic of top-down planning. This hierarchal structure reflects directly on the composition of three-layer institution (central, provincial and municipality/regency) and the break-down of three-development plans within Indonesia's planning system. Figure 4.4

shows this type of hierarchal structure of government related with the development plan. Specifically in resettlement plan for disaster recovery, the practice of top-down planning epitomized by the centralized policy of plans for post-disaster recovery in Sleman namely the action plan for rehabilitation and reconstruction after Merapi's eruption: Yogyakarta and Central Java Provinces, map of disaster-prone area of Merapi eruption, and even the initiation of Rekompak program. Interestingly, the shifted paradigms on disaster management to become more preventive, multilateral, decentralization, disaster risk management, common responsibilities, has driven the concept of community-based approach to be applied within the Rekompak (Community-based Settlement and Community Rehabilitation and Reconstruction) program.
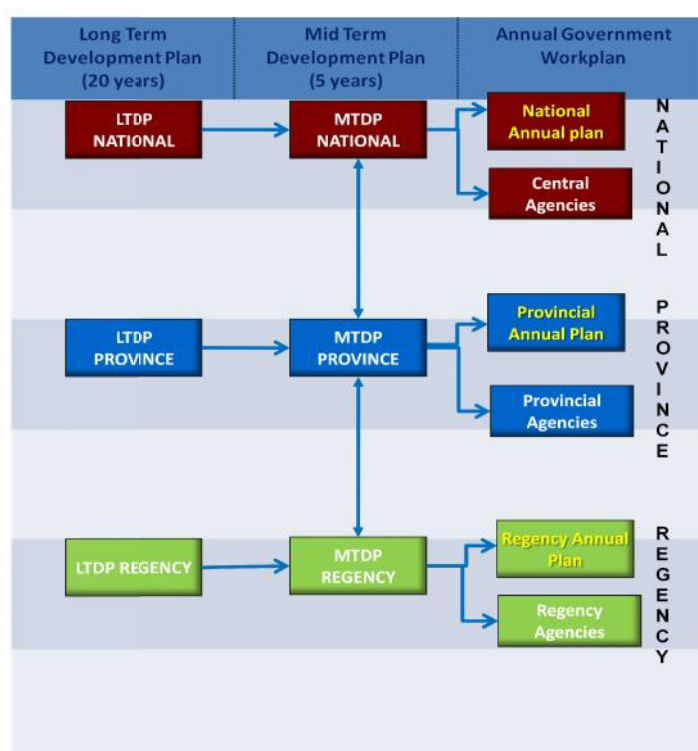
Figure 4.4 Hierarchal structure of government in regard with development plan. Source: Bappenas, 2013, modified by Author.

These centralized policies for post-disaster recovery capture a vision of 'build back safer', although the 'buld back better' term is more commonly used. Hence, Bappenas as the part of central government sees a concept of post-disaster recovery as a mean to achieve "Build Back Safer". It means the concept of post-disaster recovery is to build a community with a safer environment and condition. The new living of community in the resettlement should be better and safer than the condition before the disaster (National Development Planning Agency, 2014). In addition, Regional Disaster Management Board (BPBD) of Yogyakarta Province (2014) describes the aims for rehabilitation and reconstruction

program is to rehabilitate and reconstruct community after the disaster; not just rebuild infrastructure or housing, The phrase "Build Back Safer" might be a preferable tagline to "Build Back Better" because the word "better" has multiple interpretation, whereas safer' provides a clearer vision on which to focus for post-disaster settlement and environment (Kennedy, et. al., 2008). With this vision, the Government of Indonesia emphasized on the development of settlement to create a safer environment for the local people.

In regard to create a safer environment, the centralized government enacted multi-sector recovery to be developed in post-disaster recovery. Respondent from National Development Planning Agency (2014) and Regional Disaster Management Board (BPBD) of Yogyakarta Province (2014) state central government develops 5 sectors in the post-disaster recovery which is the housing, infrastructure, economic production, social, across sectors. The government have two pattern of rehabilitation and reconstruction program: (1) the 'one-step resettlement' for post-earthquake event or resettlement without temporary shelter. It is applicable if the original land was still available and the building was still mapped. It can be directly reconstructed on the original area or used the previous (reused) building materials; (2) the 'two-steps resettlement' for post-earthquake event or resettlement with temporary shelter. It is applicable if the original place was dismissed: land, house, and other concretes are missing with no trace. In this condition, relocation or resettlement is carried out. In the case of Merapi, it uses the 'two-steps resettlement'. The sequence of shelters for the affected households is: barracks – huntara – huntap. Temporary house (huntara) is needed as the transition to the permanent housing. The following pictures describe the specification of the huntara.

Figure 4.5 from left clockwise: the design plan for huntara/temporary house; the alternative design; the neighbourhood site plan; the huntara in Kuang Village. Source: Ikaputra, 2011.

The huntara have a simple specification: the building size is 36 m² on 100 m² land, an individual house made from bamboo and able to stand for 2 years, equipped with electricity and water, and standard budget of maximum 7 million rupiahs (equivalent to 650 euros) to keep a fair competition between donors (Respondent of Regional Disaster Management Board of Yogyakarta Province, 2014). The huntara is initially made simple since it is used as a transition phase, until huntap is completely built. However, the transition phase might take a longer time. Villager from Kuwang, Yogyakarta (2014) discloses that she and fellow residents have to stay about 2 years at huntara before they can move to huntap. During their stay in huntara, the residents received assistance on the daily needs, food and medicine from government and NGO's. She describes it was easy for residents to request a list of necessities since the local government will provide it immediately. The problem that appeared is that the assistance of these daily needs was overloaded on the storage room, until most of them are expired. They were unable to report the problem deliberately to the government on many issues including this problem. It implies, although the government run its formal function to give assistance to the community during the recovery, the rigid government's hierarchal structure of top-down planning creates a gap between authority and community. This top-down planning might be effective on providing a quick assistance but often incapable on running a reciprocal interaction or coordination.

Figure 4.6 Modest library in the huntara is made from bamboo. Source: Author, 2014.

The second step on 'two-step resettlement' is huntap. It is more complex and proven to be a critical phase on the resettlement project. From the previous Table 4.1, approximately 70% villagers are relocated under the resettlement plan by government; the 30% other are still live in disaster-prone area. Several protest signs were put by some villagers whom resist for being relocated (Figure 4.7). The reason for this refusal is mostly caused by the economic reason. Regional Disaster Management Board (BPBD) of Yogyakarta Province (2014) argues people do not want to be relocated because they are afraid on getting lesser income in the new place. Villagers from Sleman also criticize different treatment may occur on some of huntap due to unequal distribution on financial aid from the donor. Some houses are fully furnished, while others not. It made jealousy emerge between residents.

Figure 4.7 Protest sign towards the relocation from Kalitengah's residents in Sleman (leftt). Protest sign content reasons why the local residents reluctant to move to huntap (right). Source: National Board for Disaster Management, 2013

On top of that, the majority of the affected community are eventually being relocated in safer area in the new settlement in Sleman Regency. This is not mainly generated by top-down planning practice due to the implementation of Rekompak program in Sleman regency. This program promotes the community-based approach in which involving villagers to actively participate in the planning process for creating a genuine community-based resettlement. The implementation of community-based approach through Rekompak program and how it influences the dominant top-down planning in the resettlement project are discussed in the next section.

4.3.2   Planning process and community-based implementation

How was community-based approach incorporated in the process of establishing the plans for resettlement? What kind of influences generate to the practice of top-down planning in post-disaster recovery in Sleman? Perspective of stakeholders related to the issue based on the interviews is elaborated in this section.

Community's participation in resettlement plans

As mentioned on the theoretical framework, Rekompak program views community-based approach is being implemented by placing responsibility for the process of rebuilding, including the management of the funds, directly into the hands of household groups in communities affected by the disaster. On its implementation, several questions how the community can be involved to actively participate in planning process are asked to the stakeholders – mainly the planners.

According to a planner in Ministry of National Development Planning/Bappenas, the foundations for resettlement plan are Action Plan for Rehabilitation and Reconstruction after Merapi's Eruption: Yogyakarta and Central Java Provinces (*Renaksi*) and map of disaster-prone area of Merapi eruption. This master plan is created by involving experts, line ministries, and three-layer government institution. Academic from UGM confirms this statement by saying the concept on community-based resettlement with empowerment program is proposed by the academics, and they are openly invited to discuss the most possible scenario for master plan. The master plan contains general information on safe zone, required specification for settlement, available budget, and targets. From this phase, Rekompak with local government involve local community to actively participate on the details of relocation, site-plan, and resettlement management. He further explains the first step on achieving community participation in the planning process is by involving them in

voluntary relocation. Planner from Regional Disaster Management Board also sees the potential things from the community which posses the communal spirit. The community choose the location, enlist the things they need in doing the relocation, and form a group of community to be relocated, and so on. The government then respond to their initiative on relocation. Planners from Rekompak explain that along with related community and local government, they check the location to verify whether it is suitable for settlement and located in the safe zone.

Next to the voluntary relocation, consultation between community and Rekompak are done to reach agreement upon the site-plan. Planner from Regional Disaster Management Board utters the government merely support the land, basic infrastructure, cattle farm, daily needs, and financial aids, while community are being fully involved in the site-plan making in resettlement. Planner from Regional Development Planning Agency in provincial level utters they participate on monitoring programs related with community assistance, without going deeper on the field implementation. Local NGO's also mentions one of their prime tasks is giving community assistance on making their own problem mapping and alternative solution, including on discussing the site plan. Concomitantly, international NGOs describes they are also involved working together with Rekompak in assisting community to make the site plan and manage the resettlement. He argues the funding from NGOs is only act as stimulant to trigger villagers to independently build the house and the environment

The critical stage on community participation is on the resettlement management. Here, in this stage, people are managing the reconstruction process guided by Rekompak and government and helped by NGOs. Villagers in Wukirsari (Yogyakarta) explain Construction Committee is established within this stage to manage the resettlement construction. It is established by the guidance of Rekompak. Villagers are part of the Construction Committee (Panitia Pembangunan), where they can join the process from planning, reporting, to implementing the program. They are involved deeply in the program that includes the procurement of water facilities, information facilities, etc. The villagers started it with making the plan, report, and then the implementation. According to them, Rekompak served as the facilitator, they guided the villagers for all the process. The Construction Committee served as the coordinator for building the facilities, including the disaster mitigation signage. Other villager in Umbulharjo (Yogyakarta) also describes the excitement she found when participating on the program as the treasurer of houses construction in her local group. She deals with the cash-flow for building the houses; the money transferred by Rekompak, and the spending was managed by the group itself for buying materials, paying the builders, etc.

She explains Rekompak was giving the assistance by supervising the detail of each work. Furthermore, the resettlement plan is regarded as a plan that applies concrete community-based approach, because villagers are welcome to actively participate and hold shared-responsibility in the planning process according to their skills, ability and interest (villagers and Rekompak, 2014) and all the stakeholders are involved in accordance with their capacity (planners from government institutions and NGOs).

However, there's some difficulty felt by other villagers. Respondent from Kuwang (2014) describes this form of community participation might add more burden for people whom already being burdened by the disaster. She finds it is difficult for villagers along with community leaders to solve many problems mainly by themselves on the resettlement management. In this situation, it is obvious the characteristic of dependent and complex occur on the resettlement project. In situation after the disaster, it is reasonable that people who lost relatives or houses feel vulnerable and be dependent to the external assistance. The challenging part on this planning process is that planners and decision-makers have to convince villagers the importance of the villagers' participation towards the development of the resettlement, and at the same time provide different kind of requisite assistances for the community to be able to regain to their normal condition.
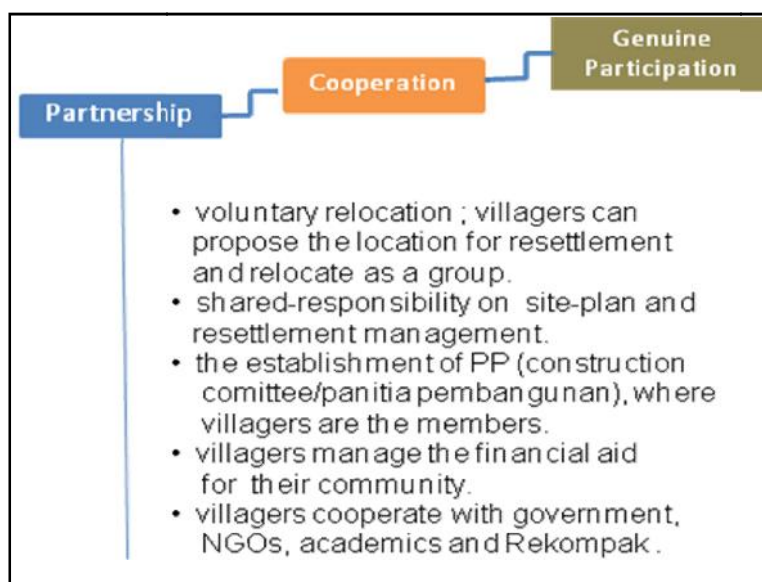

Figure 4.8 The form of community's participation in the community-based resettlement in Sleman. Source: Author.

From the interviews with related stakeholders, the community participation are acknowledged in the planning process in form of voluntary relocation, shared-responsibility on site-plan and resettlement management as well as financial management, establishment of

construction committee, and cooperation with other stakeholders (see Figure 4.8). The community participation is incorporated in the process of establishing the plans for resettlement, mostly in the final plan of recovery. This phenomenon does happen in many other cases, Bakema (2009) highlights people criticize the fact they were merely involved in final plan of recovery of Christchurch although they are eager to participate more in planning and become part of the journey towards recovery of their city. Whilst, in this case, people in Sleman are given lot of authority to decide their own resettlement once the master plan and disaster map were already established. This community participation resembles a partnership-type of participation, because it emphasizes on the cooperation and shared-responsibility or authority in the planning process while the government holds significance power and gives final decision for the resettlement plan.

Coordination line in the planning process

The conceptual model of this thesis expresses top-down planning is closely-linked with functionality and power-related that resulted in synoptic hierarchal structure. Nevertheless, the community-based approach in the case of resettlement in Sleman affects the way of its planning process. The apparent influence of this community-based approach occurs on the coordination line of stakeholders. The prior figure 4.4 of hierarchal structure of government illustrates the coordination line is limited by its function and it contains a stiff bureaucratic procedure. Nevertheless, the community-based approach through Rekompak program allows a more flexible coordination and information can be more fluently distributed among stakeholders. Figure 4.9 depicts community-based approach, through rekompak, infuses a more dynamic interaction in the coordination line. The formal coordination emerges between government (central, provincial, and local) with experts in formulating the action plan for rehabilitation and reconstruction and map of disaster-prone area of Merapi eruption and other minor plans. The international donors act as the main funding resources for the program and it has to be coordinate with central government. In regard with the local level, local NGO's give assistance to villagers under the permission of local government. At this point, villagers receive information from local government, NGO's, and academics. By taking part in the resettlement plan, Rekompak with community-based approach supports a more fluent coordination because it acts as a hub for all related stakeholders.
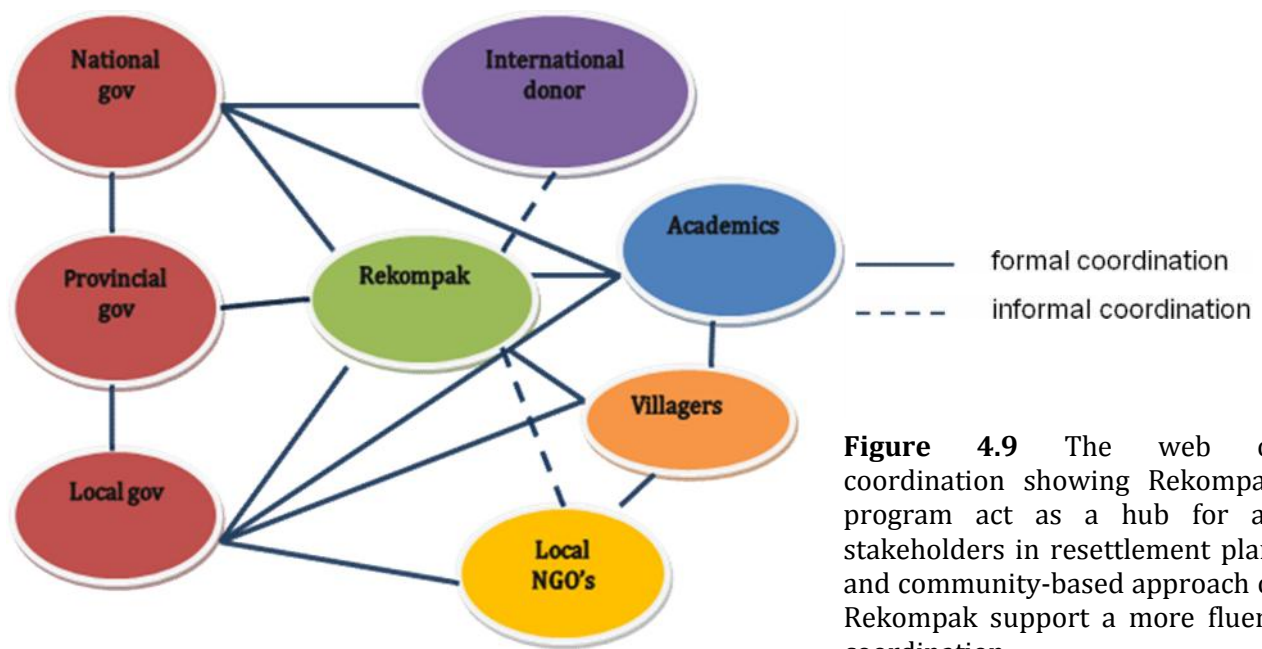
Figure 4.9 The web of coordination showing Rekompak program act as a hub for all stakeholders in resettlement plan, and community-based approach of Rekompak support a more fluent coordination

The interviewee from Regional Development Planning Agency of Yogyakarta Province underlines that all coordination is centered to Rekompak and each step by Rekompak is under coordination with Bappeda, BPBD, and the Regent, regional/local governmental level agencies, and so on. Although Rekompak doing coordination with all layers of governments and communicate with academics and villagers, it doesn't have a task to coordinate with NGO's. In spite of this condition, Rekompak is doing the coordination informally with NGO's in some situations. Local NGOs express this informal coordination helps them on running the community-based activities since they can avoid the overlapping activities. Rekompak (2014) states the informal coordination happens when they are having overlap activities in the same locations. The basic different is that Rekompak will comprehensively manage the areas while the NGO's generally only take sample of areas. Rekompak support all affected villages; whilst some NGO's only support certain villages based on their own targets. Hence, both formal and informal coordination are enriching the interaction between stakeholders in formulating and implementing the resettlement plan.

This relates to a multi-level and cross-scale of interaction in planning process (based on the schematic illustration of Cash, et. al., 2006).
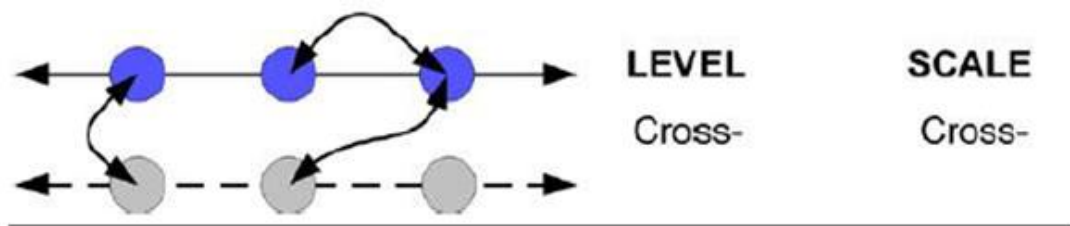

Figure 4.10 multi-level and cross-scale of interaction. Source: Cash, et. al., 2006.

Things have to be flexible to allow for changes in different situation during the recovery. This cross-scale and multi level of interaction allows ideas to be shared between stakeholders and changes to happen along the recovery process.

4.3.3 Role of stakeholders through Rekompak program

This section investigates the role of different stakeholders in the recovery process of Sleman. Many respondents indicate they can contribute to recovery process through Rekompak program although there are some drawbacks on its implementation. Thus, the role of actors with different function is presented first. Subsequent to the role, the drawbacks that appear when they are trying do their role for recovery.

Different role, different contribution

The scope of Rekompak's objective is to increase the ability of communities to restore adequate living conditions after the disaster, by organizing settlements. In regard with this objective, each stakeholder plays a role to contribute to the recovery process and develop the community capacity by coordinating with Rekompak program.

Planner from National Development Planning Agency (2014) argues the government indeed needs to involve various stakeholders to handle this comprehensive-sector recovery. The leading agency for post-disaster recovery process in the central government is BNPB (National Board for Disaster Management). Under the authority of BNPB, Regional Disaster Management Board of Yogyakarta Province and Sleman Regency are working together to coordinate with NGO's, Rekompak and community. As mentioned before on previous subchapter, government engages technocrats to discuss the plans for rehabilitation and reconstruction in Yogyakarta (action plan for rehabilitation and reconstruction, map of disaster-prone area of Merapi eruption, and Rekompak program). The technocrats are initially involved on designing the type of project that suitable with the condition in Merapi

region. Researcher from Gadjah Mada University (UGM) states the university team proposed two steps (transitional and permanent shelters) for disaster reconstruction. With their expertise, they are asked for consultation by government. Therefore, their inputs have immense influence to government's policy and decision-making. This idea is being applied through Rekompak program.

The roles of provincial and local government are also ranging from monitoring, coordinating, evaluating, to executing the activities. The interviewee from Regional Disaster Management Board (BPBD) of Yogyakarta Province explains Rekompak is part of the government. BPBD see Rekompak as their partner in the settlement and infrastructure program. The different between the BPPD and Rekompak program is that BPBD focuses on the coordinating stakeholders on the local level, while Rekompak focuses on implementing the project by involving various stakeholders. Regional Development Planning Agency (Bappeda Province) of Yogyakarta also work by reporting to central government and monitoring the recovery progress. At the regency level, governments also have differen role. Respondent of Regional Disaster Management Board (BPBD) of Sleman regency explains that they carried out the land acquisition by coordinating with village officials, provincial level to Ministry of Home Affair. Planner from Regional Development Planning Agency of Sleman Regency describes the important role for them correlating with recovery process is budgeting planning. They support Rekompak whom organizing the settlement by planning a budget program for infrastructure or roads, electricity, water, drainage, waste/sanitation system in the huntap. The Regional Development Planning Agency would receive Rekompak's progress report on monthly, quarterly, and annual basis.

Different with government's role, NGO's contribute to the recovery process with a consideration that each activity is a location-based. The interviewee from World Bank explains they is in charge in distributing the funding from the donors and ensure that the funding is properly delivered. Their program for villagers is the capacity building — incorporated with the governments and the universities. In the field, they deal with community empowerment by understanding the potential resources of local community to make a living. The NGO's aware that people are not certain that they can have better or at least the same living condition in the new location. As a response to this, NGO's create program to see the potential resources of the people, and help them to make it able to be used on the new settlement. For instance, the NGO's providing cattle farm in the new neighborhood. World Bank also delivers information to people that it is not safe to stay in the disaster prone area. They are building the critical thinking of the people. This persuasive

approach of educating is done together with the governments, NGOs, and facilitators. On implementing the resettlement, World Bank also working together with Rekompak in asking the community to make the site plan, planning the constructions management, and making community-based building. He argues the funding is only a stimulant that helps people help themselves by communally build the settlement and the environment.

Villagers are not passive actor in the recovery process of Sleman. Although they are the ones who suffer the most from the disaster, many villagers also participate through Rekompak program. Villager's roles are different each other according to their positions and participation within the community. The respondent of National Development Planning acknowledges the community leaders have a significant role on the recovery process. The community leaders usually drive the community groups to bring up the voices of grassroots level. The major community groups including Karang Taruna/village-youth organization, Village Board, to Construction Committee and also in community radio named 'Saluran Komunikasi Bersama' or Public Communication Channel are initiated in Sleman (Wukir Sari villager, 2014). Some of respondents point out the Construction Committee is the medium for them to have valuable role to the resettlement plan in the recovery.

Obstacle in doing the roles

The division of roles doesn't guarantee the smooth coordination. Most often the obstacle came from stakeholder's scepticism toward other stakeholder's role. Respondent of international NGO's (2014) admits there is still a lack of trust from some NGO's to government. On the early disaster recovery, some NGO's give assistance to villagers without asking permission from government. They did this because they assume by skipping bureaucracy procedures, they can deliver the assistance directly to villagers immediately. This goodwill of some NGO's apparently became a blunder and a mistake because what happens next is a chaotic situation. The financial aid was not well-distributed, some area receive more assistance while other receive less. Rekompak (2014) also mentions the example when some NGO's build temporary shelter in area that considered as hazardous because they didn't coordinate nor did consultation first with government or Rekompak. Aside from the trust issue from some NGO's, Rekompak (MDF-JFR Secretariat, 2012) acknowledges there were some who had serious doubts that this approach would work. Never before had such large amounts of money been entrusted to beneficiaries, and many wondered if it was prudent to do so, especially when communities had been decimated by natural disasters. Nevertheless, Rekompak affirm this community-based approach should be applied to develop a strong community in a long-term.

4.4 Concluding Remarks

The Indonesia system of governmental is a hierarchal system which founded by top-down planning. Though, the planning system is gradually shifted from centralization to decentralization. This top-down planning also still applied in the resettlement plan. Since community-based resettlement is the core of the program, the community-base approach influence planning process by changing the pattern of participatory and Coordination line. This give positive changes since stakeholders are become more connected and community become more participated on the resettlement plan. Nonetheless, the obstacle is often come from internal sources. There are still doubts whether this community-based might works. Overall, it is related with lack of trust on the capacity of government institution or community – each as the benefactor and beneficiary.

CHAPTER 5

ANALYSIS OF THE FINDINGS

5.1 Introduction

5.2 Strengths and weaknesses of post disaster planning

5.3 The importance of adaptive post-disaster planning

5.4 Lessons-learned

5.5 Concluding remarks

Chapter overview

This chapter presents the further analysis on how the top-down planning correlates with community-based approach to create an adaptive post disaster planning. This analysis is based upon the research result in the resettlement project of Sleman regency. It is started with the analysis of the strength and weaknesses of post-disaster planning that applied top-down and community-based approaches for resettlement project. The discussion continues with the importance of adaptive post-disaster planning to face the complex and dependent characteristic of resettlement project. Eventually, the lessons-learned are drawn from the excerpt of study case with the theoretical concept of the thesis.

5.1   Introduction

Relocating people and developing new settlements can be problematic since it drastically changes of the people's way of living. It is related with the condition after disaster – people are still devastated of losing their relatives or home. Thus, resettlement project are complex because it contain multi-aspect of recovery while affected people are still dependent from external resources and assistance for them to be able to back to their normal lives. In post-disaster recovery, plan has to be designed to adapt to this kind of situation. Moreover, plans should not be seen as static document but rather as dynamic and changing as the system themselves (Allmendinger, 2002). It is dynamic, whereas it adapts, shift and evolve. He expresses planners and others must find ways in which they can classify and predict such decision in order to be able to manage. Hence, the new form of planning approach can manifest in such a hybrid form (Busscher et. al., 2014). This dynamics of planning is described in the following thematic subchapters of top-down planning and its interaction as well as its linkage with the and conflict management to tackle the challenges during the recovery process. As a well-planned and managed resettlement plan can produce positive development outcomes (Badri, et. al, 2006).

5.2   Strengths and weaknesses of post-disaster planning

In this section the experience of people based on the interviews and conceptual model in regard to resettlement project during recovery will be examined. First, it examines the strength of post disaster planning in Sleman's recovery process. The top-down planning and community-based approaches are both applied within the post-disaster planning in Sleman. The experience of interviewees is described in relation to the implementation of Rekompak program. It brings community-based approach amidst the strong top-down planning for

recovery process. These approaches resulted in a more flexible coordination among stakeholders and active participation in the community in the planning process. Then, the weaknesses of post-disaster planning are described through the issues of resettlement execution, community capacity, and some drawbacks on the coordination line.

Strengths

Flexible coordination

As presented in theoretical chapter, top-down planning relates to functionality and power-related; it can result in hierarchal structure of synoptic profile. The community-based resettlement through Rekompak program introduces the characteristic of participatory in the planning process. Many of respondents agree to the establishment of Rekompak program to organize the resettlement project during recovery process. One of the respondents from National Development Planning Agency (2014) argues the role of facilitator from Rekompak is very important to provide right information and build the understanding to actors. Rekompak's presence induces the web of coordination for the recovery process. Rekompak act as a hub in the web of coordination, supporting a more flexible coordination among stakeholders. Therefore, the fact that it modify the way of coordinating plan from strict into more flexible, showing the Rekompak program bring positive influence to the post-disaster planning. As presented prior in Figure of 4.9 and 4.10, the presence of Rekompak add inter-connected link and further induce the cross-scale and multi-level interaction. The flexible coordination applied for handling resettlement plan, thus, considered as strong point in post disaster planning is Sleman's case.

Clear Guidelines

The main driving force which had an impact to the delivery of recovery is the set of clear guidelines. The master plan was initially designed as the guidelines for stakeholders including Rekompak on carrying out the recovery. The results of these clear guidelines are non-overlapping task description and general principle every actor can refer to. Rekompak illustrate an example of the use of clear guidelines; they committed to build resettlement in safe area based on the guidelines enacted in action plan and disaster-prone area map (see Figure 4.3). Any proposal would be matched with these clear yet general guidelines.

Active participation

Another strong point of the planning process of Sleman's recovery, on which all respondents agree, is the active participation of community towards the resettlement project. This participatory process emphasizes on the shared-responsibility between government and

community. As mentioned on the previous chapter, the community is intensely engaged on the stages of voluntary relocation, site-plan design, and resettlement management. Academic of Institut Teknologi Bandung (2014) views community participation is not only important for effective coordination, but also to create a system or connection between community to their house, work place and social interaction. He notes, this system is defined by how they decide the resettlement location and resettlement design. Respondents from governmental institution and NGO's are consider the enthusiasm for people to participate in the planning process are driven by the factors of community leader's influence and also the communal spirit possessed by the local villagers. During the recovery process, people take initiative to contribute to planning process (villagers from Wukirsari, 2014). As explained earlier, this come in form of community groups namely Karang Taruna/village-youth organization, Village Board, Construction Committee, and community radio.

Weaknesses

Lengthy procedure

The complex characteristics of resettlement might cause complicated issue to deal with. It becomes a complicated issue since the practice of procedural administrative still exists in the recovery process. As it discussed in subchapter 4.3.1, there's people who had unpleasant experience as waiting for response towards the problem on the field because of the bureaucracy. Other case shows people who force to stay for years in temporary settlement before they can move to the permanent settlement. Villagers from Wukirsari add, they do not just endure the lengthy procedure for moving to huntap, but they also found unclear explanation about procedure on applying huntara and huntap. It definitely shows the lengthy bureaucracy procedure does not compatible with this complex characteristic.

Community capacity

Although the idea of community-based resettlement sounds so captivating in post-disaster planning, there is still some weak point on its execution. Take into account, the resettlement project has dependent characteristic which means it is rely to the external assistance and resources provided. In some specific cases, it can also involve a risk of morbidity and placelessness (see Theoretical Framework chapter) — people felt traumas and lost identity due to loss of shelter or relatives. In this situation, some of villagers do not feel entirely ready to actively participate in the planning process. As discussed in section 4.3.2, respondent feel overwhelming knowing villagers along with community leaders have to solve many problems occurred during the resettlement project. Other respondent from Umbul

Harjo (Sleman) recalls she has not yet fully recovering from shock at the moment when she involves in resettlement plan. The respondent admits although she attends the meetings, she could not clearly pay attention to all activities. The consideration on community capacity then should be addressed since it holds significance to the recovery process.

Disorganized early transition

Referring to the concept of post-disaster management cycle in subchapter 2.2.1, one of the early transitions in recovery is from the emergency response to rehabilitation. Within this transition, it is critical that longer-term plans are developed to reduce uncertainty (Ingram et. al., 2006). Nevertheless, during the early transition, some NGOs carry out their own organizational plan by skipping the coordination line. In the early phase of disaster recovery, many NGO's entering the affected areas without an adequate supervision from the government. These certain NGOs build school in the disaster-prone area. Because of its danger and risk, government would not provide teachers to schools in hazardous area (Respondent of National Development Planning Agency, 2014). Interviewee from university explains the problem is often worsened because these certain NGO's support community to stay at the disaster-prone area because they believe it is people's right to choose to live wherever they wanted to live. The official also illustrates an example where some NGO's even build a shelter in villagers' original place although it is located in disaster-prone area. He adds there should be guidelines for NGO's to be involved in collaborative works during the recovery process. The disorganized early transition, therefore, become the one of the weak point in the planning process.

5.3 The importance of adaptive post-disaster planning

Decision-makers in central government acknowledge the importance of adaptive planning policy to the complex situation by adapting new paradigms in disaster planning. As mentioned in section 4.2, these new paradigm are preventive, multilateral, decentralization, disaster risk management, and common responsibilities. The paradigms then incite more comprehensive regulatory frameworks and a multi-stakeholders involvement in disaster risk reduction and disaster management. In regard to the general context of Indonesia's disaster planning, adaptive post-disaster planning is also applied in Sleman's case. The reasons for the importance of adaptive post-disaster planning can be grouped in the categories: congruent for multi-aspect recovery, comprehensive problem solving, empowering community, which is subsequently being examined in this section.

Congruent for multi-aspect recovery

Disaster is indeed affecting various aspects in community lives. Sagala et. al, (2014) describe the Merapi's 2010 eruption is not only affecting the physical aspect but also economic and social aspects of community. This relates to the complex characteristics of resettlement project that influenced by physical and social-economic recovery (see Theoretical Framework). The new paradigm of preventive, multilateral, decentralization, disaster risk management, and common responsibilities has becomes a backbone for adaptive post-disaster planning. It implies a post-disaster plan has to able to 'change' and 'adapt' to new demand and issues during the recovery. As some local issues being solved, another issue might appear as the consequence. It is a continuous effort that marks the adaptive post-disaster planning. The output from the adaptive post-disaster planning is the works of different stakeholders to contribute to recovery. Respondents from NGOs, Rekompak, and villagers (2014) point up the assistance given to the recovery are ranging from houses, psychological counseling, educational and capacity building training, to capital aid as such a cattle farm in the resettlement.

Comprehensive problem solving

Two direction planning approaches in post-disaster planning create a more comprehensive problem solving. In one side, the top-down planning with its systematic function helps on running the immediate response needed for recovery. On the other side, the community-based approach accelerates the recovery by endorsing flexible coordination and interaction to address the complexity occur from local issue in resettlement. These planning approaches correlate each other shaping an adaptive post-disaster planning. In Sleman's case, one planning approach solely cannot answer the complexity of problems. All respondent (2014) indicates, although there are drawbacks on the implementation, dual approaches in planning process offering many ways and solutions to address problems. For example, respondent from Regional Disaster Management Board of Sleman Regency (2014) illustrate the comprehensive problem solving for handling a land dispute on some location for huntap/permanent houses. BPBD as the government agency in the regency focuses on land procurement and land certificate, while Rekompak focuses on working with community on the houses development. This is a concrete example on two direction planning harmonizes to maximize the output.

Empowering community

Lastly, adaptive post-disaster planning is important to empowering community and therefore to develop their capacity. It leads to the sense of ownership towards the settlement (respondent from Wukirsari village, 2014). Another respondent from Umbulhardjo village (2014) argue people sense of ownership because they can choose by themselves the location for the resettlement, after that, they can also own the house and land for free. It gives a feeling for community to determine their lives. Moreover, the adaptive post-disaster planning also gives respond differently accordingly to the needs of each community. Some villagers participate in skill training and others involve in small credit for household production (respondent from Kuwang village, 2014). Derived from the experience from respondents, the adaptive post-disaster planning look carefully on things that important for villagers, and then execute it through empowerment program to create a valuable meaning for them.

5.4   Lessons-learned

From the elaboration of the importance as well as well the strengths and weaknesses of the post-disaster planning in the resettlement project in Sleman regency, it can be noted important lessons for further improvement:

Position of Rekompak

Until now, the role played by local government in recovery process is linked directly to the national planning system in disaster management, regulating the responsibilities of the three tiers of the government. The paradigm shift to be more preventive, multilateral, decentralization, disaster risk management, common responsibilities (section 4.2), has opened opportunity for community-base approach to appear in the recovery process. Rekompak program holds a strategic position on the web of coordination in recovery. Therefore, the manifestation of Rekompak program in Sleman's recovery process should be utilized in the greatest possible extent. In the current situation, it has been positioned not just as a program for recovery but also an effective knot for all the stakeholders to be connected. This position could be increased from a 'knot' to a medium of discourse where a discussion of internal issues takes place. For instance, it could be used as a medium to diminish the scepticism and doubts about their roles in recovery (e.g. section 4.3.3)

Structure of coordination of planning and budgeting

Sleman have also beneficiated from top-down planning efforts of a major external assistance to help it regain from the devastated disaster. Central government want Sleman to

be a safer and better place, where people can back to their normal activities of going to school, work, and other public activities. Different recovery aspects push this top-down planning to adapt to the complex situation by applying a community-based scheme and cross-scale interaction for recovery process. In turn, this apparently becomes strong points for the post-disaster planning.

Integrated master plan

Experts believe the master plan that related with safety aspect should be created based on scientific calculation. This type of master plan includes hazard map or buffer zone in disaster area. Respondent from Kyoto University (2014) argues this type of master plan does not related with planning approach or political aspect, but it is related with scientific accountability. Rekompak program applies this rule because technocrats or experts are being involved on creating the master plan, although it further gives impression that community mostly involves in the final recovery plan. Therefore, he adds, the communication is very important to convey the information of master plan and support its implementation. Respondent further argues, it needs good communicative technique, policy enforcement and also incentives – houses or financial aid – for people to support the master plan. In Sleman's case, the rehabilitation and reconstruction plan depicted through an integrated master plan. Each plan acts as regulatory, spatial and institutional guidelines.

Clear roles

Overlapping roles would be an additional disaster for disaster recovery, thus the clear distribution of roles is a must in recovery process. To avoid the messy or overlapping roles, the description of works division is generally described in Action Plan for Rehabilitation and Reconstruction after Merapi's Eruption: Yogyakarta and Central Java Provinces (Bappenas & BNPB, 2011). Community-based resettlement could be implemented by the clear roles of technocrat, officials, villagers, and NGO's. The clear roles help actors to avoid misinterpretation during the cooperation. Nevertheless, based on field observation, the coordination function is the utmost function in several government institutions. The coordination function could be improved with more active yet practical function. The orientation is not limited to coordinate but to do mutual works to multiply output.

Power sharing

Related with above explanation on clear roles of stakeholders, it is understandable to question how much of a role does community posses to determine their resettlement. In mere of fact, community's role in the planning process is a concrete evidence of power

sharing. The concept of shared-responsibility derived from Rekompak can be seen as a shared-power for handling the resettlement. As described in the Theoretical Framework, the right to build a partnership in deciding the relocation, site plan, and resettlement management also implies the power sharing does take account in the planning process.

5.5   Concluding remarks

The recovery attempts after disaster struck is facing many challenges on its journey. Sometime planners pick and choose planning method from their 'tool-box' to deal with the challenges. This happen on the situation where adaptive post-disaster planning is picked because it attuned with the resettlement challenges. During the Sleman's recovery, the reasons for the importance of adaptive post-disaster planning are grouped by this category: congruent for multi-aspect recovery, comprehensive problem solving, empowering community, which is subsequently being examined in this section. Based on empirical case examination, Sleman has also the ability to harmonize and embrace this adaptive planning approach. It is shown by the lessons-learned which drawned from the excerpt of study case and the theoretical concept of the thesis.

CHAPTER 6

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

6.2 Policy Recommendation

6.3 Reflection on this research

Chapter overview

The aim of this thesis is to understand the planning process during the post-disaster recovery and to acknowledge the difficulties that top-down planning is confronted when dealing with resettlement project. The conclusion is emphasis on critical aspect of post-disaster planning. This includes the implementation of top-down planning process in resettlement projects, the influence of community-based approach towards this top-down planning, and key factors in the Sleman's resettlement planning process which can be a lessons-learned for further post-disaster planning policy. Reflection of this thesis is presented in regarding with the thesis construction.

6.1   Conclusion

The theoretical concept of top-down planning and community-based approach are discussed earlier in the second chapter of the thesis. Further, the conceptual model of this thesis elaborates that power-related and functionality characterizes top-down planning, and participatory characterizes community-based approach. These post-disaster planning approaches connect to the dependent and complex characteristics of resettlement. In the study case, the general situation of resettlement project in Sleman's case can be characterized by the top-down driven initiatives, limited resources of villagers, strong communal bond, enthusiastic community participation, multi-stakeholders involvement, lengthy implementation, The characteristics of Sleman's case proven to be more complicated since the profile of local community impose the characteristic of the resettlement project. This leads to the adaptive post-disaster planning towards the distinct characteristic of resettlement in Sleman.

From the research result and analysis of the findings, top-down planning adapts to the complex situation of recovery by involving community-based approach into the post-disaster planning. Though, it is manifested in form of community participation in the final planning process. The master plan and the disaster-prone area are already established before community enters the 'arena' of planning. The unique thing on Sleman's case is community does sharing responsibility and authority in genuine participation (see e.g Anstein's ladder of citizen participation, 1969; Selener's type of participation, 1997) in resettlement plan, although they are still exhausted in the transition phase (see the concept of post-disaster management cycle). The fact that the participation resembles partnership type implies that community also holds control provided that they are doing continuously cooperation with Rekompak and government. The transition phase is not only bringing difficulty to villagers,

government also face a difficult situation in regard with some of NGO's works in the transition phase. The chaotic situation after the disaster left some confusion on what things should be done and what things should be prohibited. Eventually, the post-disaster planning is not just limited to address complexity and dependency of resettlement project, but it also address the connectivity among actors. Refers to the case study, the connectivity among actors has become an important factor to the accomplishment of post-disaster planning. Even in the case of disaster recovery, actors whom acquire the most linkages to other stakeholders possess larger access to influence the planning process. Furthermore, the excerpt of top-down planning process, influence of community-based approach, and key factors in the Sleman's resettlement planning process are presented in the next sections.

Top-down planning process

From point of view of recovery process, specifically in resettlement project, the top-down planning practice has rather dominant role. The establishment of master plan of Action Plan for Rehabilitation and Reconstruction after Merapi's Eruption, map of disaster-prone area of Merapi eruption, and Rekompak program for resettlement project, affirm the practice of top-down planning in the recovery process of Sleman, Yogyakarta. Aside from the functionality and power-related factors, as the theoretical concept suggests, the practice of top-down planning also indicates a distance or gap factor. The so-called master plan is considered as product of scientific and analytical techniques, where only the experts and decision-makers are part of its establishment. It does emphasize on functional rationality as the behind logics. But digging deeper to the case, the top-down planning process is also induced by a gap between government and community. Often it position community as the receiver of end-product of policy. The hierarchal structure of government takes part on creating the distance between government and community. The synoptic profile in the hierarchal structure depicts a one-line organization that makes the government seem quite unreachable. However, as the paradigms shifted on disaster management to become more preventive, multilateral, decentralization, disaster risk management, common responsibilities (as shown prior in Figure 4.2), government is indeed need a 'hub' to link better with community. In this situation, Rekompak program has become a suitable hub to connect them to community and local actors in the resettlement project.

The sets of guidelines, regulation, and directives mark the top-down planning process in Sleman's case. Soon after the disaster occurred, work team consists of line ministries are formed to handle the recovery. National Board for Disaster Management is appointed to be

the leading agency for post-disaster recovery process. Along with other governmental institution, this team formulates the necessary steps to be taken for the establishment of recovery plan. The systematic yet functional organization made a clear guideline – which then becomes the strength of this post-disaster planning, The foremost critique for the top-down planning process is the lengthy procedure and obstructed reciprocal interaction during the execution of resettlement project.

The influence of community-based approach

In the midst of the complex problem of resettlement project after the disaster, the top-down planning is complemented with different planning approaches to address the dynamics of the situation in Sleman's case. Community-based approach is then applied to address the complex problem of multi-aspect of recovery. As discussed in Chapter 5, the recovery covers from physical, social to economical recovery. The multi-aspect recovery may not solely answered by direct guidelines from central government. In the case of Sleman, it needs negotiation and discourse along the planning process to deal with multi-aspect recovery. Therefore, the community-based approach stimulates a more dynamic interaction in the coordination line. It modifies the rigid line of coordination to be more flexible, thus creating more connection between actors. Moreover, it also supports community participation in the planning process. These modifications of the way of doing planning recovery are resulted from the influence of community-based approach towards top-down planning practice. It has been the strong points of this post-disaster planning. A huge expectation would be the fact that afterwards, community can see and experience the effect of their involvement. Not merely just involve in the planning process, but whether they can actually benefit from their involvement in the resettlement plan.

Key factors in the Sleman's resettlement planning process

The recovery attempt based on 'build back better' vision has been widely accepted in disaster management. It is not a new concept to be implemented in disaster recovery and it is not a special treatment for Sleman's recovery. Since Sleman's recovery vision is relatively similar with many disaster recoveries, are there any distinguishing key factors in the Sleman's resettlement planning process as a lessons-learned? In regard with this key factor, many respondents identify the accommodating planning policy in Sleman's resettlement planning process has open the accessibility for community to participate on determining their own resettlement. Regional Disaster Management Board of Sleman Regency (2014) highlights the importance of participatory activity along the planning process on achieving a

good resettlement project. The participatory activity is enabled to take place by the accommodating planning policy. It doesn't put top-down planning as the single planning approach, but use another planning approach to fill the weakness of top-down planning practice in addressing the complexity of problems. This key factor of accommodating planning policy has causal effects which determining the further implementation in the resettlement projects. Breaking down to the details, these are the distinctive implementation of Sleman's resettlement planning process which can be a lessons-learned for further post-disaster planning policy, specifically for Indonesia's context:

a. The Rekompak has positioned not just a program for recovery but also becomes an effective knot for all the stakeholders to be connected, then to involve and contribute to the project.

b. The structure of coordination of planning and budgeting is organized by the top-down planning approaches that adapts to the complexity by applying a community-based scheme and cross-scale interaction for recovery process.

c. The government establish an integrated master plan specifically for rehabilitation and reconstruction program by involving experts and related authorities in early planning process. The integrated master plan comprises: Action Plan as for Rehabilitation and Reconstruction after Merapi's Eruption as the regulatory guideline for all stakeholders, Map of disaster-prone area of Merapi's eruption as spatial guideline on developing resettlement, Rekompak program to facilitate the recovery process by committed to these general guidelines.

d. Community-based resettlement could be implemented by the a clear role of each technocrat, officials, villagers, and NGO's, whereas the most possible

e. The shared-responsibility is essentially translated as shared-power or shared-authority in the context of Sleman's case. The sense of community's ownership is build through sharing the power to determine and manage the relocation, site-plan and resettlement by themselves.

6.2 Policy Recommendation

Planners and policy makers

In order to have a visible output of when designing a policy, the steps and aims should be very clear and it should anticipate the weak points that identified in this study. In this case, the apparent negative aspect including the lengthy procedure, lack of community capacity, and the disorganized early transition on the current recovery process in Sleman. Designing a

policy is indeed in the range of planners and policy makers' realm. As the paradigm of disaster management shifts and planning approach adapts, there should be changes in way of doing planning. These negative aspects indicate some implementations are unable to follow the changing paradigms of disaster planning in Indonesia. Roodbol-Mekkes, et. al. (2012) suggest some changes in the principle of organization, planning principle, planning subject of organization, planning community's composition, planning community's knowledge, planning networks. The future reform on policy design leads to more effective yet efficient implementation of planning. Policy makers and planners eventually need to embrace the shifted paradigm by placing the planning practice changes into the policy design.

Local Authorities and local communities

As one of the main issues of planning process is Sleman's recovery is the distance or gap between government and community, the future strategy can be done is by bringing local authorities and local communities works closely together continuously. As mentioned before, the gap shows government as an unreachable institution for community. Accordingly, it is fundamental to create a platform of 'local-to-local' cooperation to bridging this gap. This platform could be in the form of local committee that can bring the collective ideas to the policy-makers. The discourse from local-to-local can bring more initiative from community into the process of recovery. Local community might not decide the master plan (since it is based on scientific calculation) in the early planning process, nonetheless they can give their voices for a more effective planning process. As Hanssen (2010) expresses the effectiveness of a more open dialogue among a broader spectrum of actors early in the planning process could play a part to increased transparency and integration of important voices into the planning discourse. This community involvement contributes to a more effective planning process, giving authority less reason to use their `veto' as final approval power. To bring local authorities and local communities together, the form of cooperation needs to act in integrated way— people should not be expected to go to multiple agencies for different services. It should contain a vision, a resource and activity analysis, priorities and concentrate on delivery (Tewdwr-Jones, Morphet, & Allmendinger, 2006). With this situation, when the more local-to-local cooperation is built, the less likely gap is created.

NGO's and Academics

The relation between stakeholders also depicts a lack of confidence in trusting other actor playing their role properly. Based on the information during interviews (stated in section 4.3.3), this lack of trust commonly came from professionals as such NGO's towards the work of government and Rekompak. According to Shockley-Zalabak et. al (2010), this type of

situation resembles the doubts towards the competence dimension. The competence dimension emerges in four institution-based characteristics including competence or quality, financial matter, availability of human resources, and practice transfer. There is a growing focus on evidence-based competency. Therefore, these characteristics of competency need to be developed in the planning design. In other side, instead of being as an outsider with various contradictive recovery strategies that became a blunder, NGO's need to deliberate their recovery ideas by following the institutional process and procedure of recovery.

Academics also play important role to build the trust between government and NGO's by supporting a professional inputs for the recovery, reduce the political intervention that possibly occur during the decision-making. Based on the empirical study, academics are in presence when there is need for designing the recovery plan in the early planning process. More likely it still views academics or university in tradition way, where they are considered as producers of scientific knowledge—"knowledge factories"—which can have a local impact in the form of spillovers (Uyarra, 2010). Uyarra further suggests the other potential roles of university in development have some policy implications. This includes the roles for boundary-spanning, exchange of knowledge, and development role. Joining up of universities mission and other policies at different level, therefore, is important in the recovery process.

To conclude, the post-disaster planning can be considered as a process on designing roadmap for recovering a community to their normal life. However, this process will always face challenges and obstacles coming from the planning system, political views, governmental organization, also people's behavior and capacity towards a disaster event. In such a dependent and complex setting of resettlement project, where the optimum recovery is the priority, ideas about adaptive post-disaster planning could make a difference. The community-based resettlement, as presented in this research, can be an example how the community engagement can promote a positive impact to the recovery process. Thus, it also shows the top-down planning is still reliable for guiding the post-disaster recovery when it is being adapted to other requisite planning approaches.

6.3 Reflection on this research

Post-disaster planning in Sleman's case has proven to be a motivating research, revealing the theoretical arguments and the real implementation of the recovery process.

From the point of view of the methodological framework, this research has as main strong points the study-case approach as basis for research exploration. The findings of this

research can be used as an inspiration for cases where relocation and resettlement has to be carried out in the post-disaster recovery. Due to the fact that the disaster management topic is currently gaining more attention worldwide, this research can also be an insight how recovery planning process take place in a developing country such as Indonesia.

The weak point of this research is represented by the dominant respondents of planners. Although a clear methodological framework was designed to create a complemented data-collection. Multiple perspectives from stakeholders related to the case are tried to be presented, but most of sources is collected from planner's point of view. The planner's point of view is mostly from government officials, NGO's and experts. This happen because they are the ones who have complete information on planning design, while local community mostly know the resettlement plan on the final recovery phase. This, however, could propose subjectivity from planner's point of view. Corresponding to this situation, same type of research questions then asked to different stakeholders to check the consistency of case description. The other point is the lack information or perspective from private sector. I did not conduct interview with private sector related to their role in the resettlement plan. The reason is based on consideration that the preliminary findings imply the private sectors are rarely involved in Sleman's recovery process. However, I aware the views from private sector toward their contribution to the economic recovery would be interesting to be studied. Therefore it would be valuable input if there is a future research that discuss deeper on the private sector in how they are contributing to the development of community after the disaster.

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Interview Respondents

Interviewee 1 (2014)	National Development Planning Agency (Bappenas)/Head of Sub-Directorate of Disaster Prone Areas
Interviewees 2&3 (2014)	Ministry of Public Works, Directorate General of Cipta Karya, Rekompak Program/Monitoring & Evaluation (Monev) and Complain Handling Resolution (CHR) Expert and DRM (Disaster Risk Management) Specialist
Interviewee 4 (2014)	Regional Development Planning Agency (Bappeda Province) of Yogyakarta Province/Staff-Regional Planner
Interviewee 5 (2014)	Regional Disaster Management Board (BPBD) of Yogyakarta Province/Head of BPBD of Yogyakarta Province
Interviewee 6 (2014)	Regional Development Planning Agency (Bappeda of Sleman Regency)
Interviewee 7 (2014)	Regional Disaster Management Board (BPBD) of Sleman Regency/Head of BPBD of Yogyakarta Province
Interviewee 8 (2014)	World Bank/Consultant, Community-Based Housing Specialist
Interviewee 9 (2014)	Muhammadiyah Disaster Management Center/Secretary and Volunteer
Interviewee 10 (2014)	Institut Teknologi Bandung (ITB), Indonesia
Interviewee 11 (2014)	Kyoto University, Japan
Interviewee 12 (2014)	Gadjah Mada University (UGM), Indonesia
Interviewee 13 (2014)	Resident/villager
Interviewee 14 (2014)	Resident/villager
Interviewees 15&16 (2014)	Resident/villager

Appendix 1: Consent Form

Consent Form*
The Post-Disaster Planning In Resettlement Project
Case study of Sleman Regency

Interview Description

-   Conducted by Aruminingsih, this interview is part of data collection process on the research about the post-disaster recovery process in resettlement project in the Rekompak Program. Rekompak is a post-disaster recovery program after the Mount Merapi volcanic eruption in Yogyakarta, Indonesia.
-   The interviewer is a master student from the University of Groningen (The Netherlands). Supervisors in charge is Karina Castro Arce from the University of Groningen
-   The interviewer would like to gain information about participant's experiences and involvement with regard to Rekompak Project in Yogyakarta. The unit analysis of the research is Sleman Regency.
-   This interview will be recorded to have accurate information of participant's views. Those who can access the tapes and/or the transcripts are only the interviewer and the two supervisors
-   Everything said by participant during the interview will be treated confidentially
-   Participant can choose to stay anonymous; it means her/his name will not appear on the transcript or in any further publication
-   It is possible to add any supplementary information on the transcript which is obtained from correspondences between participant and interviewer via email or any other messages facilities.

Participant's Consent

As participant,

-   I agree to be interviewed for the research entitled **"The Post-Disaster Planning In Resettlement Project : Case study of Sleman Regency"** which is being produced by Aruminingsih of the University of Groningen
-   I have been given satisfactory answers to my inquiries concerning project procedures and other matters; and that I have been advised that I am free to withdraw my consent and to discontinue participation in the project or activity at any time without prejudice
-   I agree to participate in one or more electronically recorded interviews for this project, and one or more written correspondences via email or any other messages facilities. I understand that such interviews and related materials will be kept completely (not) anonymous, and that the results of this study will be published in interviewer's master thesis and other academic courses, and may be published in academic journals, and academic conferences
-   I agree that any information obtained from this research may be used in any way thought best for this study. I would (not) like to have the copy of this interview's transcript, and the copy of the draft final thesis, and please send it to:_____
-   Hereby I grant the right to use information from recordings and or notes taken in interviews of me, to the University of Groningen. I understand that the interview records will be kept by the interviewer and the project, and that the information contained in the interviews may be used in materials to be made available to the general public.

Place and date:

Name of participant: _____ Signature of participant:_____

Name of interviewer: Aruminingsih------------------Signature of interviewer:_____

Any hesitation and questions can be addressed by contact the interviewer on phone number: +6281318668095 or +31626243975, and email: A.Aruminingsih@student.rug.nl or aruminingsih1@gmail.com.

Appendix 2: Disaster-prone Area

Appendix 3: The condition in the huntap and huntara in Sleman after the disaster recovery phase. Source: Author. Date taken: April – May 2014.

Huntap neighbourhood

Evacuation meeting point (above); mosque designed by the university (below)

Small playground (above); house modification by the community (bellow)

The abundance natural resources in the high slopes attract villagers to stay (above); container trucks busy bringing earth materials for trade in daily basis (below).

The damaged roads – caused by pyroclastic flows – still found in Sleman regency (above); Houses in the high slopes of Merapi. People who refuse the relocation still stay in their origin village (bellow);

Lack of coordination in the early phase of post disaster recovery resulted in case where temporary houses build by donors in the disaster-prone area (above); public facility as such community hall and prayer centre are built in the disaster-prone area (bellow).

Some donors build schools and clinics in the Glagaharjo village (Sleman) located in disaster-prone area. Government do not to send doctors and teachers to the location considering to the regulation and safety standard.