This paper presented in International Conference on Sustainable Built Environment Faculty of Civil Engineering and Planning, Universitas Islam Indonesia, Yogyakarta, 10-12 July 2012

Understanding Social Recovery Process in Pangalengan Community after the 2009 West Java Earthquake: Challenges to Post-Disaster Recovery Planning

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Abstract The process of recovery from disaster is usually considered by the government and many donors as physical recovery process. Sometimes, the social impact of disaster is difficult to be seen and its recovery is not fully considered within the recovery activities by government, donors, and development planners. However, recovery activities maybe unsustainable when the social aspect in community is not taken into account. Since a strong earthquake 7.3 on the Richter scale shook and struck on 2nd September 2009, community of Pangalengan Sub-District, Bandung Regency, West Java Province, Indonesia, has received many humanitarian aid relating livelihood recovery assistance. Indonesia government had completed housing reconstruction phase but Pangalengan community, especially children and elderly, still has received traumatic feeling since the disaster event. This paper provides the understanding of social recovery process in Pangalengan Sub-District after the earthquake. It is important to develop a systematic framework and experience by in depth learning and exploration on how community is recovered socially from disaster. Thus, our research applied qualitative survey by in-depth interview to vulnerable group that affected by the earthquake, NGOs, and local governments who involved into the recovery process in Pangalengan Sub-District. Observation and secondary data analysis provides social situation, recovery aid, and social assistance information that occurred in study area. Trauma and conflict raised as the impact of the earthquake need a long term recovery process in order to return to the level of the previous condition or even difficult to achieve the same level

***Keywords**: West Java Earthquake, Pangalengan Community, Social Impact, Social Recovery, Vulnerability.*

1. Introduction

An earthquake hit and shook the southern part of Tasikmalaya District, West Java Province, on 2nd September 2009 by a magnitude 7.3 Richter scale (Bappenas, 2009). The impacts of earthquake are multifaceted, including loss of family members, loss of homes, properties, livelihoods and community infrastructure, displacement and relocation in temporary homes and shelters. This earthquake event resulted 81 people were killed, 1,287 people were injured, 194,719 people were left homeless, and 259,926 houses were damaged in West Java Province (Bappenas, 2009). The earthquake caused an estimated Rp 7,9 billion in damage which the worst damage and loss suffered by the housing sector with total damage and losses of Rp 6,9 billion (Bappenas, 2009). Many infrastructure units and public facilities suffered minor damage and severe damage in all districts/cities of West Java: 1,221 units of schools, 2,859 religious buildings, 202 units of health facilities, and 325 units of office buildings (WHO, 2009). Felt hardest in Bandung District, the earthquake resulted in 23 deaths and over 771 injuries, and 51,102 dwelling units' uninhabitable (Bappenas, 2009).

Many people survive the initial disaster, but then suffer after it, as the economy stagnates, social networks weaken, and health care and support services decline (Olshansky and Chang, 2009). To prevent this, *Badan Perencanaan Pembangunan Nasional – Bappenas* (National Development Planning Agency) made an action plan of post-disaster reconstruction and rehabilitation that aimed to provide the same brief for every recovery program from all stakeholders (Bappenas, 2009). Unfortunately, the implementation phase of West Java's post-disaster reconstruction and rehabilitation action plan just took a short term time or it was less than three years (2009-2011). Many researchers argue recovery is not only a process with short term restoration, but also it needs long-term restoration of the community to get back to normal function (Olshansky and Chang, 2009; Tobin, 1999). It must be considered by planners who will plan recovery planning because the physical and economic recovery from disasters may take a couple of years, but the psychological trauma can last for decades. What is needed is a greater understanding of social impacts and how to community recover from it (Aldrich, 2008; van Hoebrouck and Sagala, 2010). A better understanding of disasters social impacts and its recovery can provide the development of recovery plans to prevent long-term consequences from occurring (Lindell and Prater, 2003; Olshansky et al., 2006). It is important because effective recovery from disasters not depend just on physical impacts of the event but also on how the social environment supports the complex and protracted process of recovery (Johnston et al., 2009).

Ironically, there have been lacks of data that provide information about social recovery in West Java community since the implementation phase of action plan finished in the end of 2011. The only one of social recovery data in West Java community is a community recovery service of psychosocial and economic household for earthquake victims that held by *Badan Penanggulangan Bencana Daerah - BPBD* (Regional Disaster Management Agency) of West Java and *Institut Pertanian Bogor - IPB* (Bogor Institute of Agriculture) in 2011. Unfortunately, not all community in affected area received it. Community of Pangalengan Sub-District in Bandung District is one of them, whereas they are the highest number of Internally Displaced Person (IDP), almost 46,000 people,

among another sub-district in West Java (UNOCHA, 2009). The numbers of housing units damaged by the earthquake in Pangalengan Sub-District resulted 1,810 were destroyed, 6,375 units were severely damaged, and 13,730 were minor damage units (Bandung District Disaster Management Task and Coordination Force, 2010). In fact, the amount of damage suffered by a community, which could determine the pace of recovery (Aldrich, 2008). The harder impact areas will recover more slowly than they have only minor devastation who require less time to so.

However, the key question is: how Pangalengan communities recover from their social impact that caused by the 2009 West Java Earthquake? The purpose of this study is to understand social recovery in Pangalengan community after the 2009 West Java earthquake. First, our research explores the social impact of Pangalengan community that caused by the earthquake disaster. Second, our research explores how Pangalengan community recovers from their social impact. It is important to understand how to Pangalengan community could recover from the social impact of the disaster, because they can give us about problems that they faced to recover widely and how the most suffered community can recover from their impacts. Our findings are useful to answer about speed and deliberation in post-disaster recovery planning. Our research gives new perspective in recovery process, because almost recovery process has been concentrated on physical or structural recovery (Aldrich, 2008). This article proceeds as follows: First, this paper outlined some theoretical background that focused in social impact and social recovery. The third part of this paper gives information of study location. Then, the fourth part of this paper discusses our findings in Pangalengan community. The article concludes the findings and some policy recommendations for governments and non-governmental actors.

2. Social Recovery Framework

Vulnerability has been proposed by many scholars as the key to understand the scale of disaster impact and the root of changed condition after disaster that cause by natural hazard (Bankoff, 2003; Cutter et al., 2003; Morrow, 1999; Nigg, 1995; Wisner et al., 2004). Vulnerability involves a combination of factors that determine the degree to which someone's life, livelihood, property and other assets are put at risk o by a discrete and identifiable event (or series or 'cascade' of such events) in nature and in society (Wisner et al., 2004). It is inferred with a condition of community for potential for disaster impact that caused by natural event. Unsafe condition is not only the influence of physical, economic, and social susceptibility in community, but also there is an exposure from natural hazard (Cutter et al., 2003; Lindell and Prater, 2003; Wisner et al., 2004).

Morrow (1999) and Wisner et al., (2004) said that the impact of natural event is determined by access to resources stratification in pre-impact condition. It is influenced by dynamic process of society environment that related to past and present socio-economic process and political decision making. Access involves the ability of an individual, family, group, class or community to use resources which are directly required to secure a livelihood in normal, pre-disaster times, and their ability to adapt to new and threatening situations (Wisner et al., 2004). Morrow (1999) categorized four resources that influence community vulnerability: economic resources, personal resources, family

and social resources, and political resource. However, there are some social group who has limitation to access these resources, so it put them in risk situation. Access to such resources is always based on social and economic relations, including the social relations of production, gender, ethnicity, status and age, meaning that rights and obligations are not distributed equally among all people. People earn a livelihood with differential access to material, social and political resources to get back to "normal life" after disaster. Wisner et al., (2004) drew this concept as "Access Model".

Lindell and Prater (2003) drew a model to described impact of disaster. In this model, the physical impact of disaster is the primary forms of devastation – causalities and damage – by natural hazard and this it is more observable than social impact. The physical impacts of disasters include casualties (healthy, deaths, and injuries) and structural damage (infrastructure, public facilities, properties, etc) (Lindell and Prater, 2003; Wisner et al., 2004). The physical impacts of a disaster are the most observable and easy to measure, whereas social impact can develop over a long period of time and can be difficult to assess when they occur (Lindell and Prater, 2003). Our research explores the social impact of disaster and gets depth learning how community recovers from it. Thus, our research developed a framework of social recovery for our research that adapted from Lindell's and Prater's (2003) Disaster Model Impact, Morrow's (1999) vulnerability resource categories and Wisner's et al., (2004) Access Model (Figure 2).

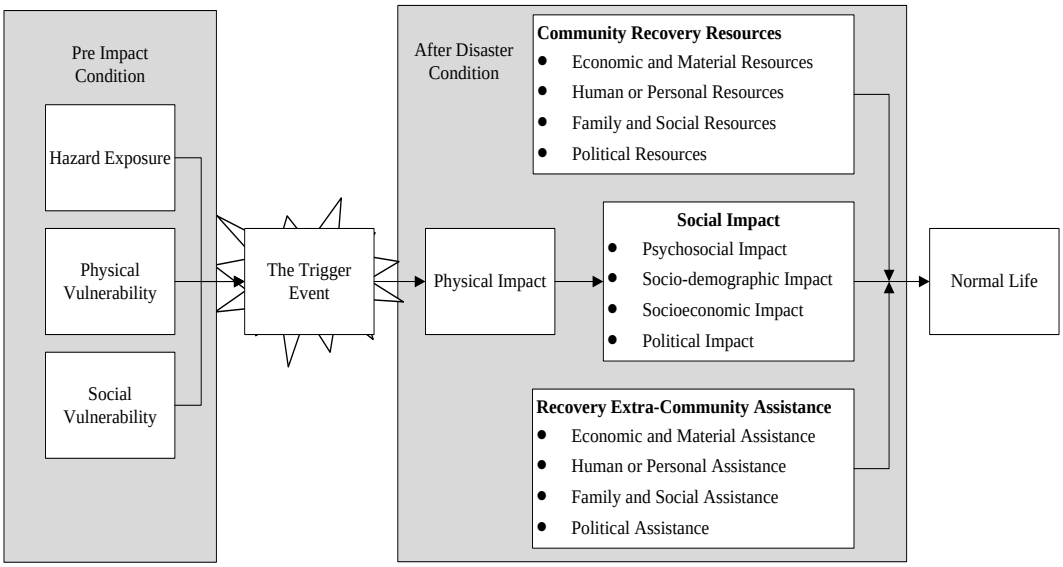

Figure 1 Social Recovery Frameworks ***(Source: Adapted from Lindell and Prater (2003), Morrow (1999), and Wisner et al., (2004))***

2.1 Social Impact

Lindell and Prater (2003) categorized their social impacts into psychosocial, demographic, socio-economic, and political impacts. Despite it is difficult in measuring the social impacts, it is nonetheless important to monitor them because they can cause significant problems for the long-term functioning of specific types of households and businesses in an affected community (Lindell and Prater, 2003). Psychosocial impact includes fatigue, gastrointestinal upset, confusion, impaired concentration, attention deficits, anxiety, depression, and grief. They also include behavioural effects such as

sleep and appetite changes, ritualistic behaviour, and substance abuse. There are population segments requiring this special attention. These include children, frail elderly, and people with pre-existing mental illness, racial and ethnic minorities, and families of those who have died in the disaster (Lindell and Prater, 2003). Since six years after devastating tsunami in 2004, Aceh's and Nias's community still have felt traumatic feeling of losses and disaster event, especially IDPs group who experienced more substantial post-disaster changes in life circumstances (impact) (Irmansyah et al., 2010).

The main demographic impact of disasters is destruction of household dwellings (Lindell and Prater, 2003). They have to face many problem during they build back their house, such living in temporary shelters, logistic and aid distribution problem, living in temporary house with non-preferred location and structures, and limitation of resources for building back permanent house (Lindell and Prater, 2003). There are also an increase number of emigrations of population segments that have lost housing (Cutter et al., 2003). In many cases, people who lost their home sometimes left their neighbourhood - leading to "ghost town" for temporary reason, such traumatic feeling, loss of job or community assistance, and conflict. It can be circumstances for housing reconstruction. This is currently particularly visible in New Orleans following Hurricane Katrina which 30% of the population of New Orleans has not yet returned for three year since Katrina, and permanent repairs to infrastructure have just begun after they came back (Olshansky and Chang, 2009).

The main socio-economic impacts of disasters are direct economic losses in damaged properties or assets (Lindell and Prater, 2003). Some of these cannot be replaced, so their loss causes a reduction in consumption (a decrease in the quality of life) or a reduction in investment (a decrease in economic productivity). Other assets are replaced—either through in-kind donations (e.g., food and clothing) or commercial purchases. There are indirect losses that occur from the interdependence of community subunits. The relationships among the social units within a community can be described as a state of dynamic equilibrium involving a steady flow of resources, especially money (Lindell and Prater, 2003). The relationships among the social units within a community are defined by the money it must pay for products, services, and infrastructure support. This money is obtained from the wages that employers pay for the household's labour. Similarly, the linkages that a business has with the community are defined by the money it provides to its employees, suppliers, and infrastructure in exchange for inputs such as labour, materials and services, and electric power, fuel, water/wastewater, telecommunications, and transportation. Conversely, it provides products or services to customers in exchange for the money it uses to pay for its inputs.

There are some cases that disaster impact can cause dynamic social activism that bring it to political disruption during period of disaster recovery (Lindell and Prater, 2003). Many cases of political impact is related to social relationship conflict between people at different level, such relation within household, between men and women, children and adults, and between citizens and their government (Wisner et al., 2004). Some victims usually attempt to recreate pre-impact housing patterns, but it can be problematic for their neighbours if victims attempt to another housing patterns. Conflicts arise because such housing usually is considered to be a blight on the neighbourhood and neighbours are afraid the "temporary" housing will become permanent (Lindell and

Prater, 2003). After the disaster, many communities were divided into tented camps, host communities and barracks, which contributed to an erosion of community cohesion (Steinberg, 2007). Just when it was most urgently needed, the capacity of communities to come together, comfort each other, and start the rebuilding of lives was badly battered. There are exceptions to this generalization because some ethnic groups have very close ties to their neighbourhoods, even if they rent rather than own (Lindell and Prater, 2003). Vietnamese community in Village de L'est, New Orleans, showed a community with deeper connections which stay in touch during and after the disaster are more likely to work together to rebuild their neighbourhoods *(Aldrich, 2008).* Attempts to change prevailing patterns of civil governance can arise when individuals sharing a grievance about the handling of the recovery process seek to redress that grievance through collective action (Lindell and Prater, 2003). Usually, community action groups pressure government to provide additional resources for recovering from disaster impact.

2.2 Social Recovery

Lindell and Prater (2003) categorized resources that they are used recovery process into community recovery resources and extra-community assistance. Community recovery resources can come from a variety individuals and Community Based Organizations (CBO). The victim might have financial asset (e.g. savings and insurance) and tangible asset (e.g. property) that undamaged by hazard impact. Lindell and Prater (2003) said there are also another way to bring additional resource through overtime employment and freeing up the needed finds by reducing their consumption. Friends, relatives, neighbours and CBO can contribute financial resource and help the victim with in-kind contribution. Extra-community assistance can come from NGOs, regional governments, national government, and foreign government. They can provide financial resource and financial assistance that do not need repaid by the victim or loans that might be offered at below market interest rates.

Morrow (1999) categorized resource that community need to recover socially: economic resources, personal resources, family and social resources, and political resource. These are used by household, government, and NGO to marshal the necessary resource to respond the impact of disaster (Morrow, 1999). Economic resources related the poor household who has limited economic and material resources. They commonly have insufficient financial for buying service and materials aftermath. The poor typically builds house poorly and insufficient material house, moreover they have to place their house in vulnerable location and less access to relief supply depots and disaster assistance centres (Morrow, 1999). Number of unemployment also increases when many business close or move after disaster, so low-income workers are difficult to get new job (Lindell and Prater, 2003; Morrow, 1999; Olshansky and Chang, 2009). Economic resource can be recovers with financial assistance through grants for buying service and materials in aftermaths. Some of the specific mechanisms for financing recovery include obtaining tax deductions or deferrals, unemployment benefits, loans (paying back the principal at low- or no-interest), grants (requiring no return of principal), insurance payoffs, additional employment, depleting cash financial assets (e.g., savings accounts), selling tangible assets, or migrating to an area with available housing, employment, or less risk (in some cases this is done by the principal wage earner only) (Lindell et al., 2006).

Household possess different personal resources: health, physical ability, personal experience, education, time, and skills (Morrow, 1999). The elderly is more likely to need disaster-related assistance with health, physical ability, and economic resources, because they are frail and/or poor and be slower to recover. Children also lack adequate for family supports, because they parents loss time and money caring for children. Physical and mentally disabled group has disability work, mobility disability or self-care limitation. These groups are likely to get psychological effect of disasters. These groups require psychiatric diagnosis and most benefit more from a crisis or trauma counselling (Lindell and Prater, 2003; Morrow, 1999). Single parent families and large families are likely to love on the economic margins and the rising cost of recovery. The personal experience, education and skills possessed by household can significantly influence it recovery, such as better preparedness and appropriate behaviour for future disaster response, gaining access to resources, better employment opportunities, dealing with bureaucracies and many more (Morrow, 1999).

Family and social resources related with social networks and kinship embeddedness (Morrow, 1999). Disaster may disrupt social cohesion and social networks among member of community (Aldrich, 2008; Lindell and Prater, 2003; Steinberg, 2007). Lack of family and social networks can be a limiting factor to seek recovery assistance. New emergence of recovery concept brings social capital into community recovery process (Aldrich, 2010; Nakagawa and Shaw, 2004). It brings the potential role of social networks and civil society in explaining the speed of post-crisis recovery. Recently, scholars have sought to link the speed and effectiveness of the process of recovery to levels of trust and social capital—that is, the resources available to individuals through their social networks. In some cases, the amount of social capital most strongly determines recovery rates (Adger, 2003; Aldrich, 2008). Social capital can serve as informal mechanisms allowing victims to support networks for the sharing of knowledge, the sharing of financial need, the sharing of market information, the sharing of logistic and physical assistance, and claims for reciprocity in times of crisis (Adger, 2003; Aldrich, 2010). Furthermore, social capital may drive into community collective action for recovery, although capable agencies are also required (Nakagawa and Shaw, 2004). The disaster recovery period is the source of victim dissatisfaction and this creates many opportunities for community conflict. This conflict typically manifests itself indifferences in emphasis regarding a task (material/economic) versus social-emotional (interpersonal relationships/emotional wellbeing) orientation toward recovery activities (Lindell and Prater, 2003). In many cases, recovery of this political impact is facilitated when neutral recovery organizations hire local mediator to provide a link between these conflicted communities (Berke et al., 1993).

3. Methodology

3.1 Location

Pangalengan Sub-District is a highland area (1400 m) where it is located in southern part of Bandung District, 40 km from capital city of West Java Province, Bandung. It has 13 villages: Wanasuka, Banjarsari, Margaluyu, Sukaluyu, Warnasari,

Pulosari, Margamekar, Sukamanah, Margamukti, Pangalengan, Margamulya, Tribaktimulya, and Lamajang, where they are surrounded by four mountains: Mt. Malabar (2,321 m), Mt. Wayang (2,182 m), Mt. Windu (2,054 m), and Mt. Tilu (2,042 m). According to the *Badan Pusat Stastik – BPS* (Centre of Statistic Agency) Bandung District in 2010, the population was 146,578 and population density is concentrated in Pangalengan and Sukamanah Village. Pangalengan Sub-District area (27,294 Ha) has characteristic of rural area which the majority of inhabitant's occupations are farmer and it is popular agricultural area with milk, tea, and coffee for economic primary production in West Java area. There are also several private industries related gasoline and geothermal mining in Pangalengan Sub-District.

West Java Province is prone to tectonic stress on region offshore and on the land of Java, thus causing the formation of earthquake to fault zones to accommodate the plate movement (Abidin et al., 2009). There are three active faults in mainland of West Java, namely Cimandiri, Lembang and Baribis faults and it is located near subduction-zone of Australian-Oceanic plate in the southern part. There is several large earthquakes happened in West Java. The 2006 Pangandaran Earthquake triggered a tsunami wave and it hit along southern West Java coastal area. On 2nd September 2009, an earthquake shook West Java by a magnitude 7.3 Richter scale. The most devastated significant damaged area is Bandung District and Tasikmalaya District where the epicentre of earthquake is located near southern part of Tasikmalaya on region offshore (Bappenas, 2009).

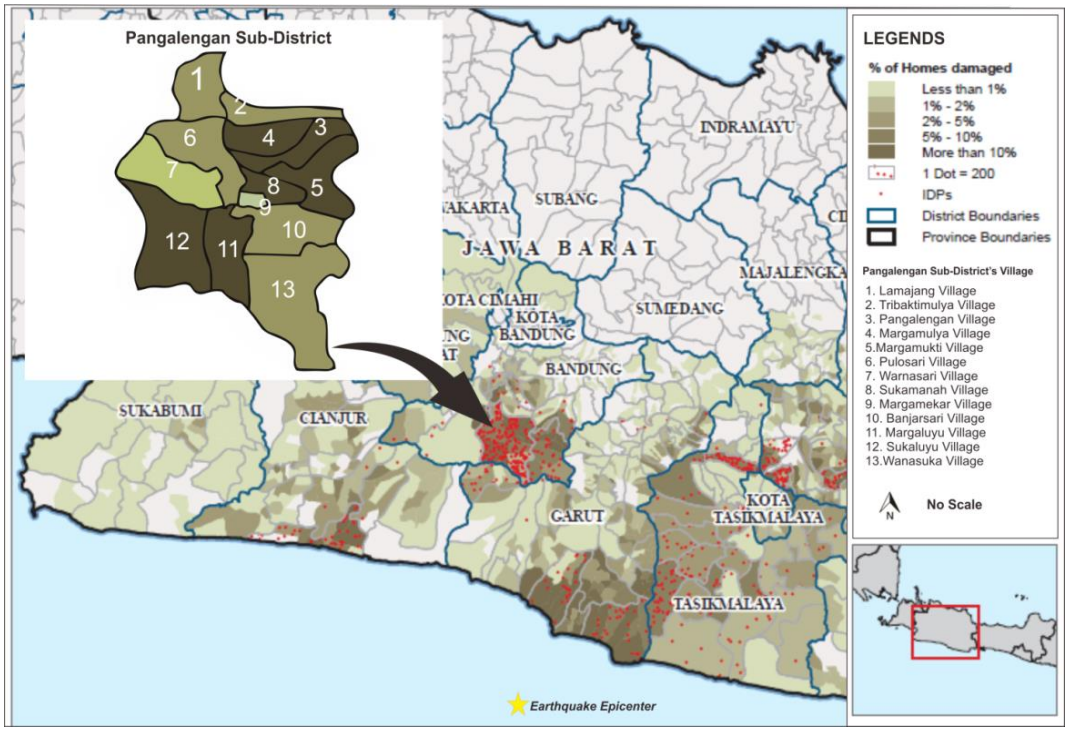

Figure 2 Percentage of Homes Damaged ***(Source: Modified from UNOCHA (2009) and Bandung District Disaster Management Task and Coordination Force (2010))***

Our research took in four villages: Sukamanah, Pangalengan, Margamulya, and Margamukti. Those villagers suffered housing units damaged heavier (Margamukti: 1,631 houses, Sukamanah: 4,028 houses, Pangalengan: 4,231 houses, and Margamulya: 2,521

houses) than others village in Pangalengan Sub-District that caused by the 2009 West Java Earthquake (Figure 3). They are also the highest density area in Pangalengan Sub-District area and they are passed by Bandung – Garut main road. The current study want to understand how the most suffered community can recover from their social impact, so we chose those villages.

3.2 Data Collection and Analysis

To understand social recovery process within Pangalengan community from the 2009 West Java earthquake event that had not been discovered before, our research applied qualitative survey by in-depth interview to the members of community, NGOs, and local governments who involved into the social recovery process in Pangalengan community. The rationale reason our research applied qualitative study because it shares a common flexibility and deep understanding about what is happening in a setting or how the participants perceive of their world. It was considered because some regions may be more or less susceptible to the impacts of hazards than other places based on the characteristics of the people residing within them (Cutter and Emrich, 2006). Each community also has different ways to recover from their impact which they can recover quickly or slowly (Aldrich, 2008).

This research applied macro level approach where the information sources were based from mass media (online, local, and national newspaper), studio survey report which it conducted by undergraduate students of ITB Urban and Regional Planning program in Pangalengan Sub-District on 23 - 28 April 2012, and governmental documents (Fife, 2005). Governmental documents include The Post-Earthquake Disaster Action Plan for Regional Rehabilitation and Reconstruction in West Java Province and Cilacap Districts in Central Java Province by Bappenas (2009) and Psychosocial and Economic Assistance for the 2009 West Java Earthquake Victims Report by IPB and BPBD of West Java. Micro approach data gathered through field observation and in-depth interview. On 1st March 2012, a preliminary observation of the area was conducted for understanding of the specific locality and social situation information after the earthquake event. In this preliminary observation, we interviewed a NGO official, village officials, and local community members. They were very helpful to discover early finding about social impact of Pangalengan community and their approach to recover from it. Their information was useful to set a semi-structured interview for the field work. Primary data collection method is conducted on 8 - 10 May 2012 through in-depth interviews and field observation.

Our research explores the social impact of Pangalengan community that caused by the earthquake disaster. Further, we related the numerous social impacts within Pangalengan community based on at-risk group (Morrow, 1999) and their vulnerability characteristics by Morrow (1999) and Cutter et al., (2003). Purposive sampling technique was used to discover social impact within Pangalengan community members that caused by the earthquake event in 2009. The participants were chose from social group in Sukamanah, Pangalengan, Margamukti, and Margamulya Village who reflects highly vulnerable characteristic. We also consulted with local leaders and leader of village officer to recruit potential participants in each village. Recruitment strategies are determined by the type of at-risk group and characteristic of earthquake victims in their

reports. Unfortunately, we could not find all of at-risk group because there was lack of information about their existence in each village from our key informants as well as we looked for them alone then. For the result, we found several at-risk groups: elderly (n = 8), children or youth (n = 8), poor household (n = 24), large household (n = 24), and single parent household (n = 12).

The interviews were semi-structured, open-ended, and directly related to main information which gave the interviewees more freedom to narrate their experience with flow. Based on our social recovery framework, we made our interview into two sections: social impact and social recovery. In the social impact section, we asked: (1) What did you feel after the earthquake event? Did you feel any traumatic feeling and health problem? (2) What is your main problem when you built back your livelihood after the earthquake event? Have you ever thought that you want to migrate to another place since the earthquake event? (3) What are your financial, economic, and material losses that cause by the earthquake event? (4) How was your relationship with others in the village and office village after the earthquake? Was there a problem of communication and trust for each other after the earthquake? In the social recovery section, we asked: (1) How did you do to recover from your traumatic feeling and health problem? (2) How did you do to build back your livelihood after the earthquake event? (3) How did you do to recover and resolve financial and economic problem after the earthquake event? (4) How did you do to fix your relationship with others in the village and office village after the earthquake?

In-depth interview result recorded by tape recorder and systematically arranged in transcript then. Because of the broad nature of the qualitative data, a sorting process followed, with segments of each interview placed in various content categories. We did a triangulation of different data resources, because it may also enhance the quality and reliability of the data. The qualitative data analysis focused on the content of participant statements. The final goal is to combine information patterns into wider and more objective analysis patterns.

5. Findings

Social Impact and Recovery

Psychosocial

Our research indicates that all of participants are still suffering traumatic experience that caused by the 2009 West Java Earthquake. There are many typical traumatic experiences, such as fear and anxiety of future earthquake likelihood, concentrate problem, blank feeling, grief, and depression. All of households feel afraid, fear, and worry about future earthquake, includes children and elderly. Some of participants feel much better within three-six months after the event, but others recover more slowly, and some of them showed that they do not recover enough without help. Becoming more aware of the changes you've undergone since your trauma is the first step toward recovery. There are much behaviour that they showed about traumatic of earthquake past experience and anxiety of future earthquake:

"There is always a ground shaking when a big truck passed away in front of our house. We are panic and afraid if that vibration is an earthquake." Man. 73. Elderly. Sukamanah Village.

"When there a big truck passes away near our school, there is always a strong shaking. Without realizing it, we always jump out of the classroom. We afraid that the 2009 earthquake event will happen again" Girl. 14. Junior High School Student. Margamulya Village *(Source:(Inilah.com, 2011))*

There are also victim who feel increased arousal. This includes feeling jumpy, jittery, and shaky, being easily startled and having trouble concentrating or sleeping. Continuous arousal can lead to impatience and irritability.

"I and my family have never slept in bedroom since the earthquake event. We always take a sleep in living room, because we are afraid that future earthquake will occur when we take a sleep..." Man. 42. Poor Household in Sukamanah Village.

"I could not concentrate in working when I was in the field for three months since the earthquake event. I was very worried about of earthquake likelihood and I left my family in home. When I felt like this, I decided to go home earlier" Man.46. Large household. Sukamanah Village.

"I used to feel blank in my mind for six months after the earthquake event" Woman. 32. Poor household. Pangalengan Village

Grief and depression are also common answers of participants. This can include feeling down, sad, hopeless or despairing. Some of them lose interest in people and activities you used to enjoy. They feel that plans you had for the future don't seem to matter anymore, or that life isn't worth living.

" I have had liver sick since the earthquake event. I do not have any money to go to the doctor because my savings is used to buy material and build back our house. I confuse how to get money for heal my sickness, so I just wait for miracle in home" Man. 52. Poor Household. Sukamanah Village.

There are many ways for community to recover from their psychosocial impact. Since there has been lack of psychosocial recovery assistance in Pangalengan community, they strive with self-help method to recover from it. Almost participants try to close with their God. They usually pray to forget the earthquake event and calm down their traumatic feeling. However, there are the only one NGO's who is still doing their psychosocial recovery program in Sukamanah Village, namely Hope Asia Foundation. They have three social workers who work for children and elderly psychosocial recovery from earthquake traumatic feeling. They help elderly and children with traumatic assistance every day. Many of them are victim by their household. They lack adequate for family supports, because their household or parents loss time and money caring for them.

"Since the earthquake event, I have felt trauma of it. To forget it, I always go to Mosque every Adzan (call for praying). I had rarely gone to Mosque for praying before the earthquake event. When I am there, I have more peaceful feeling and I forget about my traumatic feeling slowly." Man. 73. Elderly. Sukamanah Village.

"We help children and elderly who had have lack adequate for family supports since the earthquake event. Their parent was loss time and money caring for them. They are too busy to look for some money to get recover from the disaster. We help these groups to recover from their traumatic feeling that they do not have adequate traumatic feeling assistance." Social Worker. Man. 23. Hope Asia Foundation.

However, there is positive impact of the disaster event. There are many changed behaviours to face and prepare future earthquake that they did not do it before the 2009 West Java earthquake.

"…. If we sleep in living room and there is an earthquake, we could run outside house quickly" Man. 42. Poor Household in Sukamanah Village.

"I made a simple earthquake warning system alarm with my electronically skill. It was ringing when there was a ground vibration or an earthquake" Man. 48. Large Household. Sukamanah Village

Socio-Demographic

The main Pangalengan community's demographic impact is destruction of household dwellings. There also problems that there were some people in the study locations who wanted to relocate (Yasaditama and Sagala, 2012). Their traumatic feeling brought them to migrate to another area. However, they have limitation with their capacity and opportunities, so they are very hard to leave their place. Further there are almost no more options to move their house location if they still survive in their each study locations. For that, people tend to re-build their houses in the same location or at least next to the remnant of their damaged old building which cannot be totally cleaned.

"Soon after the earthquake, there is a strong desire to move out from Pangalengan. It is caused by how such big impacts that we had received by the 2009 earthquake. But in line with the running time, that feeling disappear significantly because we finally realize with our limitation of financial and capacity-opportunity to get work." Beneficiary (Source: Yasaditama and Sagala, 2012)

Different cases are only found in Sukamanah Village, Pangalengan. Until now even some refugees are still living in temporary relocation place there, at the Walatra plantation land owned by government (PTPN Walatra) (Yasaditama and Sagala, 2012). In the other side, in 2011 government actually had provided a permanent relocation place not far from the current location, even though at this time there are some refugees who had been occupied. Those people do not want to occupy the provided location because of the incompatibility reason (Yasaditama and Sagala, 2012). They assumed that the location is less access and steep in some area, so it has potency for landslide in the future. In the other side, the District Government stated that the choice of location is had been preceded by the study. This confusion, according to some informants is more because there were some decisions maker were took in hurry condition and they not involved targeted people.

"Actually, our land has been preceded through an initial review and study, even the provision of the settlement facilities and infrastructures has also been planned at that location. Indeed, in many times we had ever been recommended or even accused by some

sides to immediately provide the permanent location." Pangalengan Sub-District Secretary (Source: Yasaditama and Sagala, 2012)

However, there are some cases of pillage after the earthquake event that several victims took everything in many people's damaged house graveyard, such as a door, bricks, a couch, a cupboard, electronic device (such as television, radio, etc), and another home furnishing that it can be used again. They took this for their material and resources for build back their house or they sold it to get some money from it. Several participants realized that they could not prevent this crime, because they knew everybody needed it in that time and there was chaos condition after the earthquake event.

" *When the emergency time, there was very dark in the night because the electricity had not turned on yet. In that time, there are many victims who took home furnishing in people's damaged house. They are my neighbors and I know them very well. Before I built a tent, I saw that they were taking my home furnishings and I have lost my door, some wood material, and some roofs. I could not prevent it, because I realized that we needed it in that time. But I wanted to protect my properties more, so I built a tent to protect my home furnishing in front of my damaged house and I had lived in it for two months."* Women. 49. Poor Household. Pangalengan Village

Socioeconomic

The main problem of Pangalengan community's socio-economic impacts is direct economic losses in damaged properties, mainly house. Since the 2009 earthquake, West Java community has received financial assistance for housing damage by Indonesia government. Applied mechanism is with dividing the impacted people into three categories based on high level of damaged house, namely heavy damaged, moderate level and minor damaged. Further, each victim has different amount of received financing assistance based on their level of housing damaged: (1) Heavy damaged house victim got Rp 15.000.000, (2) Moderate damaged house got Rp 10.000.000, and (3) Minor damaged house got Rp 1.000.000 (Bappenas, 2009). Yasaditama and Sagala (2012) found demographic impact in Pangalengan community. In their findings, Pangalengan community regret that the amount of received assistance is still lacking for every category. Although damaged category based on observations both by government and also researchers, the amount of received assistance was relatively enough. Community is used to hope that it was included non-housing. However, it did not like community expected. It was realized that government wanted the affected population could rebuild their own house as soon as possible, but, in other side, government have problem in recovery funding.

"The financial assistance for damaged house was only as a stimulant for impacted people in order to be more motivated them to rebuild their damaged houses. In addition definitely government has no capability in covering all of this housing financing assistance alone." Pangalengan Sub-District Secretary (source: Yasaditama and Sagala, 2012)

The other assistance mechanism, which divides the distribution into 2 phases (9 months and 15 months after the disaster, for moderate and high damage categories only),

also often create problem among the beneficiaries (Yasaditama and Sagala, 2012). For most people in the study area, this phased mechanism can be severely hampered their house reconstruction process. People have a preference to be able to quickly re-occupy their houses, so in the end they unconsciously tend to not only depend on government assistance alone. For small portion people, this can then be handled through self-financing mechanism:

"We can't build a house by half to half, how could it be? for example in phase 1 we build wall first, then in phase 2 a few months later we had already added our house with a roof. In other side we also can't continue for more time to wait in refugee camps because we can't did our activities normally. To anticipate this, we sometimes borrow amount of money from relations and also as could as possible to set apart our income". Beneficiary (source: Yasaditama and Sagala, 2012)

In study locations there are only found a few donors who participated in the housing recovery process (Yasaditama and Sagala, 2012). In District Pangalengan for example some donors involved include the Habitat Indonesia, ITB, and Yayasan Ibu. Especially Habitat Indonesia, their contribution was even in the direct form of totally housing units rebuilding to several beneficiaries who meet their criteria. This is quite different with the other donors who only give indirect assistances such as building materials, equipment and technical guidance.

Pangalengan community seems unprepared to face this disaster. It can be seen that almost participants do not have any savings account or asset which it can be used when the disaster occurred. Their expenditure for buying service and material was increase when the recovery process too. They had two choices to recover from financial impact: they waited for financial assistance from government first, or they looked other financial resources, such from their relation or credit scheme from the bank. They also have lost many homes furnishing that broken by earthquake or struck down by building construction. They replaced it with the new one or repaired it. Even they have to buy new one, they bought it with credit scheme. Participants who are not a farmer, such merchants and businessman, need some financial capital for their business recovery. They also used credit bank scheme or relation financial resources. They must pay back for those financial resources in the future. Unfortunately, they have not had any saving since the earthquake yet. It can be financial susceptibility for the future disaster.

"I bought new to replace my ex-home furnishing which it cannot be repaired and I repaired one which it can be repaired. I bought and fixed it with credit scheme from the bank by my relation network because I did not have any money or saving and any collateral at that time. I did it too for deficit financial of housing reconstruction." Man. 48. Large Household. Sukamanah Village

"I used credit scheme from the bank to get a new financial capital by my relation network. I need this resource to open my store in Sukamanah market again after the earthquake event. The market was empty from buyers and I did not received any money for three months " Man. 48. Large Household. Sukamanah Village

Political

In the logistic distribution process, there are some distrust between residents and local leaders. Since the material distribution was limited, there are some perceptions by the victims that the materials were kept by the local leaders which were only distributed among their family members. Conflict is also found in the use of land for relocation that we discussed in socio-demographic section. While some people were given temporarily location by government owned Plantation Company for shelter, the residents kept staying in the relocation since the land is better than their previous location. This has caused some conflicts between the residents and the plantation company. There is also a conflict related to the distribution from some NGOs that are from different religious organization. Due to the belief of some leaders, the residents were forbidden to receive relief distribution.

"When we informed logistic distribution through Mosque's speaker, there were many miss understanding between members of community. In this neighborhood, there is a Moslem CBO who take a role as leader. They replaced the role of our neighborhood leader to manage logistic distribution. Christian community did not allow to get any logistic, because there was an issue many that Moslems in our village have changed their religion into Christian since the earthquake. There was a Christian organization who wanted to give 60 house unit to our villagers, but a community in our village rejected them. Finally, several household migrated to another area because this situation." Women. 49. Poor Household. Pangalengan Village

In the recovery process, the role of government as the main actor is very important. This also includes role of government in coordination with other stakeholders, such as communities, NGOs and private actors. Conflicts normally occur when there mis-understanding and not clear collaboration and agreement between actors. In the case of land conflict, government should have had provided the clear agreement between the residents and the plantation company that the land can only be used temporarily. In mis-understanding on the relief distribution, government can take role as the main actor to collect the aid and distribute it to the communities. Unfortunately, we cannot find evidence in Pangalengan Sub-District that some political assistance to solve this problem.

6. Conclusion

The paper has discussed that the social impact of earthquake in Pangalengan Sub-District and some strategies that can be used for lessons learned. The social impacts experienced by the community were assessed from psychosocial, socio-demography, socio-economic and political impacts. These kinds of impact in many cases are often omitted since many stakeholders focus much on physical and economic (*livelihood*) recovery. Trauma and conflict raised as the impact of the earthquake need a long term recovery process in order to return to the level of the previous condition or even difficult to achieve the same level. Understanding this information will help government and development planners to create some basic guiding principles for recovery process after a

disaster. Based on this research, this paper suggests including social assessment of the earthquake prior to the logistic delivery that is through the involvement of social capital e.g.: trust & leadership, indigenous knowledge, collective works and social networks. In addition to that, the roles of local leaders, both formal and informal are needed in order to smoothen the process of goods and material distribution. This is also important to maintain the social capital that exists in the society as condition before the earthquake disaster. Role of NGOs and local governments can be enhanced when integrated with this existing social capital.

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