

12-2011

# Community Participation in Post-tsunami Redevelopment in ACEH: The Process and Community Members' Perceptions and Preferences

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COMMUNITY PARTICIPATION IN POST-TSUNAMI REDEVELOPMENT IN ACEH: THE  
PROCESS AND COMMUNITY MEMBERS' PERCEPTIONS AND PREFERENCES

COMMUNITY PARTICIPATION IN POST-TSUNAMI REDEVELOPMENT IN ACEH:  
THE PROCESS AND COMMUNITY MEMBERS' PERCEPTIONS AND PREFERENCES

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy in Public Policy

By

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## ABSTRACT

The purpose of this dissertation research is to examine the process of community participation and community members' perceptions of and preferences for the participatory approaches in Aceh post-tsunami redevelopment. The research questions are: (1) How has the process of community participation been implemented in the redevelopment of Aceh Province after the tsunami disaster? (2) What are community members' perceptions of community participation in the redevelopment efforts after the Aceh tsunami? (3) What are community members' preferences for the community participation approaches in the redevelopment efforts after the Aceh tsunami?

I employed qualitative and quantitative methods in this study. The four case study villages were selected based on categories of level of development and tsunami-affected: Lam Teungoh, Lam Hasan, Lambung, and Merduati. Interviews were conducted with the representatives of government officials, key aid organizations/agencies, and residents involved in the relief efforts of the four case study villages. As many as 200 residents were selected randomly, where each case study village was represented by 50 residents.

In terms of the implementation of community participation, the research findings show that the occurrence of "ad hoc" participation (participatory activities mainly mobilized by community members) was related to community members' urgent needs right after the tsunami as well as their creativity and networking. With regard to aid organization/agency-promoted participation (participation mobilized by NGOs, international agencies, and the Indonesian Government), the findings indicate this kind of participation was associated with the willingness and capacity of aid organizations/agencies, nature of recovery projects, readiness of residents to participate, adequate time in exercising participation, and community facilitators' approaches.

With respect to perceptions of community participation in Aceh post-tsunami redevelopment, most respondents agreed that community participation in the relief efforts has benefited communities, in terms of meeting needs, capacity building, reducing traumatic feelings, and giving hope for a better future for communities. Meanwhile, factor analysis indicates that the biggest constraints of participation were the demand for quick decisions and actions, issue complexity caused by the tsunami, and the impact of Aceh's military conflict and Soeharto's authoritarian regime on citizens' awareness and capability of getting involved in the participatory process.

With regard to preferences for community participation approaches, most respondents agreed with provision of education and training as to participatory approaches for stakeholders and the formulation of specific guidelines for participation. The majority of respondents were also in favor of the implementation of both direct and representative participation in decision making. In terms of level of community participation in the government and NGO's recovery projects, more than half of respondents chose the "partnership" category of Arnstein's level of participation.

This dissertation is approved for recommendation  
to the Graduate Council.

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## ACKNOWLEDGEMENTS

This work is written with the help of many people and institutions. Without their help, it would have been impossible for me to finish. However, the mistakes and the weaknesses of this dissertation are mine.

I would like to thank Dr. Brinck Kerr, chair of my dissertation committee, for his support, guidance, and motivation at every stage of this dissertation research. I also wish to thank Dr. Donald E. Voth and Dr. Valerie Hunt, the members of my dissertation committee, for their advice and suggestion in this dissertation.

My appreciation should also goes to all of the interviewees of this study: the heads of the four case study villages (Sanusi Yahya of Lam Teungoh Village, Buchari, MY of Lam Hasan Village, Zaidi, M. Adan of Lambung Village, and Turmuzi of Merduati Village), aid organizations/agencies' workers (Tasir Muhammad Rizal Husein of Mercy Corps, Mulizarni of Development Alternatives, Inc./USAID, Sudirman Arif of UPLINK, Marziani of AIPRD, Mukhlishin of World Vision, Nazarul Khairi and Iqbal Barata of BRR, and Dedi Setiawan of *ReKompak*), Husaini, H. Raja Dalam, and Khair, for their insight and contributions.

Also special thanks go out to Hendri for his assistance in doing computation of this dissertation. His statistical expertise and skills helped me process and analyze the survey data parts.

I would like to express my gratitude to my friends for their friendship, support, and encouragement: M. Fadhil, Zulkifli (Bang Jol), Ramon Zamora, Wisnubroto, and Nizamuddin.

Special thanks to some institutions for their help and support: Fulbright and the Government of Aceh for providing funding for my PhD study, the Indonesian Ministry of Education and the Public Policy Program at the University of Arkansas for providing additional

funding for my dissertation research, as well as *Biro Pusat Statistik* (BPS) of Aceh Province, BPS of Banda Aceh City and BPS of Aceh Besar Subdistrict for providing the needed data.

Finally, I also want to thank my parents (the late M. Ali Basyiah Amin and Lenafarsiah), my wife (Nilahayati), my children (Hibri Samira, Altair Darin, and Aninda Zaira), as well as my sisters (Raihan, Afnan, and Zulfan), for their continuous love and moral support.

## **DEDICATION**

This dissertation is dedicated to all of the survivors of the Aceh tsunami and my beloved ones: my late Ayah Ali Basyiah, Bunda Lena, Nila, Hibri, Altair, and Zaira.

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# CHAPTER I

## INTRODUCTION

On December 26, 2004, an extremely strong earthquake with a magnitude of 9.1 on the Richter scale and the resulting tsunamis devastated the South Asia region. Of 12 nations hit by the tsunami, Indonesia suffered the greatest. The overall fatalities were estimated at 127,000 people, 93,285 people missing, and about 500,000 people displaced (BRR, 2009a). In Indonesia, the Province of Nanggroe Aceh Darussalam was affected the worst, while Nias Island in the Province of North Sumatra was affected to a much lesser extent.

The earthquake and tsunami wave damaged most of Aceh's coastal areas, infrastructure, settlements, and public facilities such as schools, health centers, market places, and government buildings. This disaster also affected the social and economic life of the people as well as their psychological condition (Republic of Indonesia, 2005). It was estimated that to rebuild the areas affected by the disaster in Aceh and Nias, the government of Indonesia needed approximately USD 4.9 billion. Pledges made by aid agencies surpassed the minimum required to rebuild to pre-tsunami level by 2.3 billion. Eventually 93% of the pledges were converted into real funding. Funds (in total USD 6.7 billion) came from three main sources: NGOs (USD 2.4 billion), donor agencies (USD 2.2 billion), and the Government of Indonesia (USD 2.1 billion) (BRR, 2009c).

The government of Indonesia anticipated the reconstruction and rehabilitation phase after the disaster by initiating a master plan and establishing a special agency to coordinate the mitigation of the disaster, i.e. the Reconstruction and Rehabilitation Agency of Aceh and Nias

(in Indonesian is known as *Badan Rehabilitasi dan Rekonstruksi Aceh dan Nias* or called BRR for short).

The government of Indonesia views community participation after the tsunami as an important component in the decision making process starting from the planning and implementation phases through to the monitoring and evaluation phases (The Republic of Indonesia, 2005; BRR, 2006). The government wants the survivors of the disaster to play an important role in the post-tsunami development activities along with the governments (central, regional, and local), the private sector, universities, professional associations, the mass media, and the community at large. In this regard, BRR is expected to lead the Aceh rehabilitation and reconstruction process. The process will be based on a participatory approach as the manifestation of good governance principles.

The implementation of community participation after the tsunami in Aceh Province is important to analyze due to the scale of the disaster and the socio-political situation in this province and at the national level. With respect to the scale of the disaster, the Aceh tsunami disaster is considered one of the worst natural disasters in modern times. Questions arising here, which are also addressed in this study, are what roles do Acehnese community members play in redevelopment efforts, and what is the extent of and how effective is their involvement?

From the socio-political standpoint, it is worth exploring how military conflicts taking place in Aceh prior to the tsunami affect today's Acehnese community. In many ways, the Darul Islam Movement/Islamic Army of Indonesia (*Darul Islam/Tentara Islam Indonesia* or DI/TII) and the Free Aceh Movement (*Gerakan Aceh Merdeka* or GAM) struggles for independence (during 1953-1962 and 1976-2005, respectively) have influenced all aspects of Acehnese community's life.

In the national context, community participation issues are also interesting to examine because emergent democracy in Indonesian shows great promise. After the collapse of Soeharto's authoritarian regime in 1998, Indonesia started entering a more democratic era. In this era, the high demand for increasing roles of citizens in social life has become one of the main concerns across the country (Poppe, et. al, 2001; Satriyo, et. al., 2003; Suselo & Sundungdolak, 2000). Law No. 22/1999 on Government Regional Autonomy (later revised by Law No. 32/2004) and Law No. 25/2004 on National Development Planning are pro-community participation laws resulting from this era. Besides enabling district governments to be fully responsible for development in their areas (in terms of planning, implementation, and evaluation), Law No. 22/1999 gives latitude to the district governments to engage all community elements in decision making and other development activities, even though the law does not specify the implementation of the involvement (The Republic of Indonesia, Law No. 22/1999). Law No. 25/2004 on National Development Planning emphasizes the need to accommodate a participatory approach to regional planning. It states that citizens can get involved in local governance through their participation in the deliberative multi-stakeholder forum for development planning (*Musrenbang*) which take place in stages from the village level through to sub-district and district levels. *Musrenbang* provides communities with opportunities to propose development programs (The Republic of Indonesia, Law No. 25/2004).

The following sections of this chapter will include research questions, the significance of the research for the public policy literature and for participants who deal with post-disaster community participation policies, and the conceptual framework of the participatory approach in post tsunami recovery efforts. Chapter 2 examines at theories that deal with community participation and disasters, including community participation in redevelopment after disasters,



public involvement in democratic systems, the definition and extent of community participation, the challenges of community participation, disasters as public policy issues, and collaboration in emergency management. Chapter 3 discusses the research methodology, including the design of the study, data collection and methods, sample selection, and data analysis. Chapter 4 examines the socio-economic profile of Aceh Province and the case study villages prior to and after the tsunami. Chapter 5 explains a conceptual framework of the participatory approach adopted in post-tsunami recovery efforts. Chapter 6 reviews the findings of the study and Chapter 7 concludes with summary of findings, limitations of the study, future research, and some recommendations for supporting participatory approaches in post-disaster redevelopment in Aceh and Indonesia in the future.

### **Research Questions**

In this study, I investigate the process of community participation, including community members' perceptions of and preferences about the participatory approach in the recovery efforts after the 2004 Aceh tsunami. My research questions are:

1. How has the process of community participation been implemented in the redevelopment of Aceh Province after the tsunami disaster?
2. What are community members' perceptions of community participation in the redevelopment efforts after the Aceh tsunami?
3. What are community members' preferences for the community participation approaches in the redevelopment efforts after the Aceh tsunami?

## Research Significance

Although there is some *general* guidance provided for community participation in post-disaster redevelopment (The Republic of Indonesia, Laws No. 25/2004, No. 32/2004, and No. 24/2007), to date, Aceh Province and other regions in Indonesia have not had any *specific* guidance on this matter. This situation needs to be seriously addressed in light of the appreciation of people's rights in determining their future in the disaster recovery process as well as supporting comprehensive participatory redevelopment efforts.

In post-disaster reconstruction, the involvement of the affected people and communities at large is instrumental to any long-term plans for sustainable recovery. The affected people and communities at large's involvement in reconstruction efforts is a crucial component in terms of building the capacity of communities, meeting the needs of the community, and maintaining the continuum of development. In terms of maintaining the continuum of development, their involvement in post-disaster reconstruction helps preserve the continuity of development (Newport & Jawahar, 2003; Pardasani, 2006; Waugh & Streib, 2006).

Given the above, the analysis of community participation after the Aceh tsunami is important for both Aceh Province and any other regions across the country as one of valuable bases for the preparation of more effective post-disaster participatory policies in the future.

This research will also add to the growing body of community participation literature on disaster mitigation efforts. It will provide alternative strategies and conceptual models for community participation after the disaster as well as enhance the basis for further study in community participation as part of disaster relief in global communities. The attention to community members' perceptions and preferences towards the participatory approach in post-disaster redevelopment is important. Their perceptions and preferences can affect their

involvement in post-disaster redevelopment, which in turn, contributes to the success of the recovery process (Buckle & Marsh, 2002; Coghlan, 1998; McCamish, 1998; McDowell, 2002; in Pardasani, 2006). In addition, by taking into account all stakeholders' views, including community members' preferences, policy makers can produce a more comprehensive and broadly supported strategy for the participatory approach in post-disaster redevelopment.

This research can benefit a number of parties. It will provide agencies and institutions at the local, national, and international levels with strategies and methodologies for developing community participation in the post-disaster period. This research will also help researchers in understanding community participation in the post-disaster term in developing countries, with a specific reference to Indonesia.

### **The Conceptual Framework of the Participatory Approach in Post Tsunami Recovery Efforts**

The participatory principles embedded in the Master Plan for Rehabilitation and Reconstruction for Aceh Province and Nias Islands were the main guidance for community participation in post-disaster redevelopment in Aceh . Some other references included related laws or regulations, namely Laws No. 25/2004, No. 32/2004, and No. 24/2007. Law No. 24/2007, specifically designed for the purpose of disaster management, was stipulated during the reconstruction process. Like the Master Plan, it also incorporates community-based disaster risk management. Laws No. 25/2004 and No. 32/2004 are the main laws that address the community's role in Indonesian general development processes. The central government in 2004 approved these laws which include the fundamental principles on which to build a more democratic system.

The master plan for rehabilitation and reconstruction for Aceh Province pays considerable attention to community participation issues. The master plan states that all community elements are expected to be involved in the decision making process from the planning and implementation phases through the monitoring and evaluation phases. The survivors of the disaster along with the community, the governments, private sector, and NGOs should cooperate in post-tsunami rehabilitation and reconstruction to achieve greater development results (The Republic of Indonesia, 2005).

Under the oversight of the Rehabilitation and Reconstruction Agency (BRR), the central and regional governments function to facilitate the participation of all components in the rehabilitation and reconstruction process. The Master Plan emphasizes the importance of the establishment of the Development Councils from the village to provincial levels with representatives from the public, government, and the private sector in order to coordinate the rehabilitation and reconstruction process. The Development Councils are expected to conduct planning exercises (identification of issues, strengths, threats and opportunities), develop action plans, and monitor and evaluate their implementation. The Development Council is a generic name. Its form depends on an already existing community institution.

In many ways, the master plan only provides general principles of community participation and does not set specific criteria, such as to what extent community members' roles and views in each stage of redevelopment process should be accommodated. It is no wonder then if in practice, participatory approaches used by NGOs vary. Vebry et al., (2007) state that certain NGOs involved in rebuilding houses used participatory approaches in the lowest form by only inviting their beneficiaries in the consultation process, while the rebuilding and funding process were still fully managed by the NGOs themselves. Other NGOs allowed wide latitude to their

beneficiaries by giving them a chance to design their houses (facilitated by their technical staff) and manage the needed funds.

Law No. 32/2004 on Government Regional Autonomy enables district governments to be fully responsible for planning, implementation, and evaluation of development in their respective areas. As a consequence of the enactment of this law, the central government is now responsible only for the following functions: defense and security, foreign affairs, monetary affairs, justice and religion. District development is solely within the authority of the district government (The Republic of Indonesia, Law No. 32/2004). This law also recommends that local governments engage community members in development of their areas. However, it does not give any explanation regarding the meaning and forms of the participation and what steps should be taken to put the participation in place.

Law No. 25/2004 on National Development Planning is more specific in supporting community participation in policymaking. This law emphasizes the need to accommodate a participatory approach to regional planning. Here, citizens can get involved in local governance through their participation in the deliberative multi-stakeholder forum for development planning (*Musrenbang*). *Musrenbang* takes place in stages from the village level through to sub-district and district levels to develop annual development programs and budgets. At the village level, *Musrenbang* provides community members with opportunities to voice their aspirations and participate in producing development programs that suit their needs (The Republic of Indonesia, Law No. 25/2004). However, instituting wide representation and participation is still a big challenge for local governments at this level.

Law No. 24/2007 on Disaster Management, so far the only specific law on disaster management in Indonesia, has now been an umbrella of Indonesia's disaster management

implementation that incorporates community-based disaster risk management. According to this law, disaster management is also part of the public domain, knowledge, and effort, and is integrated with government's role in planning and coordinating the efforts. Disaster management covers a series of actions in which stakeholders control, prevent, response or completely eliminate certain identified hazards. This law explicitly states each individual's rights in disaster management. The rights include gaining education, training and skills in the operation of disaster management; accessing written and/or verbal information in disaster management policies, participating in planning, operating, and maintaining the health service assistance delivery program including psychosocial support; participating in decision making on disaster management activities, especially those related to his/her self interest and his/her community interest; and conducting monitoring in accordance with mechanisms arranged in the implementation of disaster management (Partnerships for Disaster Reduction-South East Asia, 2008). Although this law enables community members to get involved in a wide scope of the disaster management process including in decision making and monitoring, like the Master Plan, it does not clearly state the extent to which community involvement will be accommodated nor how they should participate in each stage of the disaster management process including in the post-disaster term. The absence of these technical issues in the law is not supplemented in the operational guidance either.

## **CHAPTER II**

### **LITERATURE REVIEW**

This chapter will describe theories related to community participation in order to provide a theoretical framework and tools with which to examine community participation in post-disaster redevelopment in Aceh. The purpose of this literature review is to establish a knowledge base for the study. This chapter will be informed by theories about community participation in post-disaster redevelopment, public involvement in democratic systems, the nature of community participation (definition, extent, and challenges of community participation), disasters as public policy issues, and collaboration in emergency management.

Theories of community participation in post-disaster redevelopment will be described to examine the exercise of community participation in recovery efforts. Public involvement in democratic systems will be discussed to identify how citizens participate in development in a democratic arena. The nature of community participation will be reviewed in order to examine the essence, level and constraints of community participation. A review of disasters from the perspective of the field of public policy study will be conducted to identify the relationship between disasters and public policy. Finally, theories of collaboration in emergency management will be discussed to highlight the importance of collaboration among stakeholders in emergency management.

#### **Community Participation in Redevelopment after Disasters**

Community participation has been widely accepted as a tool for analyzing and addressing social problems in a sustainable way (Osti, 2004). However, the exercise of community

participation is surely contingent upon the settings in which it is implemented. Community participation in an emergency situation poses different challenges and constraints from those in a normal situation. The demand for quick decisions and actions in a context of complicated issues presents impediments for the implementation of community participation in post-disaster reconstruction (Moe & Pathranarakul, 2006; Waugh & Streib, 2006).

Research shows that community participation plays an important role in the recovery process after disasters. In post-disaster reconstruction taking place in Maldives, India, and Nepal, for instance, the involvement of the affected communities is vital to meeting the need of communities, improving capacity building of communities and maintaining the continuum of development. In terms of maintaining the continuum of development, their involvement in post-disaster reconstruction helps preserve the continuity of development (Newport & Jawahar, 2003; Pardasani, 2006; Waugh & Streib, 2006).

Although there have been different opinions on the degree of community involvement needed in redevelopment efforts, research shows that participation of affected individuals and communities is a determining factor leading to overall success (Buckle & Marsh, 2002; Coghlan, 1998; McCamish, 1998; McDowell, 2002; Pardasani, 2006). Buckle and Marsh (2002) argue that despite the significant role of experts in assessment of planning and implementation efforts, local knowledge, strengths, and priorities affect the redevelopment success. According to Buckle and Marsh (2002), the involvement of communities in needs assessment may be fraught with risk; however, this contributes to reducing disaster vulnerability and increasing resilience.

The involvement of communities can encompass the stages of need assessment, design, and implementation of the rebuilding efforts. This involvement promotes the recognition, acquisition, maturation and connection of community assets and produces self-reliant, self-



sustaining and empowered communities (Delgado, 2000; Homan, 2005, Kramer & Specht, 1983). To support participatory approaches, education, training, and awareness building within communities, related departments, and other concerned parties are an inevitable need (Newport & Jawahar, 2003).

Based on his research on community participation in post-tsunami reconstruction and redevelopment in the Maldives, Pardasani (2006) proposes a participatory model to implement a comprehensive disaster management and rehabilitation program. This model suggests the establishment of councils at two main levels: a National Advisory Council and Community Councils. The National Advisory Council functions to coordinate all redevelopment efforts involving all agencies, organizations, representatives from international development programs, financial experts, construction company executives, reconstruction experts, and community councils that are involved in the process of redevelopment. It also assists in creating a blue print for reconstruction and prepares reports and briefings for the public. Community Councils are based in villages and towns and consist of representatives of the local community from various backgrounds and professions, including at-risk groups. These councils have the right to review funding proposals and redevelopment efforts and propose modifications. These councils have representatives to the national advisory council elected by each community council (Pardasani, 2006).

Pardasani (2006) accentuates the important role of NGOs in the model. According to him NGOs should be advocates for the affected communities and help empower communities in terms of supporting their rights and needs, educating and informing them, helping community councils function, and guiding them in complex negotiating processes with bureaucracy and other institutions. Furthermore, he recommends that the whole process of reconstruction should

be undertaken in an open, accessible, accountable, and transparent manner to build trust among all components involved. Considering its general and applicable principles, it seems that Pardasani's participatory model for post-disaster reconstruction can be adopted in different settings with some modifications and adjustments.

Although community participation in post-disaster reconstruction in other countries has been intensively studied, there is only limited research paying attention to such work in Aceh's reconstruction after the 2004 tsunami. Vebry, Manu, and Berman (2007) examine community-based housing reconstruction programs implemented by three organizations, United Nations Human Settlements Programme (UN-HABITAT), Canadian Red Cross (CRC) and Urban Poverty Linkage (UPLINK). The research findings show that these three organizations used various levels of community participation: the consultation level of CRC (top-down approaches, the beneficiaries gave feedback, the benefactor made a decision), the collaboration level of UN-HABITAT (the beneficiaries and the benefactor make a joint decision), and the empowerment level of UPLINK (bottom-up approaches, the beneficiaries make a final decision). Interestingly, the highest level of participation (empowerment) resulted in the highest score in terms of beneficiary's satisfaction, accountability and construction quality. Conversely, the lowest level (consultation) resulted in the lowest score in those three aspects. Vebry et al. (2007) claim that the experience of UN-HABITAT, UPLINK and other organizations shows that homeowner's participation has speeded up reconstruction as a result of the increased sense of belonging. This research demonstrates that community participation in post-disaster reconstruction can be realistic, satisfying, fast, and can produce high quality outcomes. According to Vebry et al. (2007), the success of these community approaches rests on adequate time for the process and the availability of well-trained facilitators.

Previous studies have investigated the impacts, constraints, levels, scope, and strategies of community participation in post-disaster redevelopment (Buckle & Marsh, 2002; Coghlan, 1998; Delgado, 2000; Homan, 2005, Kramer and Specht, 1983; McCamish, 1998; McDowell, 2002; Moe & Pathranarakul, 2006; Newport & Jawahar, 2003; Pardasani, 2006; Vebry, Manu, & Berman, 2007; Waugh & Streib, 2006), but there is no particular study which examines the perceptions and preferences of community members toward this participatory approach itself. The attention to community members is important because their involvement in post-disaster redevelopment contributes to the success of the recovery process (Buckle & Marsh, 2002; Coghlan, 1998; McCamish, 1998; McDowell, 2002; in Pardasani, 2006). Also by properly considering and accommodating their views, in addition to government officials and other individuals or parties' views, policy makers can set a more comprehensive and broadly supported strategy for the participatory approach in post-disaster redevelopment in the future.

### **Public Involvement in Democratic Systems**

In democratic systems, it is widely accepted that citizens have determinant power in dealing with many aspects of their lives. Democracy, in general, requires that the government be in some way selected by, guided by, and accountable to the public. In the context of the U.S. federal system, what exists, are various forms of representative democracy, a factor which is complicated for the ordinary citizens, by the fact that there are multiple layers of general purpose governments, plus many forms of "special districts," all of which are supposed, in democratic systems, to at least be guided by and accountable to the public. Some democratic theorists view the democratic system as a mechanism for representing citizen interests as well as developing an

informed citizenry consistent with the educative functions of democracy (Pateman, 1970). This so-called “participatory democracy” is considered pivotal to development of citizens.

Added to the complications of representation and multiple levels and forms of government is the fact that, even in representative systems, the control individual citizens can, or should, have over government is limited by factors of numbers and widely varying levels of attentiveness and even knowledge (Dahl, 1990). Hence, typically “pluralism,” as discussed in theories of American democracy in the 1950s and 1960s, exists (Dahl, 1961; Truman, 1951). Pluralism is a system in which there is a whole plethora of groups and organizations—now often referred to as “interest groups”—intervening between the grassroots of individual citizens and their various “governments” (Dahl, 1961; Truman, 1951). This plethora of intervening groups and organizations is a large portion of what is now commonly referred to as “civil society,” something that is being promoted aggressively by U.S, European, United Nations, etc. organizations in their approach to the currently “emerging nations” in their efforts to promote their vision of democracy.

In fact, the “franchise,” the right to participate in government by voting, also varies and has changed over time in the U.S. Mostly, various mechanisms have emerged to extend the franchise to a broader range of citizens. One very significant, and somewhat unique, mechanism for expanding the franchise is “administrative participation.” This is the engagement of the public via “public involvement” by administrative agencies, often on a program-by-program basis, and very frequently directly engaging grassroots citizens. This is done in the form of such things as hearings, public meetings, organization of advisory committees, each focusing upon specific public agencies and/or programs (May, 1971; Voth & Bonner, 1978).

One of the things that is evident from this is that, in democratic systems, there is a wide range of flexibility in the manner in which citizens may participate, which allows for a considerable amount of what can best be called “ad hoc” participation (Dodge, 1974). Ad hoc participation may take a number of forms: committees, ombudsmen, citizen research and information offices, volunteer programs, and fund-raising efforts.

Starting with David Lilienthal’s writings (1944), Philip Selznick’s “TVA and the Grass Roots,” (1966) and the voluminous literature on the “Maximum Feasible Participation” feature of the U.S. war on poverty of the 1960s, and even the literature on community development, there is a very large literature on administrative participation, or what is often simply referred to “public involvement.” In the U.S., there are, for instance, detailed guidelines and manuals for “public involvement” in agency decision-making produced by various government agencies, like the Department of Transportation (United States Department of Transportation, 1976). Voth and Bonner (1978) have summarized some of the major features, functions, and dilemmas of administrative participation.

### **Definition and Extent of Community Participation**

To define community participation precisely is not an easy task. Various social, economic, educational, and other conditions within communities affect community participation. The varying degrees and types of involvement in development activities also contribute to the difficulty of defining “community participation.” In participatory development literatures, “community involvement,” “popular participation,” “self-help,” and “self reliance” are often considered to have the same meaning as community participation (Whyte, 1986).

In simple terms, Whyte (1986) defines community participation as “the involvement of the community members in development project” (p. 7). The involvement here includes a series of activities: assessment of the situation, definition of the problems, setting of priorities, making decisions, planning of action programs to overcome the problems, sharing responsibility in project implementation, and evaluating and modifying the project. Whyte examines the involvement of the community members; however he does not measure the degree of the involvement. It means that as long as the community is involved in the development project, though at the minimum level, it still can be categorized as community participation.

Unlike Whyte, Voth and Bonner (1978) contend citizen participation connotes active involvement in which the citizen engages. They focus on the effect of citizens on public decisions. According to Voth and Bonner, in simple terms, citizen participation may be defined as “voluntary activities undertaken by persons in their roles as ordinary citizens, or amateurs, to influence public decisions or the acts of public officials” (p. 4). Here, the citizens hope that, through their involvement, their interests will be considered and accommodated by those in charge.

Arnstein’s “ladder of citizen participation” (1969) offers an analytic framework for categorizing community involvement in development. She argues that citizen participation has hierarchical levels. The highest level of participation is the so-called citizen power which is defined as “the redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future” (p. 2). The lowest level is non participation in which citizens have no chance to get involved in planning or conducting programs. Arnstein’s “ladder of citizen participation” can be applied to various development activities and settings due to its flexibility and practicality. Arnstein does not

consider techniques and mediums of participation as the parameters in determining the level of participation. The main concern is to examine how much power citizens exercise regardless of how and in what arenas they gain the power.

Arnstein (1969) classifies community participation into three categories: non participation, tokenism, and citizen power -- based on the degree of power which citizens enjoy in decision making process. These categories are formulated as “eight rungs on a ladder of citizen participation.” The classification is based on the American context and its experiences. According to Arnstein (1969), in a hierarchal form, community participation categories from the lowest (the least meaningful) to the highest (the most meaningful) are as follows:

#### 1. Nonparticipation

In this category, community members are not allowed to participate in planning or conducting programs. Power holders ignore the involvement of community in the development process. This category has two levels (from the lowest to the highest):

##### a. Manipulation

The social elite are placed in the advisory boards of development programs aimed at engineering the community’s support. At meetings, the officials persuade and advise the citizens, and not the reverse.

##### b. Therapy

The authority tries to be the savior by “curing” the “diseases” suffered by the community. For example, tenants of public housing are used for the sake of the authority’s interest, such as through promoting cleanup campaigns. On the other side, they do not have a chance to deal with their urgent problems, such as arbitrary eviction or poor maintenance.

The fact is that it actually does not solve their real problems because it doesn't touch on the basic underlying factors causing the problems.

## 2. Tokenism

This category introduces the initial steps toward legitimate citizen participation through the involvement of the community in decision-making. Unfortunately, this involvement doesn't guarantee their concerns will truly be taken into account. The levels of community participation in this category (from the lowest to highest) are as follows:

### a. Informing

Citizens are informed of their rights, responsibilities, and options. Unfortunately the information is usually provided at a late stage and using a one-way flow of information (from officials to citizens), so citizens can't influence the decision significantly.

### b. Consultation

The community is invited to contribute ideas or considerations for the programs through surveys, neighborhood meetings, or public hearings. Participation is gauged by questionnaire responses, number of meetings/public hearings, or number of people attending the meetings/public hearings. The drawback is that there is no guarantee that their input will be really considered by the officials.

### c. Placation

The officials invite the community to provide input for programs and accommodate the involvement of community through the existence of their representatives in related planning boards. However, the right to accept or reject the advice still depends a lot on them.

## 3. Citizen power



In this category, citizens have a determinant power to force and influence the decision-making. A degree of citizen power can be achieved if the citizens have mechanisms in place which will hold their leaders accountable. This category has three levels. From the lowest to highest levels are as follows:

a. Partnership

The power of citizens is gained through negotiation. The officials share planning and decision-making responsibilities through joint policy boards, planning committees, or other mechanisms of problem resolution.

b. Delegated power

Citizens can have dominant decision-making authority with regards to a certain program or plan as a result of negotiation with public officials. One of the models at this level is the implementation of the rights of citizens to veto decisions.

c. Citizen Control

This highest level of community participation enables citizens to govern a program, to handle managerial aspects, and to negotiate to change the conditions. In practice, in the American context, many people consider that no model city can meet the criteria of citizen control because the final power and accountability are held by the city council.

Like Arnstein, another scholar, Johnson (1984), also analyzes citizen participation in light of the degree of involvement and power that citizens have in the decision making process. In terms of local planning, Johnson classifies community participation levels into five categories (in reality, they often blend with each other).

1. Constituent participation

This form appears when the planning choices made by the elected officials reflect their constituents' aspirations and needs. This form is possible to be implemented if citizens have an opportunity to choose their officials or leaders.

2. Consultative participation

This second form acknowledges the citizens' right to get information as well as to deliver comments, options and recommendation on planning. To realize the right, the planning authorities need to implement meetings or hearings.

3. Definitive participation

This is a distinct form of citizen participation. Here, citizens have legal authority to impose requirements, grant permission, and commit resources. The three top levels (degree of citizen power) of Arnstein's ladder of citizen participation regarding partnership, delegated power, and citizen control levels strongly reflect this form.

4. Implementative participation

In implementing planning decisions, the involvement of citizens becomes significant. In this case, the citizens' choices can be various: cooperate with, abstain from, or oppose the implementation.

5. Evaluative participation

This form is implemented after the planned project has been completed. The citizens who are interested in and beneficiaries of the project decide whether the outcomes meet their needs and interests. This form of participation is worthwhile in order to give feedback for the implementation of constituent participation. For instance, the failure of a particular project can result in the rejection of similar projects.

Given the above explanation, it can be concluded that community participation refers to a situation in which community members take part in decision making, planning, implementation, and evaluation processes in the affairs they are interested in. The levels of participation vary from the “no power” to “superficial power” and “real power” levels. In terms of how communities get involved in participatory process, it can take place through representative and direct participation. In the former participation, community members represented by bureaucrats or community leaders formulate decisions to fulfill community aspirations and needs. The latter is implemented by enabling community members to directly voice their concerns.

### **The Challenges of Community Participation**

Community participation in development can benefit both communities and the government (Rukmana et. al, 1993; Voth & Bonner, 1978). First, community participation mobilizes the resources of citizenry (money, material, knowledge, skills, and leadership) which contributes to complementing the lack of government resources. Second, community participation creates a possibility for decisions to be based on the community’s needs and priorities. Third, community participation ensures community’s knowledge, creativity, and skills are recognized and used that in turn results in the enhancement of community’s capacity building. Fourth, community participation builds up the self enabling and cooperative spirit of the community. Fifth, community participation ensures a greater acceptance and appreciation of development programs. This may result in better care and maintenance. Sixth, community participation can function to reduce conflict by airing conflictual issues openly and attempting to resolve them.

According to Hoff and Steinberg (1992), the willingness and readiness of both the government and communities affect community participation in policymaking process. On the one hand, government bureaucrats and agencies should have the political will and skills to stimulate and broaden participatory process. On the other hand, community members should have the will and ability to participate in the process or learn over time the benefits of such participation. Referring to Cobb and Ross (1997), “low cost strategies” are used by government to make sure that an issue is never considered in the agenda. This unwillingness of government relates to an attempt to preserve its power and promoted its own self-interest. The use of these strategies limits government’s use of resources, such as funds, time, and people.

Despite its potential benefits, public participation in development poses challenges for community decision makers. According to Cogan, Sharpe, and Hertzberg (1986), citizen participation in development will vary for different activities and governmental levels. In terms of activities, due to technical capability issues, citizen participation is most effective in the stages of goal formulation and policy definition and tends to be limited in other stages. In this case, the planners’ roles in those other stages will be much more dominant. Cogan et al. (1986) consider that citizen participation in development covers a broad scope (i.e. goal setting, policy identification and analysis, policy making, administrative rulemaking, program operations, and evaluation). With regard to governmental levels, citizens tend to get involved in local level decisions because they are most relevant to their daily lives. On the other hand, issues at the state and regional levels tend to be more abstract and removed from their daily routine.

Moreover, Cogan et al. (1986) argue that the constraints of community participation should also be considered in light of the nature of community participation itself. On one hand, public involvement is often a requirement for government. On the other, it is optional for

citizens. However, Cogan et al. (1986) contend, even though community members tend to be reluctant to participate in the development process, it does not mean that they have no motivation to be involved. As a matter of fact, they have various motivations. They choose to participate probably because they expect a satisfying experience and hope to be able to make a difference. With regard to a well-planned program, the expectations of community members and the government are similar.

Meanwhile, Snel (1999) contends that there are three primary constraints on community participation. First, it is likely that community participation is considered an unfair distribution of work among members of community. Some community members probably feel that they are asked to take on extra work tasks that do not provide them with appropriate financial, social, or other incentives. Second, the usual positions of people tend to be individualistic. Dealing with this, it is difficult to involve people with affairs that are not directly related to their lives and interests. Third, community members perhaps consider that the development project is government's responsibility, therefore government's efforts to involve them in the project is a form of exploitation.

Based on this review of the literature, it can be concluded that constraints on community participation in policymaking come from both the government and the community. The roles of these groups and their cooperation determine the success of community participation in policymaking process. More successful community participation requires the political will and the skills of government bureaucrats and government agencies to stimulate the participatory process, as well as the awareness and abilities of community members to participate in the process.

Specifically, to overcome the technical capability constraints that, in the worst case, lead communities not to be able to get involved in policymaking, the constituent participation model formulated by Johnson (1984) can be adopted. Through the constituent participation model, community members can be represented by officials or leaders who are familiar with the issues with which the community is dealing. This model requires elected community representatives so that community's aspirations and needs can be properly channeled in the policymaking process.

### **Disasters as Public Policy Issues**

In his book *After Disaster: Agenda Setting, Public Policy, and Focusing Events*, Birkland (1997) considers disasters as part of focusing events that are important in policy making. He defines a focusing event as “an event that is sudden, relatively rare, can be reasonably defined as harmful or revealing the possibility of potentially greater future harms, inflicts harms or suggests potential harms that are or could be concentrated on a definable geographical area or community of interest, and that is known to policy makers and the public virtually simultaneously.” (p. 22). In response to disasters, government needs to make decisions about “official disaster declarations or resource allocations connected with mitigation, preparedness, response or recovery” (Perry, 2007, p. 4).

In the field of public policy study, disasters are often analyzed from the perspective of the surface features of an agent, that is, natural and man-made (catastrophic) disasters. Birkland (1997), for instance, discusses how four types of man-made and natural disasters (oil spills, nuclear power plant accident, earthquakes, and hurricane) affect agenda setting and the policy making process. When discussing natural disasters as focusing events, Birkland examines the physical, economic, and human features. These disasters are among humanity's most damaging,

expensive, deadliest and feared events. Besides killing a large number of people, they also destroy infrastructure and affect the social and economic life of the people.

As disasters, focusing events provide a reasonable push to get the attention of people in and around government (Kingdon, 1995). Although they are not the sole triggers of attention to a problem, focusing events have potential to motivate the process of change when they occur in the course of an already ongoing debate on a particular issue, or when there is a stalemate in a policy debate.

Birkland (1997) contends that a potential focusing event has several criteria. First, the event happens suddenly. A sudden event can be used to attract greater attention to the problem revealed by the event. Second, a potential focusing event is rare, unpredictable and unplanned. The event is not a daily occurrence, strikes with little or no warning, and is unexpected. Third, a potential focusing event affects a lot of people. In the case of natural disasters, for instance, those people can be in the same area. Fourth, the event is learnt by members of the policy community virtually simultaneously.

According to Birkland (1997), the agenda setting power of the event --the process by which issues gain greater mass and elite attention, depends on five factors. The first is the magnitude of harm caused. Certain problems are so injurious, large and salient that they almost automatically attract public attention. The second factor is the scope and rarity of the issue. A widespread and infrequent issue has more chance to gain public attention. The third factor is the role of policy communities and policy entrepreneurs in the policy domain. Policy communities refer to active and informed individuals or groups that form advocacy coalitions. Policy entrepreneurs are those who get involved in the issue because of their material interests or

technical expertise in the field and lead advocacy coalitions in advancing issues on the agenda (Sabatier & Jenkins-Smith, 1999).

The fourth factor is the social construction of the problem. Problems are socially constructed through the use of symbols, beliefs, and facts. And the fifth factor is the symbolic power of the event to extend the issue to a broader community of citizens. Symbols are the idea of how complex issues are transmitted into easy ones. These symbols are framed by participants in policy making and propagated by the mass communications media (Birkland, 1997).

### **Collaboration in Emergency Management**

In the disaster literature, terms such as emergency preparedness, disaster planning or disaster management, are used interchangeably in the context of efforts to manage and control disasters (Pearce, 2000). Emergency management can be defined as “the discipline and profession of applying science, technology, planning, and management to deal with extreme events that can injure or kill large numbers of people, do extensive damage to property, and disrupt community life” (Hoetmer, 1991, p. xviii). In this regard, emergency managers (those who are in charge of coping with disasters) should employ knowledge, techniques, strategies, tools, organization networks, and other community and external resources to reduce the occurrence of disasters and successfully deal with their impacts in order to protect people, property, and the environment.

According to Choi (2008), emergency management is basically a comprehensive management program covering hazard mitigation, disaster preparedness, disaster response, and disaster recovery. He argues that hazard mitigation deals with prevention and lessening the impact of a disaster. According to Choi (2008), disaster preparedness is related to preparation to



mitigate against, respond to, and recover from any disaster, such as emergency operations plans, resource management plans, and training and exercises. Disaster response includes emergency operations to save lives and property through evacuating and providing supplies/logistics for victims and restoring damaged public services (Choi, 2008). Disaster recovery takes actions to return the system to normal to cope with disaster impacts, such as debris clearance, unemployment, temporary housing, and facility development (Choi, 2008).

Emergency management relates to many actors (i.e. the vulnerable communities, government institutions, non government organizations (NGOs), private sectors, and the general public). Therefore, emergency management should be supported by effective management strategies. Collaborative management is one of strategies necessary for coping with disasters (Montjoy & Kiefer, 2006; Waugh & Streib, 2006).

Collaborative management can be defined as “a concept that describes the process of facilitating and operating in multi-organizational arrangements to solve problems that cannot be solved, or solved easily, by single organizations” (Agranoff & McGuire, 2003, p. 4). Due to complicated problems and negative impacts resulted from disasters, it is important to set up plans, structures, and arrangements to engage the efforts of governments, voluntary and private agencies and other related parties in a comprehensive and coordinated manner (Moe & Pathranarakul, 2006).

Promoting collaboration in complex organizations is extremely challenging because people (or parties) in the organizations are expected to work together to share resources, power, and authority, so that they can embrace common goals that could not be achieved by only relying on a single individual or party (Kagan in Daka Mulwanda et al., 1995).

## Summary

Several theories presented in this literature review were applied to analyze community participation in Aceh post-tsunami redevelopment. Theories of public involvement in democratic systems were employed to investigate the forms of participation in the recovery efforts. How community members participate in the relief efforts in relation to the three forms of participation indicated in these theories, i.e. “ad hoc,” “interest group,” and “administrative” participation (Dahl, 1961; Dodge, 1974; May, 1971; Truman, 1951; Voth & Bonner, 1978) was investigated in the context of Aceh post-tsunami redevelopment.

In examining community members’ perceptions of the importance, constraints, extent of community participation in post-tsunami reconstruction, I also adopted a number of concepts provided in this literature review. The importance of community participation refers to the work of Newport and Jawahar (2003), Pardasani (2006), Waugh & Streib (2006). Constraints of participation adopt the work of Moe and Pathranarakul (2006), Waugh and Streib (2006), and Hoff and Steinberg (1992). Meanwhile, Arnstein’s level of participation (1969) was used to examine the extent to which community members have participated in Aceh post-tsunami redevelopment.

In terms of determining community members’ preferences for the participatory approaches in post-tsunami redevelopment, I referred to the work of Vebry et al. (2007) on the need of education and training on participatory approaches for stakeholders as well as the need of the formulation of specific guidelines for participation. Direct and representative participation discussed in Arnstein (1969) and Johson (1984) were also adopted to examine the extent to which community members support the implementation of these two types of participation.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

As stated in Chapter I, my research questions are: (1) How has the process of community participation been implemented in the redevelopment of Aceh Province after the tsunami disaster?; (2) What are community members' perceptions of community participation in the redevelopment efforts after the Aceh tsunami?; and (3) What are community members' preferences for the community participation approaches in the redevelopment efforts after the Aceh tsunami?

This chapter explains the methodology employed in this study to answer the research questions. This chapter includes, design of the study, data collection, sample selection, and data analysis.

#### **Research Design**

The methodological approach used in this study included case studies of Acehese communities in the tsunami-affected areas. The case study areas included the following villages: Lam Teungoh, Lam Hasan, Lambung, and Merduati. In this study, I employed qualitative and quantitative methods consisting of document analysis, in-depth interviews, and surveys. The use of mixed-methods aims to provide a more comprehensive understanding of the research questions. Mixed methods can neutralize the disadvantages of using either qualitative or quantitative method and complement the strengths of the two methods. This strategy is commonly used in public policy research. Policy research employs a number of methods,

techniques, and tools in analyzing public policy issues as well as promoting better policy (Haas & Springer, 1998).

The first research question “How has the process of community participation been implemented in the redevelopment of Aceh Province after the tsunami disaster?” was answered by the qualitative method which employed the following instruments: document analysis and in-depth interviews. The two latter research questions “What are community members’ perceptions of community participation in the redevelopment efforts after the Aceh tsunami?” and “What are community members’ preferences for the community participation approaches in the redevelopment efforts after the Aceh tsunami?” were addressed by the quantitative method by using the survey (questionnaire) instrument.

### **Data Collection**

Data were collected from fall 2009 through early fall 2010. The primary sources of data concerning the profiles of Aceh Province and case study villages prior to and following the tsunami and other relevant preliminary data were collected from fall 2009 until mid-spring 2010. During this period, I also chose four case study villages based on certain criteria (presented in the sample selection section) as well as carrying out the questionnaire pretests. Beginning in March until early fall 2010, the remainder of the research work, such as conducting interviews and surveys, was completed.

### ***Documentary Sources***

I analyzed documents from various sources pertinent to community participation in rehabilitation and reconstruction of Aceh Province after the tsunami at the provincial and case

study village levels. The documents included laws and regulations (Law No. 25/2004 on National Development Planning, Law No. 22/1999 on Government Regional Autonomy, Law No. 32/2004 on Government Regional Autonomy (the revision of Law No. 22/1999), Law No. 11/2006 on the Aceh Government, and Law No. 24/2007 on Disaster Management), Attachment 1 Regulation of the President of Republic of Indonesia number 30 year 2005 on Master Plan for Rehabilitation and Reconstruction for the Regions and people of the Province of Nanggroe Aceh Darussalam and Nias Islands of the Province of North Sumatera, Main book of Rehabilitation and Reconstruction (Republic of Indonesia, 2005), reports from the government, village administrations, BRR, NGOs, international agencies, BPS - Statistics (provincial and district levels) on post-tsunami redevelopment, socio-economic profiles of Aceh and the four case study villages prior to and following the tsunami.

### ***Interviews***

Interviews were conducted with three groups: government officials (BRR) and Ministry of Public Works officials), NGO and International Agency workers, and community leaders (heads of villages and informal leaders). Selection of participants for the interviews was based on the relevance of their contribution to the understanding of the research problem. The interviews were mainly intended to gather information about the community participation process and benefits, supporting factors and constraints of participation. The interview questions are presented in Appendix C.

## *Surveys*

Surveys were carried out by involving community members in four tsunami-affected villages. Questionnaires were used to obtain community members' perceptions and preferences about community participation in post-tsunami reconstruction. As many as 200 people from 4 villages got involved in the survey, where each village was represented by 50 people. A questionnaire was selected as an instrument because of a relatively large number of respondents involved and much information needed to be obtained from them. The questionnaire is presented in Appendix D.

## *The Questionnaire Pretests*

The questionnaire pretests were mainly aimed at checking the contents, format, and order of the questions. The respondents of the pretest were 5 residents of Lam Teungoh Village. Based on the results of the pretests, I then revised the questionnaire questions. Due to the difficulty in expressing thoughts in writing among community members, the all questions, except for some personal data questions, were drafted in multiple choice form. This was also in line with suggestions from the head of Lam Teungoh Village and the Lam Teungoh community leader. Another important revision was specifying the occupation option (fisherman, farmer, merchant, government employee, house wife, unemployed, etc) to prevent respondents from answering "general occupation."

## **Sample Selection**

Sample selection included villages, community members within each village and aid organizations/agencies.

## *Villages*

The four case study villages were selected based on two categories of level of development (more developed and less developed) and two categories of tsunami-affected (very severely affected, and moderately-to-severely affected). Two less developed villages included Lam Teungoh (very severely affected) and Lam Hasan (moderately-to-severely affected), both in Peukan Bada Subdistrict, Aceh Besar District. Meanwhile, two more developed villages included Lambung (very severely affected) and Merduati (moderately-to-severely affected), located in Meuraxa Subdistrict and Kuta Raja Subdistrict respectively.

The village level of development here is associated with socio-economic conditions and land use systems. More developed areas were mainly indicated by service-based economic activities as well as high level of residents' incomes and education. In contrast, less developed areas were mainly reflected by agricultural or fishery-based economic activities as well as low level of residents' incomes and education.

In terms of village income/capita level, Aceh Province income/capita was employed as a benchmark to decide the extent of village income/capita. In this study, Aceh's annual income/capita refers to that in 2009 which is Rp. 16.9 million or about Rp 1.4 million/month (BPS – Statistics Indonesia, 2010). Due to the absence of published data about income/capita at the village level (a common case in Indonesia), these kinds of data were obtained from the head of the village.

The tsunami-affected level is related to casualties and damage caused by the tsunami to the village's environment, housing, and public facilities (covering transportation, health facilities, religious facilities, educational facilities, government building, energy and electricity, postal and telecommunications service, drinking water and sanitation, and water resources).

### ***Community Members***

Community members were selected randomly. The fifty respondents selected in each village were chosen based on the following steps: the list of village members was collected from the village office, village members who were under 15 years old were left out, and fifty village members were then chosen randomly using a random number table. When the list in the village office was incomplete, I collected the information from the neighborhood units (Rukun Tetangga or RT) officials.

### ***Aid Organizations and Agencies***

Key aid organizations and agencies involved in post-tsunami redevelopment were chosen in the four case study villages. Each village was represented by two aid organizations or agencies. Their approaches in recovery efforts were examined to identify the general picture of the participatory process following the tsunami. For this purpose, representatives of the aid organizations and agencies, particularly those who dealt with participatory issues like community organizers or community facilitators, were interviewed. The aid organizations and agencies included NGOs, international agencies, and government agencies. Specifically, NGOs included Mercy Corps (in Lam Teungoh), UPLINK and AIPRD (in Lam Hasan) and World Vision (in Lambung). International agencies included USAID/DAI (in Lam Teungoh) and UN-HABITAT (in Merduati), while government agencies included BRR (in four case study villages) and Ministry of Public Works (in Lambung and Merduati).



## **Data Analysis**

Data analysis was explained based on methods used (qualitative and quantitative methods) to answer each research question.

### ***The Qualitative Method***

To answer research question # 1, “How has the process of community participation been implemented in the redevelopment of Aceh Province after the tsunami disaster?” document analysis and interviews were undertaken. In terms of document analysis, I collected data about the implementation of community participation in the four case study villages by analyzing relevant documents (as explained in the documentary sources section) and interviewing community leaders (heads of villages and informal leaders), government officials, and aid organization/agency workers of the four case study villages.

The data relate to the implementation of community participation in the case study villages based on the three categories of participation: “ad hoc,” “interest groups/civil society-promoted” and “administrative” participation suggested in theory. The second type of participation was modified a little bit to be “aid organization/agency-promoted participation,” because this type also includes the international agencies’ roles. As discussed in the literature review chapter, “ad hoc” participation relates to voluntary actions mainly mobilized by community members themselves. “Administrative” participation is a participation mechanism in which administrative agencies take the initiative in reaching out the citizens and involving them. Aid organization/agency-promoted participation is a participation mechanism in which aid organizations/agencies help empower communities.

In terms of examining the extent to which residents have participated in post-tsunami redevelopment, particularly for the categories of “aid organization/agency-promoted” and “administrative” participation, the Arnstein’s level of participation was employed. In addition, constraints, supporting factors and benefits of the implementation of community participation in the redevelopment of Aceh Province after the tsunami disaster, from the perspectives of the interviewees, were also investigated.

Meanwhile, the analysis of interviews and documents followed qualitative research methodologies, in particular Miles and Huberman’s (1994) techniques for data reduction and display. The techniques I adopted could be divided into the following steps:

1. Noting and Coding of primary information (interviewee’s identity and their answers to the questions).
2. Breaking down the content of each interview into short summarizing sentences.
3. Summaries were sorted based on the sets of interview questions with regard to community participation in post-disaster reconstruction (implementation, constraints, supporting factors, and benefits).
4. For over all comparison, findings were displayed on a matrix system.

### ***The Quantitative Method***

To answer research questions # 2 and 3, “What are community members’ perceptions of community participation in the redevelopment efforts after the Aceh tsunami?” and “What are community members’ preferences for the community participation approaches in the redevelopment efforts after the Aceh tsunami?” the survey (questionnaire) instrument was employed.

After data collection which used the questionnaire instrument was completed, data were processed and analyzed by using the statistical package (SPSS). Data were coded and categorized, and then divided into three groups: profiles of the respondents, respondents' perceptions of community participation in the redevelopment efforts after the Aceh tsunami, and respondents' preferences for the community participation approaches in the redevelopment efforts after the Aceh tsunami. Profiles of the respondents included personal data and data about respondents' involvement in post-tsunami redevelopment (such as redevelopment activities they got involved, reasons why they got involved in the activities and level of their satisfaction on the involvement in the tsunami relief efforts). Respondents' perceptions include perceptions of the importance of community participation and the constraints of community participation in post-tsunami redevelopment. Respondents' preferences include preferences for the following approaches: provision of education and training as to participatory approaches, the formulation of specific guidelines for community participation in the rebuilding process, the way community members participate (direct and representative) in the relief efforts, and participatory approaches promoted by the government and NGOs based on Arstein's level of participation.

Respondents' perceptions of the importance of community participation were examined by cluster analysis. To know the profiles of those who "tend to agree" and "tend to disagree" with the importance of participation, cross tabulation were used with variables of sex, age, education, and income. To find out respondents' perceptions of the most dominant factors which impeded the implementation of community participation in Aceh post-tsunami redevelopment, factor analysis was used. Finally, to find out respondents' preferences for the community participation approaches in the redevelopment efforts after the Aceh tsunami, descriptive statistical analysis was used. In this respect, the extent to which respondents preferred a number

of participatory approaches in the redevelopment efforts was presented. Table 3.1 below presents the summary of research questions, methodology, instruments, samples, and data analysis of the dissertation research.

**Table 3.1.: Summary of research questions, methodology, instrument, documents/samples, and data analysis of the dissertation research**

Research Questions	Methodology	Instrument	Document/Sample	Data Analysis
(1) How has the process of community participation been implemented in the redevelopment of Aceh Province after the tsunami disaster?	Qualitative method	Document analysis	Relevant laws and regulations, Master Plan for Rehabilitation and Reconstruction of Aceh, Main Book of Rehabilitation and Reconstruction of Aceh, reports from the government, BRR, NGOs, international agencies, four case study villages, BPS – Statistics	-Three categories of participation (“ad-hoc,” aid organization/agency-promoted, and administrative) were adopted to analyze the implementation of participation in the Aceh post-tsunami redevelopment - Arnstein’s level of participation was used to examine the extent to which residents have participated in post-tsunami redevelopment - Constraints, supporting factors, and benefits of the implementation of community participation from the perspectives of the interviewees were examined - Miles and Huberman’s (1994) techniques for data reduction and display was used to analyze interviews and documents
		Interview	Government officials of BRR and Ministry of Public Works, workers of organizations/ agencies (Mercy Corps, UPLINK, AIPRD, World Vision, USAID/DAI, UNHABITAT), and community leaders (heads of the villages and informal leaders of the four case study villages)	
(2) What are community members’ perceptions of community participation in the redevelopment efforts after the Aceh tsunami?	Quantitative method	Survey (questionnaire)	- Residents of the four case study villages (200 residents) were selected randomly. Each village was represented by 50 villagers. - Four case study villages (Lam Teungoh, Lam Hasan, Lambung, and Merduati) were selected by considering of level of development and tsunami affected.	- Cluster analysis and cross tabulation were used to examine respondents’ perceptions of the importance of participation. - Factor analysis was used to find out respondents’ perceptions of the most dominant factors which impeded the implementation of participation.
(3) What are community members’ preferences for the community participation approaches in the redevelopment efforts after the Aceh tsunami?				

## CHAPTER IV

### THE PROFILE OF ACEH PROVINCE AND FOUR CASE STUDY VILLAGES PRIOR TO AND FOLLOWING THE TSUNAMI

This chapter includes a portrait of the Aceh Province and four case study villages (Lam Teungoh, Lam Hasan, Lambung, and Merduati) prior to and following the tsunami. This chapter is intended to give a general description of the Aceh Province and the four case study villages prior to and following the tsunami and to show the extent to which the tsunami has influenced the province and the villages.

#### **The Profile of Aceh Province**

The Aceh Province, the westernmost area of Indonesian Archipelago, has an area of 57.366 square kilometers, spreading over 23 districts and cities, from the Aceh Besar District to the South Aceh District. Aceh has undergone significant changes during the post-military conflict (2005-present) and post-tsunami reconstruction era (2009-present). The reconstruction effort and the peace treaty between the government of Indonesia and the Free Aceh Movement (GAM) on August 15, 2005, have led to a lot of challenges and a number of opportunities for Aceh. Below is the overview of Aceh's socio-cultural, political, economic, infrastructure, agricultural and environmental conditions prior to and following the tsunami

#### ***Socio-Cultural and Political Conditions***

Based on population census in 2010, BPS – Statistics Aceh reports that Aceh has a population of 4,486,570, consisting of 2,243,578 male and 2,242,992 female (Waspada, 2010). Prior to the tsunami in 2004, BPS - Statistics Provinsi Nanggroe Aceh Darussalam (2008) reports

the population stood at 4,218,486, while BRR's version (2009a) states the number is greater, i.e. 4,297,485. After the tsunami and earthquake, BPS – Statistics Indonesia reports that, based on a 2005 census, the population decreased to 4,031,589 (Savitridina, et. al, 2006). Of these three sources, only BRR provides detailed data about the number of tsunami victims. According to this agency, the total number of casualties caused by the disaster was about 127,000, with an additional 93,285 declared missing. About 500,000 survivors lost their homes, while 750,000 people lost their livelihoods (BRR, 2009a). Table 4.1 reports data on the number of Aceh's population by district/city prior to and following the tsunami based on BPSs – Statistics Aceh and Indonesia's sources.

**Table 4.1.: Number of population by district/city in Aceh Province prior to and following the tsunami**

No	District/City	2004	2005
1	Simelue	71,517	78,389
2	Aceh Singkil	144,684	148,277
3	Aceh Selatan	185,704	191,539
4	Aceh Tenggara	168,229	169,053
5	Aceh Timur	312,014	304,643
6	Aceh Tengah	285,619	160,549
7	Aceh Barat	160,545	150,450
8	Aceh Besar	301,575	296,541
9	Pidie	469,888	474,359
10	Bireun	348,057	351,835
11	Aceh Utara	487,526	493,670
12	Aceh Barat Daya	111,100	115,676
13	Gayo Lues	68,312	72,045
14	Tamiang	229,520	235,314
15	Nagan Raya	110,486	123,743
16	Aceh Jaya	79,155	60,660
17	Bener Meriah**	-	106,148
18	Pidie Jaya**	-	-
19	Banda Aceh	239,146	177,881
20	Sabang	28,692	28,597
21	Langsa	135,167	137,586
22	Lhokseumawe	138,663	154,634
23	Subulussalam**	-	-
Total		4,218,486	4,031,589

Sources: BPS – Statistics Aceh (2008) and BPS – Statistics Indonesia (2006)

\*Bener Meriah was established in 2004, while Pidie Jaya and Subulussalam in 2007

Aceh has a number of ethnic and language groups. The dominant ethnic group is Acehnese which occupies areas throughout Aceh. Many of this ethnic group's people live in Aceh Jaya District, Nagan Raya District, the city of Lhokseumawe, and Langsa District, which are located in the coastal areas. Alas people made up of the Gayo ethnic group mainly inhabit the central, eastern and southeastern part of Aceh, spreading over 4 districts (i.e. Central Aceh, Bener Meriah, Gayo Lues, and parts of Aceh Tamiang). Tamiang mostly live in Aceh Tamiang, Aneuk Jamee in southern and southwestern, Kluet in South Aceh, and Simeulue in Simeulue

Island. The people of Aceh communicate in several languages, but the Acehnese language is widely spoken in the province. This language is a member of the Aceh-Chamic group of languages. This group of languages is mostly found in Vietnam and Cambodia and is closely connected to the Malay group of languages. Other main languages cover among others Gayo, Sigulai, and Haloban (Hasjmy, 1992).

The majority of people in Aceh embrace Islam. It is reported that in 2004, the number of Muslims reached 4,248,804 people, or 98.87 percent of the total population of Aceh (BPS-Statistics Provinsi Nanggroe Aceh Darussalam, 2005). Islam and custom cannot be separated in the Aceh people's lives. One of the *hadih maja* (traditional proverbs) of Aceh says "*Hukom ngon adat lagee zat ngon sifeut*" which means "the Islamic law and traditional custom are like fabric and its characteristics." Hence, all the teachings and public system in Aceh could not be in opposition to Islam" (Hasjmy, 1992).

Administratively, as other provinces in Indonesia, under Law No. 32/2004, Aceh Province consists of the following government structure (from the highest to the lowest levels): districts (*kabupaten*)/cities (*kota*), sub-districts (*kecamatan*), and villages (*desa* or *kelurahan*). Later, the peace treaty between the government of Indonesia and the Free Aceh Movement (GAM) in 2005, led the central government to stipulate a new law, namely, Law No. 11/2006 on the Aceh government which changed the province structure and election process.

Law No. 11/ 2006 acknowledges *mukim* and *gampong* as lawful units of a community (Republic of Indonesia, 2006). *Mukim* is a government level under the sub-district, and comprises several *gampongs*, and led by an *imeum mukim*. *Gampong*, the same level as a village, is under a *mukim*, with the right to conduct its own internal affairs, and is led by a *geuchik*. Since 2009, all villages in Aceh have officially been transformed to *gampongs* in accordance with the



enactment of the new Aceh local law. *Geuchik* is elected by *gampong*'s inhabitants, while head of village (*kepala desa or lurah*) is appointed by head of sub-district (*camat*). Law No. 11/ 2006 also regulates direct elections for heads of regions, the governor, which previously was appointed by the central government.

The earthquake and tsunami wave striking on December 26, 2004 devastated most of Aceh's coastal areas and also affected socio-cultural and political conditions. From the physical damage standpoint, 15 *kabupatens/kotas* were devastated, namely: *Kabupaten Aceh Barat, Kabupaten Aceh Barat Daya, Kabupaten Aceh Besar, Kabupaten Aceh Jaya, Kabupaten Aceh Selatan, Kabupaten Aceh Timur, Kabupaten Aceh Utara, Kota Banda Aceh, Kabupaten Bireun, Kota Lhokseumawe, Kabupaten Nagan Raya, Kabupaten Pidie, Kota Sabang, Kabupaten Simeuleu, and Kabupaten Singkil. Kota Banda Aceh, Kabupaten Aceh Jaya, Kabupaten Aceh Barat, and Kabupaten Aceh Besar* are the *kabupatens* or *kotas* severely affected by the tsunami disaster in light of death tolls and damage to infrastructure (BRR, 2009k).

The major socio-cultural issues arising from the earthquake and tsunami were associated with the great number of victims, damages to socio-cultural facilities, lack of food and shelters for victims, invalid demographic information, vulnerable situations mostly among women and children, and traumatic feelings among the victims. The responses to these issues included development of temporary housing for refugees, nurturing orphans, development of food supplies for victims, restoration of socio-cultural lives, the data collection on population, sex, and age structure, improvement of socio-economic conditions of victims, overcoming threat of sexual harassment and trafficking among refugees, and services and counseling for traumatic victims (The Republic of Indonesia, 2005; BRR, 2009i).

Aside from its devastating impact, the Aceh tsunami turned out to be a blessing in disguise. The horrifying disaster pushed the Indonesian government and the Free Aceh Movement (GAM) to sit together to end the prolonged military conflict. The desire to help victims of the disaster and to rebuild the province arose which in turn resulted in the strong wish for ending the conflict (BRR, 2009b). Hence, a series of negotiations took place which eventually concluded in a peace accord signed by both parties facilitated by the Finnish organization Crisis Management Initiative in Helsinki on August 15, 2005 (BRR, 2009b). Looking back to the former time, the centralized and authoritarian system during Soeharto's New Order regime was viewed as the cause for injustice in Aceh which led to the emergence of GAM (in 1976) and other separatist movements in various regions of Indonesia. In the context of Aceh, the situation was then triggered more and more by the increase in dissatisfaction of several communities' elements over the distribution of profits from new natural gas and oil production in the eastern coastal area of this province and the intensification of the transmigration program in Aceh (BRR, 2009b).

As a matter of fact, Aceh province's fight against the Indonesian government had also happened before GAM emerged. In 1953, Daud Beureueh led the Darul Islam Movement/Islamic Army of Indonesia (DI/TII) in Aceh fight for an autonomous Aceh within a wider Islamic state of Indonesia. Therefore, Aceh's DI/TII was, by its nature, different from GAM which aimed for independence (Aspinall, 2005). This movement which ended in 1962 was also a form of protest toward the government of Indonesia for making Aceh part of the North Sumatera Province judicial area which distinctly ignored Aceh's huge contribution in supporting the existence of the still young Republic in 1945 (BRR, 2009b).

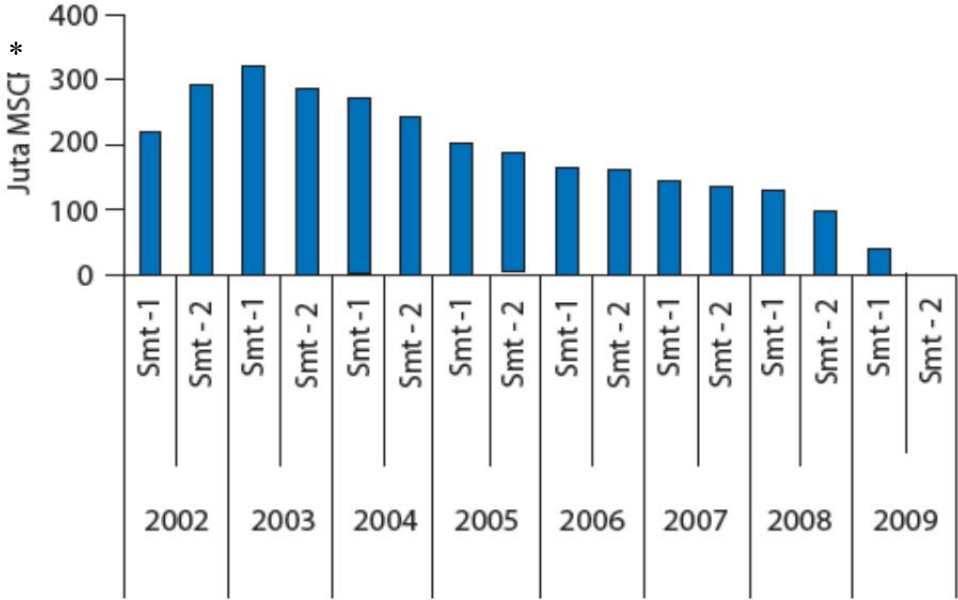
## ***Economy***

Aceh's economy will be examined by relying upon many indicators of Gross Regional Domestic Product (GRDP), economic structure, economic growth, and employment and inflation. The depiction of Aceh's economy below is based on data processed from various sources including BPS – Statistics Aceh, World Bank, Bank Indonesia, Multi Donor Fund, BRR, and Bappeda Aceh.

### Gross Regional Domestic Product (GRDP)

In the past, Aceh's main income earners were in the oil and gas sector including industries linked to oil and gas production. Up until 2004, before the tsunami struck Aceh on December 26, 2004, this source accounted for about 40% of the province's GRDP. In line with rapidly depleting oil and gas production in the past few years, Aceh's GRDP resulting from oil and gas sector has been declining steeply. In 2009, the oil and gas sector only contributed about 20% to GRDP (Badan Pusat Statistik Aceh & Bappeda Aceh, 2009; Badan Pusat Statistik Provinsi Nanggroe Aceh Darussalam & Bappeda Provinsi Nanggroe Aceh Darussalam, 2006). This was one of factors causing Aceh's GRDP to fall down in 2009 and put Aceh with annual income/capita of Rp. 16.9 million (Rp 20.3 million on average in Indonesia) as the 6th poorest province among 33 provinces in Indonesia. From the standpoint of poverty level, it was also reported that in that year, 21.8% of 4.3 million Aceh's people was categorized poor (BPS – Statistics Indonesia, 2010). Overall gas production in Aceh from 2002 through mid 2009 is presented below.

**Figure 4.1.: Gas production in Aceh, 2002 – mid 2009**



\*Mscf : Million Square Cubic Feet

Sources: Aceh Economic Update February 2010, Bank Indonesia and Bappeda Aceh, 2010

In the long run, the revenue from petroleum and natural gas will continue decreasing. Based on the projection, it is indicated that in the years to come this resource will steadily have little contribution to this province’s revenues. Given that, Aceh’s economy will have little future, unless non-oil sectors are developed. In the past few years, Aceh’s economy has also been mainly supported by the reconstruction effort and the availability of reconstruction funds. As the reconstruction effort came to end, Aceh’s economy then slowed down (The World Bank, et al., 2009; Bank Indonesia & Bappeda Aceh, 2010). Aceh’s GRDP by industrial origin at current market prices and at 2000 constant prices during the period of 2000-2009 can be seen in the following table.

**Table 4.2.: GRDP of Aceh Province by industrial origin at current market prices and at 2000 constant market prices (trillion Rupiahs), 2000-20009**

Industrial Origin Year		Agriculture, livestock, forestry, & fishery	Mining & quarrying	Manufacturing industry	Electricity & water supply	Construction	Trade hotel & restaurant	Transportation & communication	Banking & financial services	Services	GRDP	GRDP non oil & gas
2000	Current price	6.98	12.23	9.76	0.04	1.75	4.29	1.27	0.23	2.95	<b>39.50</b>	<b>19.63</b>
	Constant price	6.98	12.23	9.76	0.04	1.75	4.29	1.27	0.23	2.95	<b>39.50</b>	<b>19.63</b>
2001	Current price	8.21	8.37	9.67	0.05	1.46	4.97	1.42	0.27	3.24	<b>37.65</b>	<b>21.23</b>
	Constant price	7.24	8.81	8.40	0.04	1.31	4.77	1.35	0.25	3.10	<b>35.26</b>	<b>19.54</b>
2002	Current price	9.12	12.71	9.10	0.07	1.75	5.20	1.67	0.39	3.70	<b>43.71</b>	<b>27.01</b>
	Constant price	7.37	14.70	8.86	0.04	1.49	4.88	1.41	0.31	3.28	<b>42.34</b>	<b>21.10</b>
2003	Current price	10.19	14.60	9.69	0.10	1.87	5.39	1.86	0.49	4.43	<b>48.62</b>	<b>27.01</b>
	Constant price	7.61	16.15	9.01	0.05	1.50	5.00	1.46	0.41	3.49	<b>44.68</b>	<b>21.88</b>
2004	Current price	12.47	12.23	9.80	0.12	2.10	5.65	2.16	0.58	5.25	<b>50.36</b>	<b>30.15</b>
	Constant price	8.07	12.26	7.41	0.06	1.51	4.86	1.52	0.49	4.19	<b>40.37</b>	<b>22.26</b>
2005	Current price	15.20	13.17	10.26	0.12	1.84	7.08	2.93	0.84	5.52	<b>56.95</b>	<b>35.45</b>
	Constant price	7.75	9.49	5.76	0.06	1.27	5.19	1.73	0.44	4.60	<b>36.29</b>	<b>22.53</b>
2006	Current price	16.76	19.62	8.53	0.13	4.20	8.10	4.43	1.36	6.21	<b>69.35</b>	<b>43.47</b>
	Constant price	7.87	9.24	5.00	0.07	1.88	5.57	1.93	0.49	4.80	<b>36.85</b>	<b>24.27</b>
2007	Current price	18.14	15.98	7.94	0.17	5.42	9.23	5.75	1.35	7.12	<b>71.09</b>	<b>49.72</b>
	Constant price	8.16	7.29	4.49	0.08	2.15	5.67	2.14	0.52	5.48	<b>35.98</b>	<b>26.02</b>
2008*	Current price	19.26	13.88	8.19	0.20	6.26	10.26	6.54	1.49	7.46	<b>73.53</b>	<b>54.19</b>
	Constant price	8.22	5.30	4.14	0.09	2.13	5.93	2.17	0.55	5.55	<b>34.09</b>	<b>26.51</b>
2009**	Current price	19.39	8.20	7.93	0.29	6.84	10.42	7.55	1.79	8.35	<b>70.76</b>	<b>57.55</b>
	Constant price	8.48	2.69	3.89	0.12	2.20	6.12	2.28	0.60	5.44	<b>32.18</b>	<b>27.55</b>

Sources:

- Gross Regional Domestic Product of Nanggroe Aceh Darussalam, 2000 – 2005, BPS – Statistics Nanggroe Aceh Darussalam and Regional Development Planning of Nanggroe Aceh Darussalam, 2006
- Gross Regional Domestic Product of Nanggroe Aceh Darussalam, 2005 – 2008, BPS – Statistics Nanggroe Aceh Darussalam and Regional Development Planning of Nanggroe Aceh Darussalam, 2009
- The Selected Socio-Economic Indicator of Aceh, BPS – Statistics Aceh Province, 2009
- Statistic Official News of Aceh Province No. 05/02/11/Th.V, 10 February 2010, 2010

\* Preliminary figures

\*\*Very preliminary figures

In terms of Aceh's economic structure, during the period of 2000-2004, the share of primary activity consisting of the sectors of agriculture, livestock, forestry, fishery, mining, and quarrying to Aceh's Gross Regional Domestic Product (GDRP) reached 44% to 51%. The share of secondary activity consisting of the sectors of manufacturing, construction, and utilities (water supply and electricity) ranged between 23% and 30%. While the tertiary activity (trade, hotel, and restaurant sector, transportation and communication sector, banking and financial services sector, and services sector), during that period ranged between 22% and 32%. The share of mining sector in the year 2000 was the highest in Aceh's GDRP (31%) followed by the manufacturing sector (25%) and the agriculture sector (18%).

The share of mining sector, during the period of 2000-2003 was the highest in GRDP. In 2001, the production level of petroleum and natural gas reached the lowest point (22.2%) because of the culmination of military conflict (BPS – Statistics Nanggroe Aceh Darussalam and Regional Development Planning of Nanggroe Aceh Darussalam, 2006). Subsequently, in 2004, the economic structure changed significantly, agriculture contributed the highest (22.83%) to GRDP.

After the tsunami, Aceh's GDRP at current market prices still went up from year to year. In 2005, Aceh's GDRP was 56.95 trillion Rupiahs, while in 2009 it increased to 70.76 trillion Rupiahs. During the period of 2005-2009, the primary sector still provided the biggest contribution to GDRP. This sector accounted for between 45 – 52% of the province's GDRP. However, the mining sector share went down steadily due to the decline in revenue from petroleum and natural gas as mentioned earlier. In this period, starting from 2005 until 2009, the share of the agriculture sector in Aceh's GRDP became the largest, except in 2006 when the mining and quarrying sector was the largest (28.30%).

The share of secondary activity significantly declined during the period from 2005-2009, contributing only 18-21% to GRDP. The share of the manufacturing sector (its biggest share linked to oil and gas production), which in the previous time always be the biggest contribution in this activity, declined from 18.01% in 2005 to 11.20% in 2009. This happened as a consequence of the decreased production of petroleum and natural gas overtime. While the share of tertiary sector to GRDP in this period was around 28%-35%, showing the positive trend compared to the period of 2000-2004.

The rehabilitation and reconstruction process following the tsunami shifted the structure of Aceh's economy. From 2007 until 2008, the trade, hotel, and restaurant sector became the third largest sector contributing to GRDP (2007: 12.98%, 2008: 13.95) behind the agriculture and mining and quarrying sectors. The trade, hotel, and restaurant sector replaced the manufacturing sector which had hold the position for long period of time. In 2009, the trade, hotel, and restaurant sector went up to the second biggest contributor (14.73%). In the same year, the agriculture sector accounted for 27.40% of GRDP, while the mining and quarrying sector accounted for 11.59%.

In 2009, other sectors which had significantly contributed to GRDP besides the aforementioned sectors were the services sector (11.80%), the manufacturing sector (11.20), the transportation and communication sector (10.67%) and the construction sector (9.67%). The increased share of all of these sectors was also a logical consequence of the recovery and development activities taking place in the post-tsunami reconstruction process. The entire structure of Aceh's economy during the period of 2000-2009 can be seen in the following table.

**Table 4.3.: The economic structure of Aceh Province, 2000-2009 (percent)**

No	Industrial Origin	2000	2001	2002	2003	2004	2005	2006	2007	2008*	2009**
1	Agriculture, livestock, forestry, & fishery	17.68	21.80	20.86	20.95	24.76	26.69	24.16	25.51	26.19	27.40
2	Mining and quarrying	30.95	22.20	29.08	30.03	24.28	23.12	28.30	22.48	18.88	11.59
3	Manufacturing industry	24.70	25.68	20.82	19.93	19.46	18.01	12.30	11.16	11.14	11.20
4	Electricity and water supply	0.11	0.14	0.16	0.21	0.24	0.20	0.19	0.24	0.27	0.41
5	Construction	4.43	3.88	4.01	3.85	4.16	3.22	6.06	7.62	8.52	9.67
6	Trade, hotel and restaurant	10.86	13.20	11.89	11.08	11.22	12.44	11.69	12.98	13.95	14.73
7	Transportation and communication	3.21	3.77	3.82	3.83	4.30	5.15	6.39	8.08	8.89	10.67
8	Banking and financial services	0.59	0.71	0.88	1.01	1.15	1.47	1.96	1.90	2.03	2.53
9	Services	7.48	8.61	8.47	9.12	10.43	9.69	8.95	10.02	10.14	11.80
Gross Regional Domestic Bruto (GRDP)		100	100	100	100	100	100	100	100	100	100
GRDP non oil and gas		<b>49.69</b>	<b>56.38</b>	<b>56.03</b>	<b>55.56</b>	<b>59.87</b>	<b>62.24</b>	<b>62.67</b>	<b>69.93</b>	<b>73.70</b>	<b>81.33</b>

Sources:

- Gross Regional Domestic Product of Nanggroe Aceh Darussalam, 2000 – 2005, BPS – Statistics Nanggroe Aceh Darussalam and Regional Development Planning of Nanggroe Aceh Darussalam, 2006
- Gross Regional Domestic Product of Nanggroe Aceh Darussalam, 2005 – 2008, BPS – Statistics Nanggroe Aceh Darussalam and Regional Development Planning of Nanggroe Aceh Darussalam, 2009



- The Selected Socio-Economic Indicator of Aceh, BPS – Statistics Aceh Province, 2009
- Statistic Official News of Aceh Province No. 05/02/11/Th.V, 10 February 2010, 2010

\* Preliminary figures

\*\*Very preliminary figures

### Economic Growth

Previously, the economic growth of Aceh Province depended highly on the oil and gas sector. Due to declining oil and gas reserves in this area, in 2004, oil and gas mining decreased by 24% while oil and gas manufacturing decreased by 12%. This led the growth rate of Aceh's GRDP to decline by 10% in 2004. In 2005, Aceh's economic growth totally fell down.

Following the tsunami, the growth of many sectors decreased. The agriculture sector decreased by 3.89%, the mining and quarrying sector 22.62%, the manufacturing industry sector 22.30%, the electricity and water supply sector 1.95%, the construction sector 16.14, and the banking and financial services 9.53%. Only three sectors showed positive growth, i.e. the trade, hotel and restaurant sector (6.64%), the transportation and communication sector (14.39%), and the services sector (9.65%). Due to the tsunami, Aceh's economic growth in 2005 declined by 10.12%.

In 2006, overall Aceh's economy grew. Although the decline of the oil and gas sector continued, the positive growth occurred in other sectors. Consequently, economic growth reached 1.56%. Unfortunately, in 2007, 2008, and 2009, economic growth contracted again by 2.36%, 5.27%, and 5.58%, respectively. The decline in economic activities of the oil and gas sector and the manufacturing sector in these years was the main factor. In 2008, the construction sector also contracted by 0.85 %, while other sectors grew. In 2009, all sectors excluding oil and gas sector and manufacturing sector (which contracted by 49.24% and 6.06% respectively),

grew. However, Aceh's economic growth contracted by 5.58%. In this year, the electricity and water supply sector grew 27.07%, banking and financial services 9.61%, transportation and communication 4.86%, services 4.68%, trade, hotel, and restaurant 3.28%, construction 3.16%, and agriculture 3.09%.

Although Aceh's economy contracted for the last couple of years (due largely to the decrease in Aceh's oil and gas reserves), prospects for Aceh's economy are still promising. The non oil and gas sectors have been growing from 2002 until 2009. The growth of these sectors peaked in 2006 and 2007 at 7.70% and 7.23% respectively because during these years, massive reconstruction programs took place and the Aceh's political atmosphere had been more conducive after the peaceful agreement between the Free Aceh Movement and the government of Indonesia. However, after the post-tsunami reconstruction was over in 2009 and given the decline of oil and gas production, it will be difficult for the Aceh government and policy makers to boost the non-oil and gas sectors. The economic growth of Aceh Province during the period of 2001-2009 can be seen in Table 4.4.

**Table 4.4.: The economic growth of Aceh Province, 2001-2009 (percent)**

No	Industrial Origin	2001	2002	2003	2004	2005	2006	2007	2008*	2009**
1	Agriculture, livestock, forestry, and fishery	3.31	2.13	3.27	6.04	-3.89	1.52	3.62	0.81	3.09
2	Mining and quarrying	-27.91	66.79	9.86	-24.06	-22.62	-2.58	-21.10	-27.31	-49.24
3	Manufacturing industry	-13.88	5.45	1.68	-17.80	-22.30	-13.16	-10.10	-7.73	-6.06
4	Electricity and water supply	2.18	-3.16	16.98	19.53	-1.95	12.06	23.70	12.73	27.07
5	Construction	-24.95	13.28	0.95	0.92	-16.14	48.41	13.93	-0.85	3.16
6	Trade, hotel and restaurant	11.33	2.18	2.46	-2.68	6.64	7.41	1.70	4.59	3.28
7	Transportation and communication	6.58	4.17	3.87	3.67	14.39	10.99	10.95	1.38	4.86
8	Banking and financial services	8.48	23.95	30.99	19.45	-9.53	11.77	6.02	5.16	9.61
9	Services	4.86	5.95	6.31	20.14	9.65	4.41	14.30	1.21	4.68
	Gross Regional Domestic Bruto (GRDP)	-10.73	20.07	5.52	-9.63	-10.12	1.56	-2.36	-5.27	-5.58
	GRDP non oil and gas	-0.44	7.96	3.70	1.76	1.22	7.70	7.23	1.88	3.92

Sources:

- Gross Regional Domestic Product of Nanggroe Aceh Darussalam, 2000 – 2005, BPS – Statistics Nanggroe Aceh Darussalam and Regional Development Planning of Nanggroe Aceh Darussalam, 2006
- Gross Regional Domestic Product of Nanggroe Aceh Darussalam, 2005 – 2008, BPS – Statistics Nanggroe Aceh Darussalam and Regional Development Planning of Nanggroe Aceh Darussalam, 2009
- The Selected Socio-Economic Indicator of Aceh, BPS – Statistics Aceh Province 2009, 2010
- Statistic Official News of Aceh Province, No. 05/02/11/Th.V, 10 February 2010, 2010

\* Preliminary figures

\*\*Very preliminary figures

### Employment and Inflation

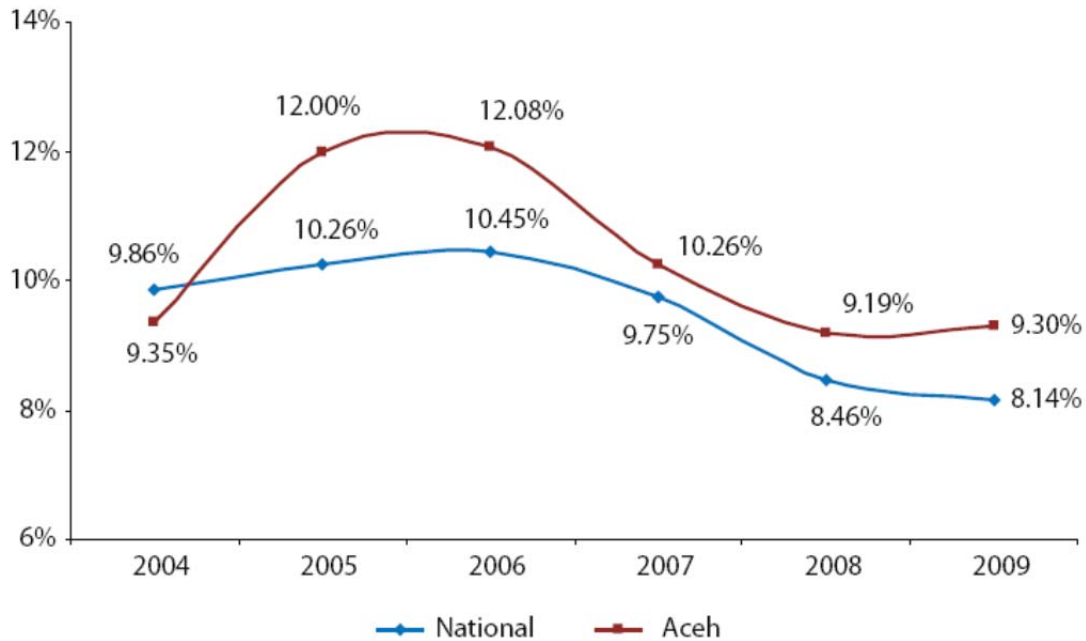
In spite of its huge contribution to the province's GRDP, before the tsunami, the oil and gas sector employed less than 5% of the workforce. The agriculture, forestry, hunting & fishery

sector employed about 60% of the workforce. However, the latter sector has been continuing to decline from year to year. In 2009, it attracted 51% of the workforce, remained far higher than at the national level which reached 41%. Other sectors which employed large workforce in this year included services (18%) and trade (15%) (Bank Indonesia & Bappeda Aceh, 2010).

In general, in the context of Aceh, the shift from the agriculture to other sectors like services, trade, and industry is partly because of the reconstruction effort after the tsunami. It is also a result of improved security conditions in remote areas, as well as assistance to small to medium-sized enterprises provided by NGOs and government during the reconstruction effort (The World Bank et. al, 2009). Aceh's employment structure from 2003 through 2009 is presented in the graphics below.

With regard to Aceh's unemployment rate, Bank Indonesia and Bappeda Aceh (2010) report that prospects are uncertain. With unemployment at 9.3% in 2009, job creation remains a major challenge in the province. At the national level, unemployment declined to 8.1%. The fact that Aceh has high minimum wages in Indonesia (Rp 1 million/month compared with Rp 800.000 on average in Indonesia), the second highest after Papua Province in 2009, is one of the biggest constraints for investment in the region (Bank Indonesia & Bappeda Aceh, 2010). In addition, the limited electricity supply has also hindered investment and job creation in Aceh. Aceh's unemployment rate from 2004 through 2009 is reported in Figure 4.3.

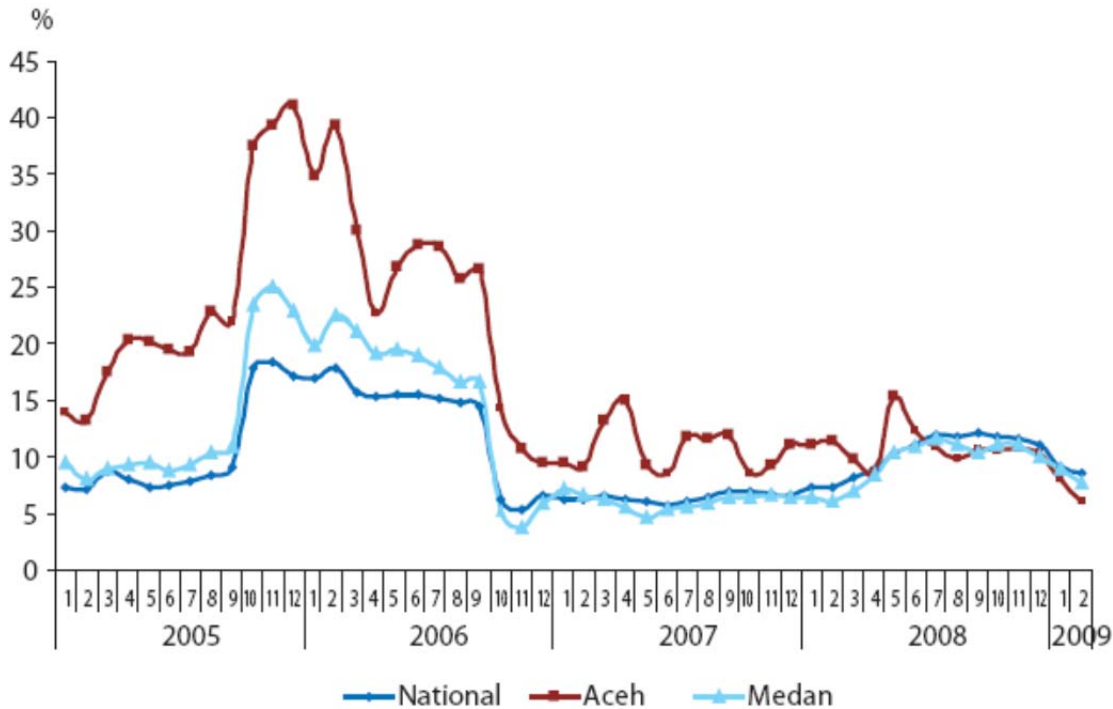
**Figure 4.3.: Unemployment in Aceh, 2004-2009**



Sources: Aceh Economic Update February 2010, Bank Indonesia & Bappeda Aceh, 2010

The inflation rate in Aceh had been far higher than the national rate for several years during the peak of reconstruction effort (2005-2007). Inflation reached the highest rate, more than 40% in 2005. In 2008, in line with the slowdown of the reconstruction effort, restored supply networks, and Aceh's economy, inflation became relatively low. Despite this condition, the trend could change in the future due to Aceh's insufficient infrastructure along the west coast, rising commodity prices at the global level, and the Rupiah's stronger currency (Bank Indonesia & Bappeda Aceh, 2010). In February 2009, Year onYear inflation (inflation in February 2009 compared to that in February 2008) increased by 5.9%, lower than the national level of 8.6% as well the neighboring province Medan of 7.7%. Inflation in Aceh during the period of 2005- early 2009 can be seen in Figure 4.4.

**Figure 4.4.: Inflation in Aceh 2005 – early 2009**



Sources: Aceh Economic Update May 2009, Bank Indonesia & Bappeda Aceh, 2010

***Infrastructure, Agriculture, and Environment***

In the infrastructure sector, the impact of the tsunami included damage to the sectors of housing, transportation, health facilities, religious facilities, educational facilities, government buildings, energy and electricity, postal and telecommunications service, drinking water and sanitation, water resources, and other facilities. Existing infrastructure was severely damaged or unusable including, among others, up to 139,195 homes, 119 bridges (a quarter of all bridges in the province) totaling 150 kilometers, around 2,618 km of the roads, 22 ports and 8 airports, more than 3,415 schools, 200 local clinics and hospitals, and 669 government buildings. With regard to agriculture, 73,869 ha of agricultural land with varying degrees of productivity were destroyed, 13,828 fishing boats vanished and up to 27,593 ha of brackish fish ponds disappeared.

The loss to the environment included 16,775 ha of coastal forests and mangroves, and 29,175 ha of reefs (BRR, 2009g).

In response to the damage and the loss mentioned above, local agencies, NGO, and donor agencies, coordinated by BRR (the Reconstruction and Rehabilitation Agency of Aceh and Nias), implemented rehabilitation and reconstruction projects. The results of the reconstruction effort include, among others, 140,304 permanent houses built, 3,696 kilometers of road and 363 bridges constructed, 23 ports and 13 airports constructed, 1,759 schools built, 3,781 religious facilities built or repaired, 1,115 health facilities and 996 government buildings constructed, 69,979 hectares of agricultural land reclaimed, and 7,109 fishing boats built or provided (BRR, 2009g). In general, the programs and achievement of the reconstruction effort in the infrastructure sector are presented in Table 4.5.

**Table 4.5.: Infrastructure reconstruction following the tsunami**

No	Program/Activities	Unit	Target as Presidential Regulation 47/2008	Achievement	% Achievement
1	Sea Port	Unit	16	15	94%
2	Ferry Port	Unit	8	8	100%
3	Airport	Unit	9	9	100%
4	Airstrip	Unit	3	3	100%
5	Helipad	Unit	1	1	100%
6	National Road	Km	933	694.80	74%
7	Provincial Road	Km	782	584.32	74%
8	District Road of Aceh and Nias	Km	3,511	2,417.25	69%
9	Bus Terminal and Damri Public Bus	Unit	16	15	94%
10	Supporting Bus	Unit	56	68	121%
11	Meteorology and Geophysics	Unit	8	9	113%
12	Post Office	Unit	23	22	96%
13	EWS-Early Warning System	Package	1	1	100%
14	Diesel Power Generator	Package	13	12	92%
15	State Electricity Company Office	Package	1	1	100%
16	Peusangan Water Power Plant	Unit	84	84	100%
17	Micro Hydro Power Plant	Unit	8	8	100%
18	Solar Power Plant	Unit	4,084	4,127	101%
19	Transmission Line	Km	930	935	101%
20	Distribution Line	Km	1,271	1,392	109%
21	Household Electricity Line	Unit	122,000	122,000	100%
22	Electricity Distribution Point	Unit	597	669	112%
23	Central Electricity Plant	Unit	1	1	100%
24	Gas Station	Unit	1	1	100%
25	Irrigation	Ha	121,884	124,590	102%
26	Flood Control	m'	98,765	152,902	155%
27	Coastal Protection	m'	72,454	108,694	150%
28	Water	Lt/s	1,430	2,843	199%
29	Waste Management	Unit	6	6	100%
30	Waste Dump Area	Unit	7	13	186%
31	Drainage	m'	200,000	600,467	300%
32	Disaster Mitigation Center	Unit	1	1	100%
33	Escape Building	Unit	5	8	160%
34	Tsunami Museum	Unit	1	1	100%

Source: Infrastructure: Stimulating the triggering sector, BRR, 2009



## **The Profile of Case Study Villages**

Below is the profile of four case study villages affected by the 2004 Aceh tsunami. Several aspects covering geography, socio-demography, economy, and infrastructure of the villages will be described. Data come from reports of each village, interviews, and aid organizations' reports.

### ***Lam Teungoh***

#### Geography

Lam Teungoh, about 20 minutes drive from Banda Aceh the capital city of Aceh Province, is bordered on the north by the Indian Ocean, on the south by the Village of Lam Tutui, on the east by the Village of Meunasah Tuha and on the west by the Village of Lam Guron. The area of Lam Teungoh is approximately 40 hectares; 20 hectares of fish and shrimp pond areas, 10 hectares of settlements and public facilities, and 10 hectares of agricultural and plantation areas (AIPRD – LOGICA, 2006, & Husaini, personal communication, March 8, 2010).

This fishing village which is one of 26 villages in the Peukan Bada Subdistrict, the Aceh Besar District, has 3 hamlets, namely Lam Raya, Teungoh, and Meunasah. The elevation of the village is very low and the topography is flat due to its proximity to the water. The 2004 Aceh tsunami completely damaged this seaside village, destroying all public facilities, settlements, infrastructure, and environment.

## Socio – demography

Before the tsunami, the population of Lam Teungoh was approximately 1294. The tsunami killed about 80% (1045) of the village residents (Yayasan Pugar, 2007). Survivors from Lam Teungoh then lived in tents around the National Television Station (Televisi Republik Indonesia, TVRI), Jalan Sudirman, Mata Ie, southeast of Banda Aceh, one of the biggest IDP (internally displaced person) camps in Aceh. One week after the disaster, they moved to temporary living centers in Lampeuneurut village and after one month they moved again to Lamseudaya village in the area of the civil servant estate. Other survivors sought refuge in their relatives' homes or host communities in Banda Aceh, Sibreh and surrounding areas. Later on, once some villagers had built several temporary shelters in Lam Teungoh, many villagers returned to their home village to live there (Husaini, personal communication, March 8, 2010).

As in other tsunami-affected villages, many women, girls, and children in the village of Lam Teungoh were killed by the tsunami. Many men in this coastal area were fishermen who survived at sea or were farming in the hills when the tsunami struck. But their wives and children were killed by the waves not far from the beach. Most of them were hit by the tsunami as they were on their way to the hills near its neighboring villages of Tutui and Lambaro Neujid. Unsurprisingly, so much of population of these neighboring villages survived since their villages were situated at the foot of hilly areas (Husaini, personal communication, March 8, 2010).

Since the massive reconstruction effort was over (2007), the number of Lam Teungoh population has decreased year by year due to migration of its residents to other areas. By 2008, the population of Lam Teungoh was around 189 people; 115 male (60.85%) and 74 female (39.15%) (BPS – Statistics the Aceh Besar District, 2006).

**Table 4.6.: Demography of Lam Teungoh before and after the tsunami**

<b>Variable</b>	<b>2003</b>	<b>Pre-Tsunami 2004</b>	<b>Post-Tsunami 2005</b>	<b>2006</b>	<b>2008</b>
Population	918	1294	249	189	189
Household number	150	n/a	n/a	109	92
Family Size	6	n/a	n/a	2	2.05
Male	512 (55.77%)	n/a	n/a	117 (61.90%)	115 (60.85%)
Female	406 (44.33%)	n/a	n/a	72 (38.10%)	74 (39.15%)
< 5 years	n/a	n/a	n/a	n/a	16
≥ 5 – < 17 years	n/a	n/a	n/a	n/a	36
≥ 17 – < 50 years	n/a	n/a	n/a	n/a	117
≥ 50 years	n/a	n/a	n/a	n/a	20

Sources: Processed based on data from:

- Peukan Bada Sub-District in Figures, 2003 – BPS – Statistics of the Aceh Besar District
- Peukan Bada Sub-District in Figures, 2006 – BPS – Statistics of the Aceh Besar District
- The Five Year Development Plan (2008-2012) of the Village of Lam Teungoh, and interview with Husaini, community leader of the Village of Lam Teungoh on March 8, 2010
- Yayasan Pugar, 2007

With regard to education, Lam Teungoh's condition is serious. Referring to Lam Teungoh village data in 2008 (Gampong Lam Teungoh, 2008), quite a lot of villagers had no education (39.88%). Only 22.09% had a senior high school level of education and 1.23% had an undergraduate education. The remaining villagers were in the level of education of junior high school (30.67%) and elementary school (6.13%).

**Table 4.7.: Level of education of Lam Teungoh residents in 2008**

<b>Education</b>	<b>Number</b>	<b>Percentage</b>
No education	65	39.88
Elementary	10	6.13
Junior High	50	30.67
Senior High	36	22.09
University (undergraduate)	2	1.23
Total	163	100.00

Sources: Processed based on data from:

The Five Year Development Plan (2008-2012) of the Village of Lam Teungoh, and interview with Husaini, community leader of the Village of Lam Teungoh on March 8, 2010

### Economy

According to Husaini, community leader of the Village of Lam Teungoh (personal communication, March 8, 2010), the fishery sector has been a source of income for many villagers before and after the tsunami. This sector suffered severe damage because of the tsunami. Most of fisherman's boats were carried away by the waves. In the same vein, the fish and shrimp ponds were all destroyed and covered with sludge and sand carried by the tsunami from the sea. Unfortunately, for many fishermen in the village fishing was the only skill they had.

Serious damage was also experienced in the agricultural sector. The damage to farmland encompassing hectares of rice fields and plantations. Rice fields could not be sowed anymore since they contained too much mud and sand. They were also filled with debris from collapsed houses. Meanwhile, hundreds of cows, water buffalos, sheep, goats, and fowl were dead or missing.

Given the damage to village's economy above, in the months following the tsunami, as in other tsunami-hit areas, villagers relied heavily on handouts given by the government, NGOs and other aid organizations. Later, when the reconstruction process took place, villagers could earn a

living again by doing their previous jobs (particularly for fishermen) and getting involved in the reconstruction effort (e.g. cash-for-work projects, building village's infrastructure, etc).

Besides working in the fishery and agricultural sectors, a number of Lam Teungoh residents make a living as poultry and cattle breeders, unorganized day laborers, construction related professionals, merchants, drivers, and government employees. Based on information from Husaini, (personal communication, March 8, 2010), monthly income/capita in the village is now about Rp 800,000 – 1 million. This income places this village as a poor village in the province. By 2009, the provincial minimum wage was Rp 1.2 million per month (Bank Indonesia & Bappeda Aceh, 2010), while the provincial income/capita calculated per month was Rp. 1.4 million.

**Table 4.8.: The livelihood of Lam Teungoh residents in 2008**

<b>Occupation</b>	<b>Number</b>	<b>Percentage</b>
Fisherman and fish and shrimp pond farmer	30	26.79
Farmer	25	22.32
Poultry and cattle breeder	17	15.18
Unorganized day laborer	10	8.93
Construction- related professional	6	5.36
Merchant	3	2.68
Driver	2	1.79
Government employee	1	0.89
Unemployed	18	16.07
<b>Total</b>	<b>112</b>	<b>100.00</b>

Sources: Processed based on data from:

The Five Year Development Plan (2008-2012) of the Village of Lam Teungoh, and interview with Husaini, community leader of the Village of Lam Teungoh on March 8, 2010

### Infrastructure

All buildings and public facilities in Lam Teungoh were destroyed by the tsunami. The tsunami swept away houses, the village office, the village clinic, the elementary school, the

prayer house, sport facilities and asphalt roads. In line with the arrival of many parties from within the country and all around the globe in assisting the rescue and relief operations, Lam Teungoh began to rebuild (Husaini, personal communication, March 8, 2010).

UPLINK, a consortium of Indonesian and international development groups, gave materials for the 40 temporary homes. The Prosperous Justice Party (PKS) provided a canoe and material for a small, temporary mosque. The US Agency for International Development (USAID) paid villagers to clean their fields through the cash-for-work project (later, this project was also carried out by an Indonesian relief group Pugar and a NGO Mercy Coprs). USAID also built a community center, volleyball court and garden. Pugar and Al Amin, a Muslim aid group, provided fishing boats. The French group Secours Populaire Francais constructed an ice factory to keep the fish fresh for market, while CARE supplied rice, toiletries, cooking oil and other goods. Permanent homes were built by a German organization, GTZ. Later, the homes were also constructed by UPLINK and BRR (Husaini, personal communication, March, 8, 2010).

Presently, the condition of the village infrastructure is back to normal. In a way, the quality of many community houses, roads, and other public facilities is better than that of previous facilities. The following table summarizes major infrastructure built by numerous aid organizations in Lam Teungoh during the reconstruction process.

**Table 4.9.: Infrastructure built in Lam Teungoh during the reconstruction period**

<b>Project, Name</b>	<b>Source of Funds</b>	<b>Remarks</b>
House construction	GTZ*, UPLINK, & BRR**	110, 12, 26 units
Road construction	Government of Japan (through Department of Public Works) and BRR	
Village Office construction	USAID/DAI***	
Volleyball court construction	USAID/DAI	
Village Meeting Hall construction	AIPRD ****	
Well construction	PLAN	
Water Supply	PLAN, WASALMA*****	
Ritual ablution place construction	MERCY CORPS	
Women's Group building construction	MERCY CORPS	
Public cemetery fence construction	MERCY CORPS	
Drainage construction	MERCY CORPS	
Floodgate construction	AIPRD	
Pathway construction	AIPRD	
State-Owned Islamic Elementary School construction	Islamic Relief	
Mosque construction	WAMY*****	
Prayer-house construction	AIPRD	
Public toilet construction	World Vision, Care, PPK, Yayasan Dian	

Sources: Processed based on data from:

The Five Year Development Plan (2008-2012) of the Village of Lam Teungoh, and interview with Husaini, community leader of the Village of Lam Teungoh on March 8, 2010

\* *Gessellschaft for Technische Zusammenarbeit* (The German Technical Cooperation)

\*\* *Badan Rehabilitasi dan Rekonstruksi Aceh dan Nias* (the Reconstruction and Rehabilitation Agency of Aceh and Nias)

\*\*\* The US Agency for International Development/ Development Alternatives, Inc.

\*\*\*\* Australia Indonesia Partnership for Reconstruction and Development

\*\*\*\*\* Wahana Amal Sesama Makhluq Allah

\*\*\*\*\* World Assembly of Moslem Youth

### ***Lam Hasan***

#### Geography

The Village of Lam Hasan, 5 kms from Banda Aceh, is bordered on the north by the Village of Payatieng, on the south by the Village of Rima Keuneruem, on the east by the Village

of Ajuen and the Village of Lampoh Daya, and on the west by the Village of Payatieng and the Village of Lam Geu-eu. Located in the Peukan Bada Subdistrict, the Aceh Besar District, this village has 7 hamlets: Paya Loe, Lampoh Raya, Lamdan, Komplek Perumahan BTN, Lampoh Sukon, Pola Permai, and Darma Sakinah.

Lam Hasan has a spacious area of 90 hectares, consisting of 70 hectares of settlements and public facilities and 17 hectares of agricultural and plantation areas (Gampong Lam Hasan, 2009a). Like its neighboring village of Lam Teungoh, Lam Hasan's elevation is also very low with a flat topography.

According to head of the Village of Lam Hasan, Bukhari MY (personal communication, May 9, 2010), out of 7 hamlets, 5 hamlets, namely Lamdan, Lampoh Raya, Lampoh Sukon, Darma Sakinah, and Paya Loe, were totally flattened to the ground by the tsunami. The remaining neighborhoods of Komplek Perumahan BTN and Pola Permai were partially destroyed.

### Socio – demography

Around 600 Lam Hasan residents were dead from the December 26, 2004 tsunami. Immediately after the tsunami, the remaining population was about 1700 (Bukhari MY, personal communication, May 9, 2010). Although located fewer than 2 kilometers inland, the death toll was relatively low (approximately 26%). The location of some of its hamlets which are 200-500 meters from *Gle Genteng* (Genteng Hill) provided enough time for a lot of Lam Hasan residents to climb the hill and runaway from the tsunami.

The survivors from Lam Hasan scattered in several areas in Aceh. Most of them stayed in the MPI building in Ajuen. The rest mostly lived in their relatives' homes or stayed in host communities in the unaffected areas around Aceh Besar, Banda Aceh and other areas. In early



March 2005, after UPLINK's 36 temporary tents were erected in Lam Hasan, a number of villagers initiated to return to their home village. Later, more and more villagers went back to the village once many permanent homes were built.

As of 2009, data show that Lam Hasan had a population of 2316, far higher than that in the aftermath of the tsunami (Gampong Lam Hasan, 2009). The increase in the number of population resulted from influx of new inhabitants and new births.

**Table 4.10.: Demography of Lam Hasan before and after the tsunami**

Variable	2003	Pre-Tsunami 2004	Post-Tsunami 2005	2006	2009
Population	1901	2300	1700	1576	2316
Household number	397	n/a	n/a	432	555
Family Size	5	n/a	n/a	4	3.86
Male	874 (45.98%)	n/a	n/a	831 (52.73%)	1189 (51.34%)
Female	1027 (54.02%)	n/a	n/a	745 (47.27%)	1127 (48.66%)
0 – 12 months	n/a	n/a	n/a	n/a	146
> 1 year – < 5 years	n/a	n/a	n/a	n/a	244
≥ 5 – < 7 years	n/a	n/a	n/a	n/a	151
≥ 7 – ≤ 15 years	n/a	n/a	n/a	n/a	655
>15 – < 57 years	n/a	n/a	n/a	n/a	969
≥57 years	n/a	n/a	n/a	n/a	151

Sources: Processed based on data from:

- Peukan Bada Sub-District in Figures, 2003 – BPS – Statistics of Aceh Besar District
- Peukan Bada Sub-District in Figures, 2006 – BPS – Statistics of Aceh Besar District
- The Profile of the Village of Lam Hasan, 2009
- Interview with Bukhari MY, head of Lam Hasan Village on May 9, 2010

In terms of education, data (Gampong Lam Hasan, 2009) show that in 2009 the majority of Lam Hasan residents had a senior high school education (57.53%), whilst 5.64% had an undergraduate education. Interestingly, 1.58% had master or doctoral degrees, reflecting that the village had a few number of residents with high levels of education. Those well-educated

residents worked as lecturers or educators. However, education levels in the village are disparate, reflected by the high number of residents with no-education (12.28%).

**Table 4.11.: Level of education of Lam Hasan residents in 2009**

<b>Education</b>	<b>Number</b>	<b>Percentage</b>
No education	257	12.28
Elementary	116	5.54
Junior High	365	17.44
Senior High	1204	57.53
Undergraduate	118	5.64
Master degree	31	1.48
Doctoral degree	2	0.10
Total	2093	100

Sources: The Profile of the Village of Lam Hasan, 2009, and interview with head of Lam Hasan village, Bukhari MY on May 9, 2010

### Economy

According to data in 2009 (Gampong Lam Hasan, 2009), 21.81% of Lam Hasan residents were state or private workers, 13.14% were farmers, 21.51% were government employees, the remainder being poultry and cattle breeders (6.08%), bakers (4.83%), retired government employees (4.38%), unorganized day laborers (3.57%), police and military (3.40%), tailors (2.23%), construction related professionals (1.79%), merchants (1.61%), midwives (1.52%), mechanics (1.34%), carpenters (1.07%), fishermen (0.71%), medical doctors (0.45%), and miscellaneous (0.80%). This occupation portrait is basically the same as that prior to the tsunami. Monthly income/capita in Lam Hasan is around Rp 1 - 1.2 million (categorized as a poor village). This is because a large number of residents are unemployed, while others still have low monthly income jobs (bricklayers, bakers, tailors, mechanics, carpenters, and fishermen) (Bukhari MY, personal communication, May 9, 2010).

**Table 4.12.: The livelihood of Lam Hasan residents in 2009**

<b>Occupation</b>	<b>Number</b>	<b>Percentage</b>
Private or state company worker	244	21.81
Farmer	147	13.14
Government employee	140	12.51
Poultry and cattle breeder	68	6.08
Baker	54	4.83
Retired ( government employee and police & military)	49	4.38
Unorganized day laborer	40	3.57
Police and Military	38	3.40
Tailor	25	2.23
Construction related professional	20	1.79
Merchant	18	1.61
Midwife	17	1.52
Mechanic	15	1.34
Carpenter	12	1.07
Fisherman	8	0.71
Medical doctor	5	0.45
Miscellaneous (police officer, lawyer, etc)	9	0.80
Unemployed	210	18.76
Total	1119	100.00

Source: The Profile of the Village of Lam Hasan, 2009

### Infrastructure

Based on the head of the village Bukhari's information (personal communication, May 9, 2010), 60-70% buildings in Lam Hasan were wiped out by the tsunami. Although a number of residents' houses and other infrastructure (prayer house, drainage, schools) were not completely destroyed, they did require reconstruction. Immediately after the tsunami, relief agencies, and local and foreign governments came to the village to provide emergency assistance.

In the beginning, UPLINK dominated the reconstruction effort in the village. This organization provided materials for temporary shelters and subsequently built and renovated houses. UPLINK also rehabilitated drainage (later continued by Mercy Corps) and made route evacuation. Mercy Corps carried out the cash-for-work project, creating a source of income for

the villagers. BRR, Muslim Aid and British Red Cross constructed new homes. AIPRD built a village office. Water was delivered by Care and Oxfam, whilst food was provided by Care, WFP, and Save the Children. In the next period of relief efforts, other parties such as Plan, Luis Fernandez Fund, and Turkey Red Cross also took an active part (Bukhari MY, personal communication, May 9, 2010).

**Table 4.13.: Infrastructure built in Lam Hasan during the reconstruction period**

<b>Project Name</b>	<b>Source of Funds</b>	<b>Remarks</b>
House construction	UPLINK, BRR, Muslim Aid, & British Red Cross	236 (rehab 40), 96,13, & 16 units respectively
Road construction	BRR (through the Dep't of Public Works), ILO*, & UPLINK	Total +/- 5 km
Village Office construction	AIPRD	
Water supply	Care, Oxfam	
Public bathing place renovation	MERCY CORPS	
Construction of Local Government Supporting Medical Clinic ( <i>Puskesmas Pembantu</i> )	PLAN	
Construction of Women's Group building	PPK**	
Construction of prayer house's fence and gate	PPK	
Construction of Women's Group's Warehouse building	MERCY CORPS	
Tsunami victims' cemetery fence construction	AIPRD	
Drainage rehabilitation	MERCY CORPS, BRR (through the Dep't of Public Works), & UPLINK	1600 m, 300 m,& 300m
State Elementary School construction	Luis Fernandez Fund	
State Senior High School construction	Turkey Red Cross	
Evacuation route development	UPLINK	
Street and pathway naming and housing numbering	MERCY CORPS	
Volleyball and table tennis courts construction	AIPRD	
Supply of street lights	MERCY CORPS	
Prayer-house rehabilitation	Bureau of welfare, specialty and culture, Aceh Province	
Public toilet construction	MERCY CORPS	

Sources: Processed based on data from:

The Five Year Development Plan (2008-2012) of the Village of Lam Hasan, 2009

Village Profile of Lam Hasan, 2009 and interview with Buchari MY, Head of Lam Hasan Village

\* The International Labour Organization

\*\* *Program Pengembangan Kecamatan* (Subdistrict Development Program) under the Department of Home Affairs

## ***Lambung***

### Geography

Lambung is situated in the Meuraxa Subdistrict, one of 9 subdistricts in the city of Banda Aceh. During the 2004 tsunami, Lambung along with 15 other villages in the Meuraxa subdistrict experienced severe damage. Lambung is close to the Indian Ocean, bordered on the north by the Village of Deah Glumpang, on the south by Jalan (Street of) Sultan Iskandar Muda, on the east by the Village of Ulee Lheue, and on the west by the Village of Blang Oi. Four hamlets are part of the village: Seulanga, Mawar, Dahlia, and Melatika. As a whole, Lambung's area covers 52 hectares; 29 hectares of settlements and public facilities, 15 hectares of mangrove areas, and 8 hectares of fish and shrimp pond areas (Gampong Lambung, 2009).

### Socio – demography

“The Profile of Lambung Village, the Meuraxa Subdistrict, the city of Banda Aceh” (2009) describes that Lambung lost 1037 out of 1368 or around  $\frac{3}{4}$  of its population when the earthquake and tsunami struck. According to head of Lambung village, Zaidi M. Adan (personal communication, July 2, 2010), aside from fishermen who were going fishing on the boat during the disaster (15 people including himself) and those who survived from the tsunami waves in the village, survivors were also those who were travelling around the city of Banda Aceh after the

earthquake (before the tsunami). In addition, some residents were also safe because of being out of the village for the purpose of studying, running a business and doing other activities in the provinces like Medan and Jakarta.

According to Zaidi M. Adan (personal communication, July 2, 2010), as many as 50 survivors sought refuge in their relatives' houses concentrating around Cot Gu, Mata Ie, near the National Television Station (Televisi Republik Indonesia, TVRI). One month later, a number of male survivors started building temporary shelters in the village. The shelters accommodated more than one hundred villagers for more than 2 years due to the long village mapping and land consolidation process among villagers for replanning and rebuilding permanent houses. The rest of the survivors not living in the shelters scattered in other cities in the province (Langsa and Sigli) or in other provinces (Medan, Jakarta).

In 2009, five years after the disaster, Lambung residents lived in their village comfortably and safely. The number of Lambung residents increased to 420. New residents (resulted from marriage, birth, the presence of more house renters, etc) contributed to the increased population. Renters were attracted by a more orderly and beautiful Lambung village.

**Table 4.14.: Demography of Lambung before and after the tsunami**

<b>Variable</b>	<b>Pre-Tsunami 2004</b>	<b>Post-Tsunami 2005</b>	<b>2009</b>
Population	1368	331	420
Household number	295	154	146
Family Size	4.64	2.15	2.88
Male	753 (55.04%)	215 (64.95%)	222 (52.90%)
Female	615 (44.06%)	116 (35.05%)	198 (47.10%)
0 – 12 months	n/a	n/a	13
>1 - < 5 years	n/a	n/a	50
≥ 5 – < 18 years	n/a	n/a	98
≥ 18 – < 56 years	n/a	n/a	219
≥ 56 years	n/a	n/a	40

Sources: Processed based on data from:

The Profile of Lambung Village, the Meuraxa Subdistrict, the city of Banda Aceh, 2009, and interview with Zaidi M. Adan, head of Lambung Village on July 2, 2010

In the education sector, as a whole, the 2009 data (Gampong Lambung, 2009) show that Lambung residents had a relatively better portrait than two previous villages. The number of residents who had no education was very small (2.28%). The majority of residents (61.82%) had a senior high school education and 21.08% had a college education. The rest of the residents were in the education levels of junior high school (13.11%), and elementary school (1.71%).

**Table 4.15.: Level of education of Lambung residents in 2009**

<b>Education</b>	<b>Number</b>	<b>Percentage</b>
No education	8	2.28
Elementary	6	1.71
Junior High	46	13.11
Senior High	217	61.82
University (undergraduate)	74	21.08
Total	351	100.00

Sources: The Profile of Lambung Village, the Meuraxa Subdistrict, the city of Banda Aceh, 2009, and interview with Zaidi M. Adan, head of Lambung Village on July 2, 2010

## Economy

Data in 2009 show that the majority of people in Lambung village were employed as workers in the private companies, government employess, construction-related professionals, and merchants. A number of inhabitants, especially male groups, produced Acehese unique cakes which were quite famous all over Aceh (Gampong Lambung, 2009).

According to the head of Lambung Village, Zaidi M. Adan (personal communication, July 2, 2010), due to economic reasons as well as the awareness to rebuild their village, a certain number of residents participated in the income-generated cash-for-work (cleaning up the village) project sponsored by several relief agencies (International Relief and Development, Inc., etc) after the tsunami. The project was really helpful in providing community members with a regular income during the months after the disaster. As in other tsunami affected areas, most residents in Lambung could not practice their occupation for quite a long time after the tsunami. Later, as the project was over and the situation was getting normal, residents returned to their previous jobs.

Based on information from the head of the village (personal communication, July 2, 2010), monthly income of each villager is currently about Rp 1.5- 1.75 million, relatively high compared to residents in other villages in Aceh.



**Table 4.16.: The livelihood of Lambung residents in 2009**

<b>Occupation</b>	<b>Number</b>	<b>Percentage</b>
Private company worker	68	27.83
Government employee	28	11.67
Construction-related professionals	27	11.25
Merchant	18	7.50
Fisherman	7	2.92
Retired government employee and police and military	7	2.92
Police and Military	3	1.25
Farmer	2	0.83
Miscellaneous (medical doctor, lawyer, etc)	16	6.67
Having irregular jobs	30	12.50
Unemployed	34	14.17
Total	240	100.00

Sources: The Profile of Lambung Village, the Meuraxa Subdistrict, the city of Banda Aceh, 2009, and interview with head of Lambung village, Zaidi M. Adan on July 2, 2010

### Infrastructure

Like Lam Hasan village, Lambung village was also completely destroyed by the tsunami. In contrast to the surrounding villages which were built at high speed by NGOs immediately after the tsunami, the initial redevelopment progress in Lambung was slow. A common agreement on rearranging the village mapping among community members took a long time (Zaidi M. Adan, personal communication, July 2, 2010). This village had to wait until 2006 to start building permanent homes for its residents. The old Lambung village, which was not properly planned like most villages in Indonesia, finally turned into the block system village with wide roads. The village used to have a narrow road and small alley leading Lambung villagers to be trapped inside the village and unable to escape from the tsunami. Lambung has now often been considered a model village for spatial mapping and for the successful participative post-disaster redevelopment, particularly in Aceh (BRR, 2009b).

Reconstruction in Lambung was supported by the government and various aid organizations. Through the Re-Kompak program (Rehabilitasi dan Rekonstruksi Masyarakat dan Permukiman or The Community-Based Settlement Rehabilitation and Reconstruction Project), the Multi Donor Fund (MDF) through the Community-Based Settlement Rehabilitation and Reconstruction Project (*Rehabilitasi dan Rekonstruksi Masyarakat dan Permukiman* or *ReKompak*) provided funding to build 309 houses. Japan International Cooperation System (JICS) built a three story community escape building with a helicopter pad on its roof as a safe place for communities during a tsunami or other disasters. RCTI, a private television station based in Jakarta the capital city of Indonesia, donated funds for the construction of one school complex which has the level of education of kindergarten, elementary, junior high and senior high. From its own funding, Lambung gave a contribution to build a volleyball court, Pos Kamling (Law and order of the neighborhood post) and a village office (Zaidi M. Adan, personal communication, July 2, 2010). Many other development projects have been successfully implemented in Lambung.

**Table 4.17.: Infrastructure built in Lambung during the reconstruction period**

<b>Project Name</b>	<b>Source of Funds</b>	<b>Remarks</b>
Temporary shelter construction	AIPRD	
Knock down buildings construction (for temporary clinic, temporary kindergarten building, and warehouse)	AIPRD	
Artesian wells construction	AIPRD	
House construction	MDF/ <i>ReKompak</i> *	309 units
Road and drainage construction	BRR	
Mukim Office construction	BRR	
Prayer House (Meunasah)	BRR	
Village Meeting Hall construction	BRR	
Construction of building for producing Acehnese traditional cake	BRR	
Afternoon Religious School for children (TPA) construction	BRR	
Village Office construction	BRR and Lambung residents-owned funds	
Volleyball court construction	Lambung residents-owned funds	
Youth Hall construction	JICS**	
Community escape building construction	JICS	
Law and order of the neighborhood post (Pos Kamling) construction	Lambung residents-owned funds	
Community health center (Puskesmas) construction	Saudi Arabian Red Cross	
Construction of school complex (kindergarten, elementary, junior high & senior high school buildings)	RCTI ***	

Sources: The Profile of Lambung Village, the Meuraxa Subdistrict, the city of Banda Aceh, 2009 and interview with head of Lambung village, Zaidi M. Adan on July 2, 2010

\* The Multi Donor Fund/ Rehabilitasi dan Rekonstruksi Masyarakat dan Permukiman or The Community-Based Settlement Rehabilitation and Reconstruction Project

\*\* Japan International Cooperation System

\*\*\* Rajawali Citra Televisi Indonesia, an Indonesian private television

## ***Merduati***

### Geography

Having an area of 30.71 hectares, Merduati is surrounded by Lampaseh Kota village on the west side, Kampung Baru on the east and south sides, and Peulanggahan village and Keudah village on the North side. Since 2009, this area (along with other areas which were formerly *kelurahans*), has legally turned into a village or *gampong* as a consequence of the enactment of Law No 11/2006 on the Aceh Government.

The elevation of Merduati is about 0.5 meter above sea level, quite low compared to other villages in the Kuta Raja subdistrict which have the elevation ranging from 0.5 to 1 meter. Like other villages in the Meuraxa Subdistrict (Lampaseh Kota, Keudah, Peulanggahan, Gampong Jawa, and Gampong Pande), Merduati has flat topography (PNPM-Mandiri, 2008). According to the head of the village, Turmizi (personal communication, August 14, 2010), the tsunami destroyed 70-75 percent of the total 5 hamlets in the village, namely Seroja, Kemuning, Sedap Malam, Mawar, and Melatika.

In terms of land use, Merduati is organized as follows: 19.4 hectares of settlements, 2.21 hectares of public facilities, 8.17 hectares of trading and service areas, 0.81 hectares of office complex areas and 0.07 hectares of other areas. Its strategic location near the capital city, to some extent, makes Merduati an influential trading and service area, both in the city of Banda Aceh and in the province. The standing of this area is also associated with its proximity to 3 central markets in the province: Pasar Aceh, Kawasan Perdagangan, and Pasar Peunayong (GTZ-SLGSR, 2006).

## Socio – demography

Merduati is the most populous area among other 5 villages in the Kuta Raja subdistrict. Like many villages in the Kuta Raja subdistrict, Merduati is also a densely populated area. Before tsunami, it had a population of 5365 (GTZ – SLGSR, 2006). Based on information from Khair, one of community Merduati leaders (personal communication, August 14, 2010), tsunami killed a large number of residents including the head of the village, Zakaria. It was predicted that only about 1500 (28%) residents survived (Turmuzi, personal communication, August 14, 2010). Like survivors in its neighboring villages, most survivors were safe because they were out of the village during the tsunami.

Like many survivors from Lam Teungoh and other areas, survivors from Merduati also sought refuge around TVRI area on Jalan Sudirman, Mata Ie. Others scattered, living in their relatives' homes and host communities or school and government buildings located around Banda Aceh and Aceh Besar areas like Lambaro, Ulee Kareng, Darussalam and Tungkop. One month later, a number of residents returned to their home village and lived in several spots like Arrahman Mosque and Taman Dianjung Mosque or even in the ruins of village buildings. After a base camp for Merduati residents equipped with the Indonesian soldier (TNI)-donated tents was established in Geuceu Iniem, some 100 Merduati residents then moved there (Turmuzi, personal communication, August 14, 2010).

As of July 2010, most of survivors have returned home and many new residents have lived in Merduati. Data show that Merduati population currently reaches 2651 (Gampong Merduati, 2010). As a thriving business area, the population of Merduati is predicted to increase over time (Gampong Merduati, 2010).

**Table 4.18.: Demography of Merduati before and after the tsunami**

<b>Variable</b>	<b>Pre-Tsunami 2004</b>	<b>Post-Tsunami 2006</b>	<b>2010</b>
Population	5365	1969	2651
Household number	1064	1218	844
Family Size	5.04	1.62	3.14
Male	2998 (55.88%)	1141 (57.95%)	1421 (53.60%)
Female	2367 (44.12%)	828 (42.05%)	1230 (46.40%)
≤ 5 years	n/a	n/a	302
> 5 – < 21 years	n/a	n/a	655
≥ 21 – < 56 years	n/a	n/a	1572
≥ 56	n/a	n/a	122

Sources: Processed based on data from:

- The Detailed Regional Spatial Planning of Kuta Raja Subdistrict, 2006
- Data about the number of population of Merduati Village, Kutaraja subdistrict, 2010

In terms of the education condition, based on the 2008 report, the majority residents had senior high school level of education (48.31%). Those who had an undergraduate or higher education level were 20.15%. Other residents had the level of education of junior high school (16.50%) and elementary school (6.15%). Meanwhile, 8.88% had no education.

**Table 4.19.: Level of education of Merduati residents in 2008**

<b>Education</b>	<b>Number</b>	<b>Percentage</b>
No education	163	8.88
Elementary	113	6.15
Junior High	303	16.50
Senior High	887	48.31
University*	370	20.15
Total	1836	100.00

Source: PNPM-Mandiri, The participative review of the five year development plan for combating poverty 2008-2010

\*Including level of education above undergraduate, but the exact number of post graduate level is unavailable.

## Economy

Prior to the tsunami, the majority of people in Merduati village worked as private company workers, government employees, and merchants, while the remainder being national police and military, drivers, medical workers, fishermen, and fish and shrimp pond farmers. As an area close to the center of the province, Lampung had to deal with unemployment issues. Even though Merduati enjoys a relatively high income/capita compared to other case study villages (about Rp. 2.5 million per month), prosperity is not equally distributed. A large number of its resident are unemployed or still do not have regular jobs (Turmuzi, personal communication, August 14, 2010).

As in other tsunami-hit villages, after the tsunami, Merduati residents also participated in the cash-for-work project. In their village, this was run by IRD (International Relief and Development, Inc.). However, many of them were not used to doing manual labor and did not want to continue getting involved in the project. Therefore, as the majority of cleanup had been accomplished and as the situation was getting more normal, most of them returned to their previous sources of employment.

**Table 4.20.: The livelihood of Merduati residents in 2008**

<b>Occupation</b>	<b>Number</b>	<b>Percentage</b>
Private company worker	169	17.70
Government employee	124	12.98
Trader	122	12.77
Police and Military	33	3.46
Driver	12	1.26
Medical worker	10	1.05
Fisherman	7	0.73
Fish and shrimp pond farmer	3	0.31
Having irregular jobs	431	45.13
Unemployed	44	4.61
Total	955	100.00

Source: PNPM-Mandiri, The participative review of the five year development plan for combating poverty 2008-2010

### Infrastructure

The tsunami devastated about  $\frac{3}{4}$  of Merduati's infrastructure including settlements, social and educational facilities, roads, medical facilities, sport facilities, and religious facilities. The village was paralyzed and road access was obstructed by thousands of tons of debris and hundreds of corpses. It took about 3 months for the city of Banda Aceh and other organizations to systematically clean this area. IRD (International Relief Development, Inc.) paid each resident involving in the cleanup as much as Rp 35,000/day (Turmuzi, personal communication, August 14, 2010).

The government of Indonesia (through BRR and several projects), various NGOs and aid agencies took part in the redevelopment process of Merduati. BRR and government-related projects of P2KP (*Program Penanggulangan Kemiskinan Perkotaan* or The Urban Poverty Project) and PNPM (*Program Nasional Pemberdayaan Masyarakat* or the National Community Empowerment Project) constructed infrastructure like roads and drainage. In cooperation with a Christian Doctors' Association from Jakarta, Bayer supports a neighborhood health clinic. The



members of this Doctor's association had previously gotten involved in providing medical aid right after the tsunami. The clinic was mainly directed to child and mother care (Turmuzi, personal communication, August 14, 2010).

Another organization, Unicef (the United Nations Children's Fund) helped Muhammadiyah (the second largest Indonesian Islamic organization) rebuild schools in the village. The schools had several facilities such as a library, a multi purpose hall, a canteen, toilets, and a sport court. Unicef contracted the United Nations Office for Project Services (UNOPS) to build the schools. Meanwhile, UN-Habitat and UNDP (the United Nations Development Program) with their Aceh-Nias Settlements Support Program (ANSSP) funded by the Government of United Arab Emirates, built and renovated 486 houses. Besides UN-Habitat/UNDP, ADB (the Asian Development Bank), BRR, and Genesis also constructed houses as many as 300 units (Turmuzi, personal communication, August 14, 2010).

Other organizations including Care, Muslim Aid, Oxfam, Unicef and Bayer also supported relief efforts by constructing numerous public facilities which were urgently needed by Merduati residents.

**Table 4.21.: Infrastructure built in Merduati during the reconstruction period**

<b>Project Name</b>	<b>Source of Funds</b>	<b>Remarks</b>
House construction	UN-Habitat/UNDP* ADB** BRR Genesis	445 new units, 41 rehab 213 units 76 units 11 units
Road construction	BRR P2KP*** PNPM-Mandiri****	
Community warehouse construction	P2KP	
Drainage construction	P2KP Care Muslim Aid PNPM-Mandiri	
Mosque rehabilitation (3 units)	BRR, City of Banda Aceh government	
Water supply	BRR	
Village office renovation	Provincial government	
Construction of public bathing, washing and toilet facilities	Care	
Elementary school building construction	Oxfam	
Muhammadiyah's educational complex construction	Unicef*****	
Health clinic construction	Bayer in cooperation with Jakarta Christian Doctors' Association	

Sources: Processed based on data from:  
PNPM-Mandiri, The participative review of the five year development plan for combating poverty 2008-2010, and interview with head of Merduati villageTurmuzi on August 14, 2010.

- \* The United Nations Development Program
- \*\* The Asian Development Bank
- \*\*\* Program Penanggulangan Kemiskinan Perkotaan (The Urban Poverty Project)
- \*\*\*\* Program Nasional Pemberdayaan Masyarakat (The National Community Empowerment Project)
- \*\*\*\*\* The United Nations Children's Fund

## *Summary*

The tsunami that hit Aceh and the four case study villages on December 26, 2004, besides causing a large number of casualties, also affected Aceh and the villages' socio-politics, economy, infrastructure, and environment. The scale of the damage triggered huge aid and assistance from various NGOs and donor agencies around the world. The redevelopment process involving NGOs, donor agencies, the Government Indonesia, and the community at large, resulted in better infrastructure. It also turned out to be a blessing in disguise where the Indonesian government and the Free Aceh Movement (GAM) then agreed to sign a peace accord in 2005, after about thirty years of the military conflict. However, the relief efforts to overcome the damage to the environment need a relatively longer period of time to be evaluated thoroughly. On economy, we also still have to wait and see the extent to which reconstruction efforts after the tsunami has boosted Aceh's economy. Specifically, the description of the four case study villages in this chapter is hoped to provide the villages' socio, demographic and economic backgrounds which, can be seen later, affected the implementation of participation in the villages.

## CHAPTER V

### RESEARCH FINDINGS

The research findings will be presented and discussed according to each supporting research question: the implementation of community participation in post-tsunami redevelopment in Aceh Province and community members' perceptions and preferences on community participation in the recovery efforts. The implementation of participation will be described in three categories of participation ("ad hoc," aid organization/agency-promoted, and administrative) and supplemented by the benefits, constraints, and supporting factors of community participation following the tsunami. Community member's perceptions and preferences on participation will refer to the survey (questionnaire) results. This chapter begins with the profile of survey respondents, followed by perceptions on the importance and constraints of participation, and preferences on participation from the perspective of survey respondents.

#### ***The Implementation of Community Participation in Post-Tsunami Redevelopment in Aceh Province***

Various types of participation took place in the reconstruction term following the tsunami in the four case study villages of Lam Teungoh, Lam Hasan, Lambung, and Merduati. Referring to the participation theories discussed in the literature chapter, the types of participation can be associated with the actors promoting or mobilizing the participation itself. They include "ad hoc" participation, administrative participation, and civil society participation.

"Ad hoc" participation relates to voluntary actions mainly mobilized by community members themselves and plays a role in such forms as volunteer programs, information offices,

and fund-raising efforts. Administrative participation is a participation mechanism in which administrative agencies take the initiative in reaching out to the citizens and involving them. Civil society participation is promoted by “interest groups” and help empower affected communities through such activities as supporting their rights and needs, educating and informing them with relevant information, providing funds, building facilities, and others. In the context of the relief efforts in Aceh following the tsunami, besides community members, administrative agencies, and interest groups, aid organizations like foreign government organizations were also involved in the participatory-based development programs.

In many cases, the process of all participation types taking place on the ground mentioned above were not fully in line with the guideline of community participation embedded in the Master Plan for Rehabilitation and Reconstruction for Aceh Province. The hierarchycal participatory process through Development councils from the village to provincial levels could not be implemented in the beginning years following the tsunami, due to the demand for quick relief actions at the village level and the difficulty in reaching an agreement on land consolidation between residents related to land titling issues. What was happening was the reconstruction efforts managed by government agencies and aid organizations were mostly accentuated in the village scope (Nazarul Khairi, ex head of BRR for Aceh Besar District & Iqbal Barata, ex head of BRR for Banda Aceh District; personal communication, June 15, 2009 & August 18, 2010). In Lam Teungoh and Lam Hasan, facilitated by Mercy Corps, the Five Year Village Development Plans (comprehensive village plans) with the participatory approaches were succesfully formulated in 2008. This document was a reference used by those villages in proposing their village development plan at the upper development structure (subdistrict). was also one of aid organizations which succeeded in facilitating the formulation a document on

short-term community planning in Merduati right after the tsunami (in 2005). The formulation was possible with strong support from village leaders and the community as a whole (UNDP & UN-HABITAT, 2006).

It is important to note that the reconstruction effort promoted by aid organizations had some similar characteristics in terms of initial steps taken, implementation of existing community's representatives structure, and the funding sources of their projects. In general, before starting the village reconstruction effort, aid organizations made consultations with the local authorities (pertinent government agencies, heads of subdistricts, heads of villages, etc). In the consultations, there had been socialization and instruction about the organizations' mission, visions and other relevant aspects. After preliminary agreement was achieved between those parties, aid organizations supported by village apparatus organized village meetings to determine the needs and priorities of communities. In the beginning, village meetings were usually held in barracks/temporary tents, later on in village halls, mosques or prayer houses after they were built.

With respect to functionalization of existing community's representative structure, The Activity Managing Team (*Tim Pengelola Kegiatan* or TPK) and the committee for Rehabilitation and Reconstruction (*Komite Rehabilitasi dan Rekonstruksi* or KERAP which later became the Community Self-help Body or *Badan Keswadayaan Masyarakat/ BKM*) models, for instance, were often adopted. The models had been used for already existing government development projects like the Sub-District Development Project (*Program Pengembangan Kecamatan* or PPK). Meanwhile, in terms of funding sources, aid organizations mainly funded their projects from their own sources, donor agencies or donor countries.

Below is the implementation of community participation following the Aceh tsunami which is grouped based on the aforementioned types of participation. The second type of

participation, civil society participation, is extended to be “aid organization/agency-promoted participation” since it also describes the involvement of international agencies in the participatory approaches. Data were gathered from interviews with community leaders and heads of villages of the case study villages and community facilitators of associated aid organizations working on reconstruction efforts in those villages.

### “Ad hoc” Participation

#### 1. Lam Teungoh

In the beginning days following the tsunami, survivors from Lam Teungoh who were scattered in Aceh Besar and Banda Aceh, individually returned to their village to find out if their family members were missing. On the next second week, survivors who mostly gathered in the evacuation area in Lamseudaya village and survivors from neighboring village of Lamtutui who sought refuge in the same area, organized themselves to continue the searching process led by the head of Lamtutui village, Baharuddin. Later Baharuddin also served as head of Lam Teungoh village at the same time, since the previous head of Lam Teungoh village, Masri, was killed by the tsunami. While searching for corpses, they started collecting rough data about death toll in the village (Husaini, personal communication, March 8, 2010).

The paralyzed local governments and the absence of any relief agencies right after the tsunami, led the survivors to evacuate corpses of their family members, relatives, or friends by themselves. Those corpses were buried in any possible areas in their village. Within the first week after the tsunami, the men began burying corpses. In total, some 500 corpses were buried by mid-February. Later, the Indonesian Red Cross and other parties assisted with evacuation and burial process. At that time, most dead bodies were buried in the largest tsunami mass grave in

Lambaro, Aceh Besar. In parallel with search for corpses, data collection on death tolls was also undertaken by the community.

More than one month after the tsunami, community members of Lam Teungoh Village and Lamtutui Village, led by Baharuddin, held a meeting to make a decision with regard to survivors' lives. In the meeting, they decided to go back to Lam Teungoh and Lamtutui because they needed to work again in the villages (mostly as fishermen). They also agreed to rebuild a temporary prayer house and some temporary houses.

With limited resources, tens of male survivors started initial redevelopment of the village. In February 2005, Lam Teungoh villagers finally finished the development of the temporary prayer house and 10 temporary houses. They used wood from remaining trees and debris for wall materials. Iron sheeting donated by the Welfare Justice Party (PKS) was used for roofing. The temporary prayer house then became a community center enabling residents to organize themselves and deal with many issues such as death toll dissemination and trauma counseling (Husaini, personal communication, March 8, 2010).

The return of villagers to the villages was very much influenced by the high spirit of togetherness among them to redevelop their village. Of all tsunami-affected area inhabitants in Aceh, Lam Teungoh and Lamtutui villagers were the first groups who came back to redevelop their villages following the tsunami. This phenomenon is quite amazing given the high level of damage and loss of life suffered by the village. The quick decision to return to their home village helped accelerate the redevelopment efforts in the village, reduced survivors' traumatic feelings and helped earn a livelihood particularly for most villagers who work as fishermen. The fact that most villagers were native inhabitants who were related to each other contributed to the strength of social ties among them (Husaini, personal communication, March 15, 2010).



That spirit impressed USAID which carried out the cash-for-work project, that is, payed residents to clean the land and build a community center and other public facilities. UPLINK, Mercy Corps and other aid organization then were also attracted to provide materials or give funding for the village reconstruction process.

Besides the tight bond among residents, the strong leadership of Baharuddin also played an important role in the return and initial redevelopment process in the village of Lam Teungoh. Given the low level of education among many community members, leadership played an important role in the mobilization process. This low level of condition, in many cases, prevented residents from active participation in the rebuilding process. Baharuddin succeeded in motivating villagers to return to the village and rebuild it (Husaini, personal communication, March 15, 2010). He was communicative, decisive, charismatic and close to the people – typical of Acehnese natural born leader. As a fisherman, he spent more than 30 years on the sea. Before the tsunami, he had been not only head of Lamtutui village, but also Sea Commander (Panglima Laot), leader of an association of fishermen in nine villages including Lam Teungoh village.

## 2. Lam Hasan

Like in Lam Teungoh village, the absence of local government and other aid organizations during the first days after the tsunami forced survivors from Lam Hasan to take urgent measures in initial relief efforts in their village. Two days after the tsunami, community members who escaped to *Gle Genteng* (*Genteng* Hill) returned to Lam Hasan and started looking for their dead family members and relatives. Their return was also to find food (bread, coconut, snacks, and drinking water) from houses and food shops leftover in the neighboring village of Lampasi Engking.

A couple of days later, they sought refuge in the MPI's building in Ajun and emergency tents surrounding the building. Besides survivors from Lam Hasan, survivors from other villages around Aceh Besar and the City of Banda Aceh gathered in this area. In the beginning, survivors built the tents by using wood and plastic coming from tsunami debris. Later, emergency tents were supplied by various local and international relief organizations (Bukhari MY, personal communication, May 9, 2010).

During the third and fourth week, survivors began evacuating corpses and buried them in a collective manner as well as collecting data about death tolls. Most corpses were buried in front of the village's prayer house (about 60 corpses), while the rest were buried in community's or village land. When the reconstruction process started taking place, the evacuation and burial processes were supported by the Indonesian Red Cross and other parties (Bukhari MY, personal communication, May 9, 2010). Like in Lam Teungoh, most dead people were then buried in the tsunami mass grave in Lambaro.

The strong wish to return to their own village motivated survivors to ask for any needed assistance from several aid organizations. Among others, led by the head of the village Bukhari MY, they approached Mercycorps, UPLINK and the Welfare Justice Party (PKS). As a result, in February 2005, villagers cleaned tsunami debris in their village supported by Mercy Corps through the cash-for-work project. One month later, Lam Hasan villagers could stay in the village temporary tents. As many as 36 tents were provided by UPLINK. They utilized wood floors contributed by PKS. The function of the tents were significant. It also supported any other necessities in an emergency situation, that is to deal with trauma healing and the need for disaster information (Bukhari MY, personal communication, May 9, 2010).

### 3. Lambung

Like other survivors in tsunami-affected areas in Aceh, right after the tsunami, survivors from Lambung village also returned to their village to find the corpses of their family members, other relatives, and friends. Due to the flat topography of this area and surrounding areas, only ten corpses were found amid the tsunami debris (Zaidi M. Adan, personal communication, July 2, 2010). Many corpses were swept away by the tsunami waves to other areas. The corpses were then buried in the village cemetery.

To reconsolidate his village inhabitants, the head of Lambung village coordinated male survivors from the village who sought refuge in their relatives' houses concentrating around Cot Gu, Mata Ie, to start erecting temporary shelters in their home village one month after the tsunami. They used debris from the State Junior High School 11 (SMPN 11) building located 200 meters west of the village office as well as materials donated by villagers' relatives residing around Banda Aceh. Fortunately, many of the survivors' relatives were building contractors who kept some building materials at their home areas. The shelters were finished within one month and immediately after that, 40 of the survivors lived in them. The number of residents living in the village temporary shelters increased, and in the fourth month, reached 120 people. Like in Lam Teungoh and Lam Hasan, the existence of these temporary shelters was really significant pertaining to access to disaster information and restrengthening social life (Zaidi M. Adan, personal communication, July 2, 2010).

In supporting relief efforts of their village, Lambung residents were quite creative. Led by their head of the village, who is well educated, with a bachelor degree in social and political sciences, Lambung residents also opened a community bank account for receiving donations and announced it widely. Then they advertised village redevelopment meetings in local newspapers

or on local radio. The village bureaucrats' and community leaders' relations with ex-Lambung inhabitants who had moved to other areas, including businesspersons, government officials, and other prominent figures, made it easy for the village to collect funds donated by those people and to network. This relation also enabled the village to have information access to any development projects managed by the government and various aid organizations (Zaidi M. Adan, personal communication, July 2, 2010). From its own funding, Lambung successfully built a volleyball court, *Pos Kamling* (Law and order of the neighborhood post), and a village office.

Through village development meetings, which were usually attended by more than one hundred inhabitants, the proposal of a number of survivors to rebuild the village into better organized settlements was discussed. With the participation of most survivors, the village eventually arrived at a common agreement concerning a redrawing of boundaries and land-use patterns. The new land-use plan was handled by professional rural spatial planners. Approved by villagers, all the land was properly consolidated and the village was replanned and built with an open green area and a minimal width of roads of four meters. This could be realized after villagers agreed to freely give at least 10-15% of their land for the construction of roads and public buildings. It is important to note that religious approaches made by the head of the village as well as cultural and religious leaders by linking the land contribution to religious services were the key factors in this process (Zaidi M. Adan, personal communication, July 2, 2010).

#### 4. Merduati

Unlike the three previous villages, Merduati's proximity to the center of the capital city of Banda Aceh, made it a bit easy for several parties to immediately get involved in the village relief efforts. Along with volunteers from the Indonesian Red Cross and the Indonesian Mobile

Brigade troops, a number of survivors from Merduati evacuated corpses in the village a few days after the tsunami. Those corpses were taken to the area around the Lambaro intersection, before being buried in the next couple of days in the mass grave near that area (Turmuzi, personal communication, August 14, 2010).

One month after the tsunami, with tents donated by The Indonesian National Soldier (TNI), survivors established a base camp in Geuceu Iniem on land owned by a local inhabitant. In this base camp, some 100 survivors organized themselves to search for remaining corpses in their village, made a list of the death toll and served any emergent necessities of survivors (logistic, clothing, information, etc). It is important to note that close working relations between the head of the village and community leaders (particularly religious leaders) made it easier for survivors to tackle participation emergency activities. Later, religious leaders also took an active role in involving Merduati residents in the village recovery process (Turmuzi, personal communication, August 14, 2010).

As a thriving business area, Merduati attracts many people from different ethnic backgrounds (Chinese, Indian, Javanese, Padangnese, etc) and occupations (private sector workers, government employees, traders, etc). Many people also lease buildings and houses over time in this area to make a living as traders or to just stay at boarding houses (students, etc) because of its strategic location. This create a low sense of belonging for the newcomers to the village and weaken social ties among community members which in turn, influence participation among community members (Turmuzi, personal communication, August 14, 2010).

Unlike previous villages, survivors from Merduati did not immediately return to their village and did not build barracks/temporary homes in the village. Most survivors stayed in the evacuation areas or lived in their relatives' homes and host communities until permanent homes

were built in the village by some aid organizations. Its proximity to the capital city resulted in easy access to any relief assistance including barracks/temporary shelters. The death of the head of the village because of the tsunami also caused coordination among survivors to be difficult which, in turn, inhibited survivors from wider participation in the reconstruction process. The new village head, Zakaria, was appointed 6 months later (Turmuzi, personal communication, August 14, 2010). The status of Merduati was still as a *kelurahan* until 2009 where its head was appointed by the government.

#### Summary of Ad-hoc Participation in the Four Case Study Villages

Given data about the participatory activities mainly mobilized by the community members above, it can be concluded that residents of the four case study villages participated in (1) corpse evacuation; (2) data collection on the death toll in their own village; and (3) disseminating disaster-related information. The occurrence of this kind of participation was basically related to communities' urgent needs right after the tsunami. Communities had no choice except to participate in these activities because aid agencies were still not involved actively in the relief effort at that time. All case study villages, except for Merduati, also participated in barrack/temporary shelter development. The non-existence of temporary shelter development in Merduati resulted from the lack of coordination among its community members due to the death of its former head of village in the tsunami and its proximity to the capital city which resulted in easy access to relief assistance.

Lambung village surpassed other villages in terms of the variety of participatory activities. Lambung made some breakthroughs through their residents' initiatives in village development planning, land contribution for public facilities, opening a bank account for public

donations, advertising village meetings, and public facility construction with village funds.

Table 6.1. below summarizes the participatory activities of the four case study villages in post-tsunami redevelopment.

**Table 5.1.: Community participation mainly mobilized by residents following the tsunami in the case study villages of Lam Teungoh, Lam Hasan, Lambung and Merduati**

Village Activity	Lam Teungoh	Lam Hasan	Lambung	Merduati
Corpse evacuation	√	√	√	√
Initial data collection on death toll	√	√	√	√
Barrack/temporary home development	√	√	√	
Disseminating disaster related information (in barracks/tents/evacuation areas, community center building, etc)	√	√	√	√
Village development planning			√	
Massed land contribution for public facilities			√	
Opening a bank account for public donations			√	
Advertisement of village meeting in media			√	
Public facility construction with village funds			√	

## *Aid Organization/Agency-promoted Participation*

### Mercy Corps (Lam Teungoh Case)

#### 1. Relief activities

Mercy Corps, a global aid organization, started operating in Aceh province right after the tsunami hit this area. Mercy Corps focused its work on community development, economic development and local government initiatives (Mercy Corps, 2009). In Lam Teungoh, Mercy Corps operated from January 2005 through March 2010.

A number of relief efforts have been conducted by Mercy Corps in the village. The cash-for-work project, aimed at cleaning up the village to make it ready for reconstruction and enabling households to earn cash, was its first project in the village. This project was followed by several construction projects including construction of the ritual ablution place/bathing place, women's group building, public cemetery fence, and drainage system. The economic development program included training on business and entrepreneurship, providing grants both for survivors to run businesses (as mechanics, cattle breeders, etc) and for the village (to establish a village shop and to provide rental wedding supplies and kitchenware). The leadership and governance program consisted of village administration data base development and facilitating the formulation of Five Year Village Development Plan (2008-2012) of the Village of Lam Teungoh in cooperation with the Indonesian government. The program also included training on administration and leadership, bookkeeping, project management, and reporting, (Gampong Lam Teungoh, 2008).



## 2. Participatory Process

- Facilitated by Mercy Corps and supported by village bureaucrats (the head of the village and his apparatus) and community leaders, Lam Teungoh residents organized a series of community meetings begun in early 2005 to discuss urgent relief efforts in the village. Twenty to thirty villagers usually participated in the meetings.
- Improvements, objectives and goals were determined based on agreement between Mercy Corps and the community by taking into account the conformity of the programs with Mercy Corps' missions and focused work in Aceh Province.
- Once projects were decided, committees were established. One committee consisted of three people (chair, secretary, and treasurer). Each project was associated with a different committee. The committee in the women group building construction project, for instance, was different from that of drainage construction. Committees were responsible for the overall implementation of their related projects. Their members were chosen by village meeting participants (the input of the head of the village was, however, considerably important).
- Mercy Corps provided consultation and relevant training for committee members to support construction projects. Meanwhile, training on entrepreneurship, administration, leadership, etc, was conducted with participants who were selected by the head of the village and his apparatus by considering input from residents.
- Construction designs (for ritual ablution place/bathing place, Women's Group building, public cemetery fence, drainage) were prepared by the Mercy Corps technical staff by taking into account the community's aspirations.

- Local community members were prioritized to be laborers in the construction projects. Non-local laborers were employed as minimally as possible to enable local residents to improve their incomes. The use of manual labour without a contractor was enabled because of the small scale of the construction projects.
- Committees managed project funds and dealt with builders and material suppliers (community contracting model). To control the use of funds, Mercy Corps disbursed the funds in several stages, based on the progress of the construction. This helped projects meet the contract timing and quality specifications.
- Program monitoring and evaluation was formally done by village bureaucrats supported by *tuha peut* (an advisory council consisting of four people considered knowledgeable and resourceful within the community). Community members were also persuaded to participate in this process. Communities could direct their complaints, questions, or input to pertinent committees or Mercy Corps.
- Committees made reports of program implementation and evaluation. The report of one program subsequently became a useful reference for other future programs.
- In accordance with the comprehensive village plan, the Five Year Village Development Plan (2008-2012) was formulated in 2008. Its process was entrusted to the Village Planning Team (*Tim Perencana Gampong* or TPG). TPG members were selected by the head of the village and started working on the project in 2008 (with Mercy Corps' facilitation). The planning process of the document consists of several steps. First, TPG members identified village assets, potential, and problems. They also analyzed Mercy Corps' former projects that had been implemented in their village. Subsequently, TPG came up with detailed potential projects and activities and made a presentation. After receiving feedback, the

planning draft was approved by *tuha peut* and sent to the subdistrict. To carry out projects approved in the five year development plan, Mercy Corps gave the village \$21,000 in 2008 and \$25,000 in 2009.

- For the economic projects in the early phase of the emergency period (right after the tsunami), Mercy Corps provided individuals or groups of residents with low incomes with grants. Those people were to make proposals regarding economic activities they wanted to undertake (development of machine shops, food shops, etc). The approval of the proposals was done through the Mercy Corps' review process. Grants, rather than loans, were given since the majority of residents were poor and only ran small businesses. For economic projects outlined in the five year village development plan, there had been the establishment of the Village Owned Enterprise (*Badan Usaha Milik Gampong*). Mercy Corps proposed this project to minimize the dependence of the village on external sources of funding so that the village would be able to realize its future development projects. The enterprise was aimed at generating profit for the community. The establishment of a village shop, provision of rental wedding supplies and kitchenware became the means for the village to generate funding for its economic development.

(Tasir Muhammad Rizal Husein, Mercy Corps' community facilitator, Jan 2008 – Dec 2009, personal communication, April 4, 2010; Mercy Corps, 2010).

**Table 5.2.: The role of residents and other actors for each phase of Mercy Corps' projects in Lam Teungoh\***

Activity \ Actor	Residents/ beneficiaries	Committees/ community representa- tives	Mercy Corps	Hired Contractor	Arnstein's level of community participation
Program initiation for village redevelopment	√		√		
<b>1. Construction project (bathing place, women's group building, public cemetery fence, and drainage)</b>					"partnership" (joint decision making between Mercy Corps and the community, project funding management in the hands of the community)
Project initiation	√		√		
Design			√		
Construction	√	√**			
Monitoring & evaluation	√	√	√		
<b>2. Small grant project for individual(s) business</b>					"delegated power" (decision making and project funding management in the hands of the community)
Project initiation	√		√***		
Proposal making	√		√***		
Running of business	√				
Monitoring & evaluation			√		
<b>3. The establishment of the Village Owned Enterprise</b>					"informing" (decision making in the hands of Mercy Corps, residents were informed their rights, responsibilities and options)
Project initiation			√		
Proposal making		√	√		
Running of the enterprise		√			
Monitoring & evaluation			√		

\*This table (and other similar tables in the next section of this chapter), especially the "construction project" part, is adapted from Davidson C. H., et al.'s matrix of post-disaster housing project management.

\* \*The village committee managed the process

\*\* \*Mercy Corps facilitated the process

## USAID/DAI (Lam Teungoh Case)

### 1. Relief Activities

The U.S. Agency for International Development (USAID) supported Aceh reconstruction with a number of recovery efforts including the cash-for-work projects (cleaning up village land), village planning facilitation, public infrastructure reconstruction, training on community empowerment and leadership (BRR, 2009e) . In implementing its programs, USAID cooperated with Development Alternatives, Inc. (DAI), a global consulting firm providing social and economic solutions in developing and transitioning countries.

In Lam Teungoh USAID/DAI worked from March 2005 through December 2007. USAID/DAI finished the following projects: debris removal, village office construction, volley ball court construction, soccer field rehabilitation, provision of kitchenware for village women's group as well as computers and tables for the village office, rice field rehabilitation, and training for food science, vehicle repairmen, leadership, etc (Gampong Lam Teungoh, 2008).

### 2. Participatory Process

- USAID/DAI in cooperation with influential village figures (particularly the head of the village and community leaders), facilitated village meetings to absorb the community's aspirations and needs. In the meetings residents discussed their problems, needs and expected programs. More than 20 villagers usually attended the meetings.
- Technical issues of programs were discussed in Focus Group Discussions (FGDs) consisting of village bureaucrats, members of the village advisory council (*tuha peut*), and representatives of various groups in the community (Farmers' group, Fishermen's group, Women's group, Youth's group, etc). FGD members were chosen by community members.

- USAID/DAI's community facilitators also communicated with villagers, especially vulnerable people like women and children, in an informal manner to better understand their situations, problems, and needs. This communication was relayed to FGDs' members. The results of this initiative was the provision of kitchenware for the village women's group and food science training for village women.
- One FGD consisted of 8-10 members and was assigned for one project with different members. However, due to their strategic positions and the consideration of project implementation smoothness, the head and secretary of the village served as members in every FGD.
- Village Office was designed by the USAID/DAI's technical staff, while its development mainly employed local laborers. Like in Mercy Corps' projects, USAID/DAI did not need to hire any contractors for their projects due to simple construction of the projects.
- USAID/DAI managed project funds and dealt with builders and material suppliers. According to USAID/DAI, this saved time and minimized the misuse of funds.
- Program monitoring and evaluation was primarily done by USAID/DAI in cooperation with FGDs. Any complaints and consideration from both parties and communities were discussed mainly on a development stage basis.

(Mulizarni, DAI's community facilitator March 2005 – Aug 2007, personal communication, June 8, 2010).

**Table 5.3.: The role of residents and other actors for each phase of USAID/DAI’s construction projects (village office, volley ball court, and soccer field) in Lam Teungoh**

Actor \ Activity	Residents	FGDs	USAID/DAI	Hired Contractor	Arnstein’s level of community participation
Program initiation for village redevelopment	√	√	√		“partnership” (joint decision making between USAID/DAI and the community, but project funding was managed by USAID/DAI)
Project initiation		√	√		
Design			√		
Construction	√				
Monitoring & evaluation	√	√	√		

UPLINK (Lam Hasan Case)

1. Relief Activities

Urban Poor Linkage (UPLINK) is an urban poor community organizer focusing on urban poverty and impoverishment issues. In the reconstruction of Aceh after the tsunami, UPLINK worked in many village areas to provide homes, infrastructure reconstruction, economic development, reinforcement of social relations and cultural cohesion, and environmental regeneration (Sudirman Arif, ex UPLINK’s community organizer, personal communication, May 5, 2010).

In Lam Hasan, UPLINK working with villagers constructed 236 new homes and rehabilitated 40. It also constructed roads and drainage systems and recovered village-based small scale economic activities. By adopting participatory reconstruction approaches in its development activities, UPLINK intended to increase community cohesion, resilience and reconciliation. The organization worked in Lam Hasan about four years from 2005-2008 (Gampong Lam Hasan, 2008 & Gampong Lam Hasan, 2009).

## 2. Participatory Process

- In cooperation with the Indian NGO Abhiyan, UPLINK established *Udeep Beusaree* Network (*Jaringan Udeep Beusare* or JUB) consisting of 25 neighboring coastal villages stretching from *Ulee Lheue* to *Lam Pageu* to enforce community involvement in post tsunami redevelopment.
- JUB increased social cohesion of 25 village communities and was a medium for community workshops and empowering communities to manage their lives. It facilitated communities to discuss any issues and problems resulting from the tsunami and the possible solutions. In the early phase of relief efforts, rather than taking quick actions in carrying out construction projects in the tsunami-affected areas, UPLINK focused on facilitating JUB's activities in light of strengthening communal spirit among community members, both intra- and inter-villages.
- Before starting its Community Based Housing Reconstruction Program (CBHRP), UPLINK had to settle the dispute over land ownership. Long disagreement about land-titling issues between BRR and the National Land Affairs Agency (BPN) led UPLINK to use a community land adjudication system through a community land mapping process. The results of the process were published to finalize land boundaries. This participatory process was quite effective and avoided the long delays of the housing project. Later, the agreement among communities, in turn, resulted in the issuance of a land legal certificate from BPN.
- In a series of meetings, communities sat together to develop a village spatial plan (facilitated by UPLINK) as a general reference for any development activities in the village, including the housing development project.



- Through CBHRP, UPLINK helped community members become involved in all aspects of the housing development process with the final decision in the hands of the community.
- In the first stage of housing development, residents actively participated in land surveying and mapping, data collection, and housing design. For the housing design, UPLINK adopted Community Action Planning (CAP) methodology. UPLINK technical staff helped communities prepare the housing design.
- The Activity Managing Team (*Tim Pengelola Kegiatan* or TPK) for housing construction was established. Its members consisted of 3 people (supervisor, supplier coordinator, and head of laborers) and were chosen by villagers.
- Housing beneficiaries were grouped into clusters of 5 households. Leaders and representatives of clusters were elected by the clusters' members themselves. Each cluster had a cluster savings account, to receive funds for construction. These funds were disbursed in 3 phases, based on construction progress.
- UPLINK's facilitators motivated community members to strengthen social ties through working with group members. UPLINK also provided the community with training to enhance community spirit and to support construction projects. The training included, among other things, mass mobilization, building design, building materials and construction.
- Housing beneficiaries had latitude to employ laborers (including themselves if possible) and dealt with material suppliers for their housing development. In many cases, local laborers were optimally used which helped boost village economies. In the case that reconstruction laborers and resource requirements were not available in the village, they were supplied from other places.

- Housing beneficiaries with the help of TPK acted as building inspectors and evaluators for their own home construction or rehabilitation.
- TPK managed funds for housing development. It also helped beneficiaries monitor, evaluate and report the development progress on a development stage basis.
- For the small scale construction of roads and drainage, UPLINK also adopted community based approaches. A particular TPK was established for this and communities got involved in provision of laborers and material supply. In the asphaltting phase, due to the work complexity, UPLINK hired a contractor. Meanwhile for drainage construction, participatory approaches were used for provision of materials and laborers for the entire construction process.
- In the village economic recovery, UPLINK provided households with small grants (Rp 3.2 – 3.5 million) that enable them to gain access to capital for income generating activities. One TPK consisting of 3 elected representatives was established to handle project administration. Households submitted their prioritized economic activities. Besides kinds of activities they planned to carry out, they had to break down budget for needed equipment. UPLINK provided households with technical assistance and finalized the proposal. The funds were disbursed by BRI through the opening of household bank accounts. Economic activities proposed by households included: composting, mushroom cultivation, rice farming, cattle and poultry breeding, mechanical working, barbering, etc.

(Sudirman Arif, UPLINK's community organizer, personal communication, May 5, 2010 & Campagnoli, 2007).

**Table 5.4.: The role of residents and other actors for each phase of UPLINK’s projects in Lam Hasan**

Activity \ Actor	Residents/ beneficiaries	TPKs	UPLINK	Hired contractor	Arnstein’s level of community participation
Program initiation for village redevelopment	√		√*		“delegated power” (decision making and project funding management in the hands of the community)
<b>1. Housing construction and renovation</b>					
Project initiation	√				
Design	√		√*		
Construction	√**	√***			
Monitoring & evaluation	√	√	√*		
<b>2. Small scale drainage construction</b>					
Project initiation	√				
Design		√	√*		
Construction	√	√***			
Monitoring & evaluation	√	√	√*		
<b>3. Small scale road construction</b>					
Project initiation	√				
Design		√	√*		
Construction	√****	√***		√****	
Monitoring & evaluation	√	√	√*	√	
<b>4. Small grants project for households’ business</b>					
Project initiation	√				
Proposal making	√	√***	√*		
Running of business	√				
Monitoring & evaluation	√	√	√*		

\* UPLINK facilitated the process

\*\* Beneficiaries could either build their houses or give the house construction to professional builders

\*\*\* TPKs managed the process

\*\*\*\* Residents did not participate in the last part of construction (asphalting) because of the work complexity; it was done by a hired contractor.

### AIPRD (Lam Hasan Case)

#### 1. Relief Activities

Australia Indonesia Partnership for Reconstruction and Development (AIPRD), jointly managed by the Australian and Indonesian Governments, was developed to support Indonesia’s

reconstruction and development efforts both in and beyond tsunami-affected areas. In Aceh, AIPRD reconstructed public infrastructure, rebuilt people's livelihoods, strengthened government service delivery, democracy, and peace in the province (AIPRD, 2010).

AIPRD worked from January 2006- December 2007 in Lam Hasan. AIPRD successfully constructed Village Office, tsunami victims' cemetery fence and volleyball and table tennis courts. AIPRD also provided stationery for village office and equipment for village health clinic as well as conducting training for management and leadership (for village bureaucrats and community leaders), capacity building of village development cadre, women's empowerment, five year development plan and craftsmanship (Gampong Lam Hasan, 2008 & Gampong Lam Hasan, 2009).

## 2. Participatory Process

- AIPRD consulted with village authorities to discuss the possible efforts to rebuild the village and the community.
- Supported by village leaders, AIPRD organized village meetings to gather community's wishes and aspirations. The decision making process concerning projects was based on agreement between the community and AIPRD.
- The Activity Managing Teams (*Tim Pengelola Kegiatan* or TPK) were established for all development projects (tsunami victims' cemetery fence construction, and volleyball court construction), except for village office construction. One TPK was assigned for one project. It consisted of 3 community representatives and was elected by the community.
- AIPRD technical staff made the construction designs by taking residents' input and consideration into account.

- TPKs managed funds and laborers (except for village office construction). Local laborers were prioritized for the construction process to provide jobs and empower the community's economy. The village office was constructed by a hired contractor and laborers from outside of the village were employed for its construction.
- Program monitoring and evaluation were done by AIPRD supported by communities. Communities directed input and any comments regarding projects to AIPRD. Specifically for village office construction, it was monitored and evaluated by the hired contractor and AIPRD.

(Marziani, AIPRD's community facilitator, Jan 2006 – Dec 2007, personal communication, July 27, 2010).

**Table 5.5.: The role of residents and other actors for each phase of AIPRD's construction projects (Village Office, tsunami victims' cemetery fence, and volleyball and table tennis courts) in Lam Hasan**

Actor \ Activity	Residents	TPKs	AIPRD	Hired Contractor	Arnstein's level of community participation
Program initiation for village redevelopment			√		"partnership" (joint decision making between AIPRD and the community, project funding management in the hands of the community)
Project initiation			√		
Design			√		
Construction	√			√*	
Monitoring & evaluation	√	√	√	√*	

\*For the village office, construction as well as monitoring and evaluation was done by a hired contractor. For cemetery fence, and volleyball and table tennis courts, the contractor was not involved in the project management.

## World Vision (Lambung Case)

### 1. Relief Activities

In response to the tsunami, World Vision, a Christian relief, development and advocacy organization, carried out programs pertaining to supporting tsunami survivors, rehabilitating livelihoods and construction of public facilities. Food was distributed and equipment and supplies were provided to clinics, hospitals and schools. World Vision also built temporary shelters, permanent houses, temporary and permanent schools as well as facilitating massive training for teachers to achieve quality education (World Vision Indonesia, 2010).

During its work time in Lambung, 2005-2010, World Vision has built temporary shelters, warehouses, and artesian wells. World Vision has also provided knockdown buildings for a temporary clinic and a temporary kindergarten. This construction work was tackled during the emergency period soon after the tsunami through Indonesian Tsunami Response Programs. Since 2007 (until present), with its Aceh Development Program, World Vision has focused on economic activities and community health service empowerment. In the health sector, World Vision has helped the village health clinic develop its service through training for clinic workers and provision of initial medical equipment and medicine. In the economic sector, World Vision has strengthened village long-term livelihood prospects, as well as strengthening residents' confidence, skills and expertise through the combination of training and various economic activities. The economic activities supported by World Vision include producing Acehnese cakes (*doi, meusekat*, etc) and other cakes, embroidering, and village fish pond development. In 2010, the latter activity is still in progress by strengthening the Village Fish Pond Farmer Association (the establishment of the association was facilitated by World Vision) (Gampong Lambung, 2009).

## 2. Participatory Process

- In the Lambung reconstruction relief right after the tsunami until about 2 years later, World Vision mostly accommodated Lambung community's proposal for needs and priorities in the village reconstruction. Like many other relief organizations operating in Aceh, World Vision used a PRA (Participatory Rapid Appraisal) method in the decision making process. In this regard, World Vision helped community members identify the problems, design and implement program activities. From its meetings with village authorities and the community, World Vision approved communities' proposals for the following reconstruction: barracks, artesian well, temporary clinic, temporary kindergarten building and warehouse.
- Communities got involved in the artesian well reconstruction through the bidding process with the bidding participants from Lambung community.
- In health sector development, community members were voluntarily involved in providing service for patients in the World Vision's village clinic enhancement project. World Vision itself provided some needed equipment for the clinic.
- In the next period of time (2007-present), World Vision has focused its work mainly on economic and education development. In Lambung, economic development has taken up a large portion of World Vision's programs. World Vision proposed small and medium enterprise development and the establishment of the fish pond farmer cooperative.
- World Vision conducted training (on bookkeeping, marketing, etc) for small business development and provided the community with the financial support for the establishment of the cooperative for fish pond farmers. The financial support was used for the process of administering the cooperative as a corporate body. World Vision came up with the idea of establishing the cooperative based on their own initiative to boost the future village economy.

World Vision, in cooperation with Aceh microfinance institutions, also provided technical assistance to strengthen cooperative management and performance. So far, this cooperative has 25 members who have been participating in this economic project by making initial and monthly member contributions.

(Mukhlisin, World Vision’s community development coordinator, Sept 2009 –Sept 2010, personal communication, July 23, 2010)

**Table 5.6.: The role of residents and other participants for each phase of World Vision’s artesian well construction project in Lambung**

Actor \ Activity	Residents/ beneficiaries	Committees	World Vision	Hired contractors	Arnstein’s level of community participation
Program initiation for village redevelopment	√		√		
<b>1. Artesian well construction</b>					“partnership” (joint decision making between World Vision and the community, project funding management in the hands of the community)
Project initiation	√		√		
Design	√				
Construction	√				
Monitoring & evaluation	√		√		
<b>2. Small business development (producing cakes, embroidering, etc)</b>					“partnership” (joint decision making between World Vision and the community)
Project initiation	√		√		
Proposal making	√		√*		
Running of business	√		√**		
Monitoring & evaluation	√	√	√*		
<b>3. The establishment of the cooperative for fish pond farmers</b>					“informing” (decision making in the hands of World Vision, residents were informed their rights, responsibilities and options)
Project initiation			√		
Administering of the cooperative as a corporate body			√		
Managing the cooperative	√		√***		
Monitoring & evaluation	√	√	√		



\*World Vision facilitated the process

\*\*World Vision conducted training (on bookkeeping, marketing, etc) for beneficiaries

\*\*\*World Vision in cooperation with microfinance institutions have been providing technical assistance

## UN-HABITAT (Merduati Case)

### 1. Relief Activities

Immediately after the tsunami, United Nations Human Settlements Programme (UN-HABITAT), the agency for human settlements in the UN system, started working to assess the damage and support survivors to rebuild their lives, their communities and economic activities. UN-HABITAT, through the Aceh-Nias Settlements Support Programme (ANSSP), which was part of the UNDP's broader Aceh Emergency Response and Transitional Recovery (ERTR) Programme, was involved in rehabilitation and reconstruction of housing and community infrastructure, introduction of risk mitigation infrastructure, mapping of basic information at the level of the settlement, and technical assistance and policy support to the Aceh Nias Rehabilitation and Reconstruction Agency (BRR) (UNDP & UN-HABITAT, 2006; UN-HABITAT, 2006).

In Merduati, UN-HABITAT facilitated the formulation of short-term community planning (*Perencanaan Jangka Pendek* or PJP) and reconstructed 486 houses (445 new units and 41 rehabilitated ones). The housing reconstruction project in the village and Peulanggahan Village (both part of Kuta Raja subdistrict) was funded through support from the Government of United Arab Emirates. The project started operating in July 2005 with the establishment of the field office, recruitment of staff and staff training and ended in December 2007 (PNPM-Mandiri 2008; Turmuzi, personal communication, August 14, 2010).

### 2. Participatory Process

- Consultations with head of Merduati, the committee for Rehabilitation and Reconstruction' (*Komite Rehabilitasi dan Rekonstruksi* or KERAP) members and the community to build a common vision in the relief effort process. KERAP was part of P2KP project and was formed beforehand.
- KERAP facilitated discussions on the community's needs to rebuild their lives by using the Community Action Plan (CAP) methodology. The product of the discussions was a document on short-term community planning (*Perencanaan Jangka Pendek* or PJP). This document was approved by the village community and verified in the focus group meetings attended by community representatives. PJP prioritized construction of the following infrastructure: roads, water supply, drainage, school, mosque, and community hall.
- Participatory mapping of the land ownership boundaries was conducted to prepare the settlement layout plan (the community land adjudication system). This was important for the land certification process required by BPN.
- After the settlement layout was approved, a series of meetings were organized to determine whether the reconstruction was still in the same location or relocation was required. The communities finally decided to rebuild in the same area.
- In the first stage of house construction, UN-HABITAT facilitated communities to share their ideas on house designs, construction and the terms of their participation.
- Seven to thirteen households form one cluster (*Kelompok Pembangunan Rumah* or KPR). Each cluster had plotted their previous land boundaries in coordination with the surviving neighbours. KPR consisted of 3 cluster representatives: chair, secretary, and treasurer. They had the authority to operate the KPR's bank account to receive funds from

UN-HABITAT as well as managing other issues related to the housing reconstruction. At the village level, beneficiaries were represented by TPK consisting of 3 representatives of all KPRs (chair, secretary, and treasurer).

- Monitoring started with supervision in each KPR group (by a supervisor of each KPR). The report to the village level will be made if needed.

(UNDP & UN-HABITAT, 2006; UN-HABITAT, 2006).

**Table 5.7.: The role of beneficiaries and other participants for each phase of UN-HABITAT’s housing project in Merduati**

Actor \ Activity	Beneficiaries	Committees	UN-HABITAT	Hired contractors	Arnstein’s level of community participation
Program initiation for village redevelopment	√		√		“partnership” (joint decision between UN-HABITAT and the community, project funding management in the hands of the community)
Project initiation	√		√		
Design	√		√*		
Construction	√**				
Monitoring & evaluation	√	√	√		

\*UN-HABITAT facilitated the process

\*\*Beneficiaries could either build their houses or give the house construction to professional builders

### ***Administrative Participation***

#### BRR (in 4 Case Study Village)

##### 1. Relief Activities

The Agency for the Rehabilitation and Reconstruction of Aceh and Nias (Badan Rehabilitasi dan Rekonstruksi Aceh dan Nias, BRR), established by the Government of

Indonesia on April 16, 2005 through the issuance of Government Regulation in Lieu of Law (Perpu) No. 2/2005, functioned to coordinate and jointly implement a community-driven recovery program for Aceh and Nias (BRR, 2009j). BRR basically had the dual roles: coordinating domestic and international efforts to rebuild Aceh and Nias as well as implementing its own projects (BRR, 2009c). BRR ended its term on April 16, 2009. The relay of recovery work was continued by the associated ministries/agencies and regional governments.

In the four case study villages, BRR carried out the following projects: house construction (in Lam Teungoh, Lam Hasan, Merduati), road construction (in all case study villages), construction of drainage, prayer house, village meeting hall, building for producing cakes and *Mukim* (a legal community unit formed from several villages) Office (in Lambung), mosque rehabilitation and water supply (in Merduati) (Gampong Lambung, 2009; Gampong Lam Hasan, 2008; Gampong Lam Teungoh, 2009; PNPM-Mandiri, 2008). In addition, BRR also provided grants and loans for the tsunami victims to restart small businesses. Grants were given directly from BRR (right after the tsunami), while loans were then given through microfinance institutions and cooperatives until 2008.

## 2. Participatory Process

- Through the Committee for Acceleration of Housing and Settlements Development (*KP4D*), established by BRR's initiative with some of its members were community representatives, BRR conducted surveys about housing needs assessment (except for Lambung which its housing project was tackled by the Ministry of Public Works in cooperation with the Multi Donor Funds). These surveys involved community members at the grassroots level coordinated by *KP4D*. The final decision on the overall housing development (number,

beneficiaries, etc) was made by BRR. Housing design and funds were also managed by BRR, while the construction was done by contractors. These housing development approaches which enable communities to participate in the project in a less meaningful way were adopted by BRR to prevent the high risks borne by this new relief agency. The BRR housing project was the biggest housing construction project of all housing projects managed by aid organizations/agencies in the reconstruction process.

- Using its own and other parties' data and assessment (NGOs', etc), BRR built infrastructure such as roads, bridges, etc by hiring contractors without necessarily employing village laborers in order to achieve timely project targets (commercial contracting model), in the tsunami-affected areas. The choice of hiring contractors was made in a situation where BRR was a new relief agency which had a lot of responsibilities in coordinating all recovery efforts and in implementing its own projects in a relatively short period of time. In terms of implementing its own project, BRR was responsible for the biggest housing development project of all aid organizations/agencies. In such a situation, BRR should carefully consider the extent to which communities would participate in its projects to avoid the delay and unsuccessful results.
- BRR provided grants for housing renovation (*BLT/Bantuan Langsung Tunai*) and grants for business capital (*BLM/Bantuan Langsung Masyarakat*) for tsunami victims the community at-large. *BLT* funds were fixed amounts decided by BRR. *BLM* were given based on proposals made by individuals or parties considering the feasibility of projects offered and the eligibility of beneficiaries (economic conditions, etc).
- Later, BRR provided loans instead of grants through microfinance institutions and cooperatives for tsunami victims' businesses and other community members economic

activities. This scheme also required beneficiaries to make business proposals. The microfinance institutions or cooperatives would select the beneficiaries based on the proposals. The microfinance institutions and cooperatives received technical assistance (management assistance, training, internship programs, etc) from BRR. Unfortunately, the low return on loans caused by the misconception among borrowers that the loans belong to them still remains the biggest challenges.

- Program monitoring and evaluation for housing construction was done by hired contractors and BRR, while provision of loans and grants by BRR and associated microfinance institutions and cooperatives.

(Nazarul Khairi & Iqbal Barata, personal communication, June 15, 2010, & August 18, 2010 respectively; BRR, 2009h).

**Table 5.8.: The role of project participants for each phase of BRR’s projects in the four case study villages**

Actor \ Activity	Residents/ beneficiaries	Community’s committees	BRR	Hired contractors	Arnstein’s level of community participation
Program initiation for village redevelopment			√		
<b>1. Small scale public infrastructure and housing construction</b> (roads, drainage, village hall, prayer house, etc)					“consultation” and “placation” (community’s input was considered through surveys and the involvement of their representatives in KP4D, but the final decision was in the hands of BRR)
Project initiation		√	√		
Design			√		
Construction				√	
Monitoring & evaluation			√	√	
<b>2. Housing renovation</b>					“partnership” (joint decision between BRR and the community, project funding management in the hands of the community)
Project initiation	√		√		
Design	√				
Construction	√*				
Monitoring & evaluation	√		√		
<b>3. Grants and loans for supporting survivors’ economic activities</b>					“partnership” (joint decision between BRR and the community, project funding management in the hands of the community)
Project initiation	√		√		
Business proposal making	√		√**		
Running of business	√				
Monitoring and evaluation			√***		

\* Beneficiaries could either build their houses or give the house construction to professional builders

\*\* BRR (through microfinance institutions or cooperatives) facilitated the process

\*\*\* Loans were monitored and evaluated by associated microfinance institutions and cooperatives which gave the loans

## The Ministry of Public Works and BRR/ *ReKompak* (Lambung Case)

### 1. Relief Activities

The Community-Based Settlement Rehabilitation and Reconstruction Project (*Rehabilitasi dan Rekonstruksi Masyarakat dan Permukiman* or *ReKompak*) provided grants to rebuild and repair houses and to rehabilitate infrastructure using a community-driven approach in the tsunami-affected areas in Aceh. Funds for village infrastructure development were distributed through the Urban Poverty Project (*Program Penanggulangan Kemiskinan di Perkotaan* or P2KP) and the *Kecamatan* Development Project (*Program Pengembangan Kecamatan* or PPK). At the beginning, *ReKompak*, launched in early 2006, was executed under the coordination of Ministry of Public Works. Later, going through a step by step process, the management and execution of the program was handed over to BRR (BRR, 2009f).

As a whole, the work of *ReKompak* following the Aceh tsunami was funded by the Multi Donor Fund (MDF), International Development Agency (IDA) and the Government of Indonesia represented by BRR in cooperation with Direktorat General for Settlements, Ministry of Public Works. Meanwhile in the Lambung reconstruction, *ReKompak*'s funding source came from MDF.

Three parties were involved in MDF: the Government of Indonesia represented by BRR, donors represented by the European Commission and the World Bank as manager of MDF. MDF's members included donor countries and international institutions, such as the European Commission, United Kingdom, Sweden, Norway, Germany, Canada, Belgium, Finland, the United States, New Zealand, Ireland, and the Asian Development Bank (BRR, 2009e). *ReKompak* operated in Lambung from 2006-2009 focusing on the construction of 309 new



homes (Dedi Setiawan, *ReKompak*'s housing facilitator, 2006-2009, personal communication, September 3, 2010) .

## 2. Participatory Process

- Supported by *ReKompak*, residents mapped and assessed the damages in the village to identify construction needs and housing beneficiaries.
- At the beginning, housing designs were offered to the community. However, communities wanted the designs were prepared by the *ReKompak* team. In response to this request, *ReKompak* provided a couple of alternative designs and communities picked one.
- Communities formed the Settlers Groups (*Kelompok Pemukiman* or KP), a group of beneficiary families consisting of about 10 household leaders. In total, there were 33 KPs on the list. Each household democratically chose three representatives to manage its own KP (chair, secretary, and treasurer). At the village level, the Activity Managing Team (TPK) was responsible for the whole rehabilitation and reconstruction of settlements in the village.
- KP representatives opened and operated the KPR's bank account to receive funds from *ReKompak*. Fund disbursement was set up into 3 phases, based on the construction progress. Funds allocated for a new house were Rp 45 million and for a rehabilitated one, Rp 15 million maximum.
- The community decided whether to choose the self-employed or to work with builders especially the local ones (collectively organized by each cluster group). Beneficiaries could use their own funds to build bigger houses with the help of *ReKompak* in building designs.
- Monitoring was done by each KP and each beneficiary household leader. Both beneficiary household leaders and KPs should make progress reports on the reconstruction progress.

- Housing facilitators accompanied TPK and KP in the housing development process. One facilitator was assigned to 3 KPs which consisted of about 30 households.

(Dedi Setiawan, *ReKompak's* housing facilitator, 2006-2009, personal communication, September 3, 2010).

**Table 5.9.: The role of residents and other participants for each phase of *ReKompak's* housing project in Lambung**

Actor \ Activity	Beneficiaries	TPK	<i>ReKompak</i> Team	Hired contractors	Arnstein's level of community participation
Program initiation for village redevelopment	√		√		“partnership” (joint decision between ReKompak team and the community, project funding management in the hands of the community)
Project initiation	√		√		
Design			√		
Construction	√*				
Monitoring & evaluation	√	√	√		

\*Beneficiaries could either build their houses or give the house construction to professional builders

#### The Ministry of Public Works/PNPM-Mandiri (Merduati Case)

##### 1. Relief Activities

The National Community Empowerment Program (*Program Nasional Pemberdayaan Masyarakat Mandiri* or PNPM-Mandiri), a government flagship program coordinated by the Ministry of Planning (*Badan Perencanaan Pembangunan Nasional* or Bappenas) and the Coordinating Ministry Social Welfare (*Kementrian Koordinator Kesejahteraan Rakyat* or Menko Kesra), aims to increase community capacity to implement a participatory development process in reducing poverty and creating jobs through the provision of investment resources to

support proposals developed by communities. PNPM-Mandiri was launched in 2007 and implemented through the PPK and P2KP. Beginning in 2008, all community empowerment programs for poverty reduction managed by government ministries and agencies were integrated into PNPM Mandiri (PNPM-Mandiri, 2008; Ministry of Public Works, 2009).

Following the tsunami, PNPM-Mandiri's projects in Aceh, especially in the tsunami-affected areas, were then linked to the reconstruction effort. PNPM-Mandiri's reconstruction projects in Aceh included infrastructure reconstruction (roads, drainage, water and sanitation facilities, etc), provision of capital and financial resources through micro credit for the poor, and increasing community and local government capacity through training and disseminating information on business skills and good governance.

In Merduati, as of 2008, community block grant (*Bantuan Langsung Masyarakat* or BLM) managed by PNPM-Mandiri was allocated for two main activities: construction of economic and social infrastructure as well as providing microcredits through community-managed revolving fund. The former comprised, among others, construction of drainage, roads, and a warehouse. The latter included providing revolving funds for poor families who have no or limited access to other sources of credit. These funds were used to develop economic activities of, among others, cattle and poultry breeders, fishermen, notions traders, and meatball vendors (PNPM-Mandiri, 2008).

## 2. Participatory Process

- The socialization of the program (pertaining to its objectives, participatory approaches, basic principles, etc) was conducted in the village and hamlet level meeting.

- A representative body to supervise PNPM-Mandiri programs at the village level, the Community Self-help Body (*Badan Keswadayaan Masyarakat* or BKM), was elected by the residents. To synchronize its programs with the whole village development plan, PNPM-Mandiri coordinated with the village head.
- The revolving funds were managed by the Financial Management Unit (*Unit Pengelola Keuangan* or UPK) set up within BKM. UPK members along with volunteers and other development teams/units for construction related activities were elected in the village meeting.
- The community mapped and identified local potential, problems and needs. The results of this process were used by the community for preparing community development plans, namely the Three Year Village Development Plan and the Annual Village Development Plan. This plan contained programs and activities designed to improve the village conditions.
- Based on the community development plan, villagers selected and determined the local institution which would get involved in the activity implementation, as well as discussing funds disbursement, provision of laborers, material and logistics.
- All activities were carried out by the community facilitated by community facilitators, a consultant, and local government staff. For construction related activities, local resources (laborers, skills, etc) were prioritized.
- A review of the whole project performance was undertaken by UPK and reported to BKM. In particular, facilitators, the consultant, and local government officials conducted financial and performance audits.

- Project implementation progress was reported on a monthly/couple of month basis. The report included detailed project implementation and problems faced on the ground.
- Complaints and questions as to the projects were directed to UPK, related development teams, BKM and facilitators. These both followed up the reported complaints and questions if needed.
- In providing microcredits for poor families, PNPM-Mandiri targeted residents with small businesses. However, loan was also allocated for other purposes (for instance for education in Merduati case). The microcredits were distributed through group lending (about 10 people per group) with the guarantee from the group. Group leaders were responsible for collecting loan repayments from their group members, as well as in monitoring and managing delinquent loans. Loan repayments are usually made on a monthly basis and collected by the group leaders who, in turn, repay UPK on behalf of the group. Training on bookkeeping was provided to microcredit groups, while technical assistance as to revolving funds management was provided to UPK.

(Ministry of Public Works, 2009; PNPM-Mandiri, 2008; Raja Dalam, personal communication, August 19, 2010)

**Table 5.10.: The role of residents and other participants for each phase of PNPM-Mandiri’s projects in Lambung**

Actor \ Activity	Residents/ beneficiaries	Community Development Team	PNPM-Mandiri Team	Hired contractors	Arnstein’s level of community participation
Program initiation for village redevelopment			√		
<b>1. Small scale construction project (drainage, roads, and warehouse)</b>					“partnership” (joint decision between PNPM-Mandiri Team and the community, project funding management in the hands of the community)
Project initiation	√	√	√*		
Design	√				
Construction	√				
Monitoring & evaluation	√		√		
<b>2. Microcredits for poor families</b>					
Project initiation	√		√*		
Proposal making	√	√	√*		
Running of business	√				
Monitoring & evaluation	√	√	√		

\*PNPM-Mandiri team facilitated the process

Summary of Aid Organization/Agency-promoted Participation and Administrative Participation in the Four Case Study Villages

Based on aid organization/agency experience in exercising community participation in post-tsunami redevelopment described above, it can be concluded that there are many ways that communities could participate in post-tsunami redevelopment both in decision making and project management. In decision making, communities in cooperation with or facilitated by aid organizations/agencies could play a role in the program and project initiation process. This process begin with the identification of the existing situation, problems and needs as well as setting priorities. Specifically, in terms of the infrastructure projects, the participation ranges from design, construction, and monitoring and evaluation. Meanwhile, in the case of grants or

loans for small businesses, the participation includes proposal making for businesses, operation of businesses, and monitoring and evaluation.

Of all aid organizations/agencies, UPLINK was the only party applying “delegated power” level of participation in its recovery projects in Lam Hasan, including housing construction and renovation, public infrastructure construction, and small business development. In the whole process of its infrastructure, economic, and other projects, UPLINK consistently empowered the community by facilitating the community in decision making and project management. The final decision was in the hands of the community.

All aid organizations/agencies, except for the Ministry of Public Works (PNPM-Mandiri) and BRR (Indonesian government agencies), endorsed communities to participate in the development of recovery programs and projects. The absence of community participation in decision making of PNPM-Mandiri’s program was caused by the fact that PNMP-Mandiri is the continuation of the previous programs that had been designed by the central government long before the tsunami. Meanwhile, BRR with no experience in implementing community participation approaches (as a new agency) and its large scale housing and infrastructure construction projects (for housing projects, the biggest in all tsunami affected areas in Aceh compared to other aid organizations/agencies), did not want to risk its projects and relied very much on its own and contractors’ roles in project management. In this regard, BRR only engaged communities in the rebuilding process by considering their input through surveys and the involvement of communities’ representatives on the related board. The final decision was in the hands of BRR. Only in housing renovation projects and small grants projects for business which had relatively low risk, BRR gave more space for the community to participate by joint decision making between BRR and the community/beneficiaries (“partnership” level of participation).

Except for BRR's housing reconstruction project, most aid organization/agencies applied "partnership" Arnstein's level of participation in implementing their construction projects. They made decisions regarding projects together with communities and involved communities in project management in a meaningful manner. In project design, they facilitated communities in the design process (UPLINK and UN-HABITAT). In cases where communities were not capable of making the design (based on their or communities' appraisal), they handled it (Rekompak, Mercy Coprs, AIPRD, USAID/DAI, PNPM, and World Vision). Construction was handled by communities (managed by communities through self-help or appointing professional builders). The use of local laborers contributed to boosting village economies. However, the complexity of asphaltting work in road construction in Lam Hasan led UPLINK to hire a contractor for finishing the work. Only village office construction (AIPRD's project in Lam Hasan) was handled by a hired contractor. With regard to monitoring and evaluation, aid organizations/agencies and communities mostly worked together except for the few number of contractor-based projects.

Two economic projects, namely the establishment of the village owned enterprise in Lam Teungoh (Mercy Corps) and the establishment of the cooperative for fish pond farmers in Lambung (World Vision) fall into the "informing" level of participation due to the absence of communities involvement in the decision making process. However, this occurred because these projects were advanced ones in which communities had no initial idea on these matters, while Mercy Corps and World Vision considered the projects important for boosting the future village economy. Meanwhile, the other economic project, i.e. small business development for low income community members supported by Mercy Corps, World Vision, and PNPM-Mandiri fall into the "partnership" category since the final decision was made based on the agreement from the aid organizations/agencies and communities.



Consequently, it is obvious that the extent to which communities participate in the reconstruction effort is associated with the willingness and capacity of aid organizations/agencies, the nature of recovery projects and the readiness of communities to participate. It is also important to note that adequate time in exercising participation (UPLINK case in Lam Hasan) and community facilitators' informal approaches to engage communities in the reconstruction effort (USAID/DAI case in Lam Teungoh) are also significant for optimizing participation.

**Table 5.11.: The comparison of communities and other participants' roles for each phase of Aid Organizations/Agencies' projects in the four case study villages (the role of communities is highlighted)**

Actor Activity	NGOs				International Agencies		Indonesian Gov't Agencies		
	Mercy Corps (Lam Teungoh)	UP LINK (Lam Hasan)	AIPRD (Lam Hasan)	World Vision (Lam-bung)	USAID/ DAI (Lam Teungoh)	UNHA-BITAT (Mer-duati)	Rekom-pak (Lam-bung)	PNPM -Mand. (Mer-duati)	BRR (4 case study villages)
Program initiation for village redev't	Mercy-Comm	UPLIN K-Comm	AIPRD-Comm	WV-Comm	USAID-Comm	UNHA BITAT-Comm	Rek-Comm	PNPM -Mand.	BRR
<b>1. Housing construction</b>									
Project initiation	-	Comm	-	-	-	UNHA BITAT-Comm	Rek-Comm	-	BRR
Design	-	Comm	-	-	-	Comm	Rek	-	BRR
Construction	-	Comm	-	-	-	Comm	Comm	-	Con
Monitoring & evaluation	-	UPLIN K-Comm	-	-	-	UNHA BITAT-Comm	Rek-Comm	-	Con-BRR
Arnstein's level of participation	-	Delegated power	-	-	-	Partnership	Partnership	-	Consultation & placation
<b>2. Housing renovation</b>									
Project initiation	-	Comm	-	-	-	UNHA BITAT-Comm	-	-	BRR-Comm
Design	-	Comm	-	-	-	Comm	-	-	Comm
Construction	-	Comm	-	-	-	Comm	-	-	Comm
Monitoring & evaluation	-	UPLIN K-Comm	-	-	-	UNHA BITAT-Comm	-	-	BRR-Comm
Arnstein's level of participation	-	Delegated power	-	-	-	Partnership	-	-	Partnership
<b>3. Small scale public infrastructure project</b>									
Project initiation	Mercy-Comm	Comm	AIPRD-Comm	WV	USAID-Comm	-	-	PNPM -Comm	BRR
Design	Mercy	Comm	AIPRD	Comm	USAID	-	-	Comm	BRR
Construction	Comm	Comm & Con-Comm	Comm & Con-Res't	Comm	Comm	-	-	Comm	Con
Monitoring & evaluation	Mercy-Comm	UPLIN K-Comm	AIPRD-Comm-Con	WV-Comm	USAID-Comm	-	-	PNPM -Comm	Con-BRR
Arnstein's level of participation	Partnership	Delegated power	Partnership	Partnership	Partnership	-	-	Partnership	Consultation & Placation

4. Small business development (grants, loan, training, etc)									
Project initiation	Mercy-Comm	Comm	-	WV-Comm	-	-	-	PNPM-Comm	BRR
Proposal making	Comm	Comm	-	Comm	-	-	-	Comm	Comm
Running of business	Comm	Comm	-	Comm	-	-	-	Comm	Comm
Monitoring & evaluation	Mercy	UPLIN K-Comm	-	WV-Comm	-	-	-	PNPM-Comm	BRR-Comm
Arstein's level of participation	Partnership	Delegated power	-	Partnership	-	-	-	Partnership	Partnership

Comm: The community; Con: Hired contractor

Arstein's level community participation:

- Delegated power: decision making was in the hands of the community, the aid organization/agency only facilitates the process
- Partnership: joint decision making between the aid organization/agency and the community
- Consultation and placation: community's input was considered through surveys and the involvement of its representatives on the related board, but the final decision was in the hands of the aid organization/agency

### ***Benefits, Supporting Factors and Constraints of Community Participation***

Community participation in post-tsunami redevelopment in four case study villages has brought about positive impacts on tsunami survivors, villagers and villages as a whole. Particular benefits were gained by each village. Immediate survivors' return to the village coordinated by their charismatic head of village in Lam Teungoh accelerated the villagers' economic recovery process. The majority of residents who worked as fishermen were able to go to sea to make a living again. The return also encouraged various aid organizations/agencies to take quick efforts to rebuild the village (Husaini, personal communication, March 8, 2010). The choice of qualified Activity Managing Teams' (TPKs) members in Lam Hasan resulted in a relatively quick process of project management (Marziani, personal communication, July 27, 2010). Lambung community members' endurance and preserverance in a long and tough village mapping and land consolidation process, as well as their willingness to give their land without any compensation

resulted in more organized existing settlements (Zaidi, personal communication, July 2, 2010). The role of community leaders, particularly religious leaders, in involving residents in the reconstruction projects in Merduati influenced the increase in the number of residents involved in the participatory process (Raja Dalam, personal communication, August 19, 2010), although its number (percentage) still lagged behind the three other villages.

Aside from specific achievements, the four case study villages also gained similar benefits by exercising community participation in their village redevelopment. The major benefits included improving community capacity building in organizing community resources and project management (planning, funding, design, construction and monitoring and evaluation); meeting community's needs; reducing traumatic feelings among survivors; and providing more income for communities from reconstruction related jobs (through the cash-for-work projects and community contracting model of housing and public infrastructure projects, etc). In terms of reducing traumatic feelings, survivors' involvement in the village relief efforts, to some extent, shifted their attention from post-tsunami depression (due to loss of family members, etc) to reconstruction activities (Husaini, Bukhari, Turmuzi, & Zaidi, personal communication, March 8, 2010, May 9, 2010, August 14, 2010, & July 2, 2010, respectively).

In terms of constraints and supporting factors of the participation process, they varied from village to village. Socio-cultural and economic conditions, leadership, communities' endurance in participatory process, and social ties determined the success of community participation in post-tsunami redevelopment. In the case of Lam Teungoh, lack of knowledge among community members (especially vulnerable people like women and children) which was caused by low income conditions inhibited them from actively participating in decision making. In this regard, the situation was handled by the role of community USAID/DAI's facilitators in

improving their self confidence and absorbing their aspirations through informal interaction between the aid organization and the community. The facilitators also played an important role in channeling their wishes to FGDs members, which in turn, resulted in the accommodation of their needed projects such as provision of women's group building and kitchenware (Husaini, personal communication, March 8, 2010). Meanwhile, native inhabitants tended to be more attached to their village and had strong social ties which helped the participatory process. In cases of Lam Teungoh and Lambung (the majority of their inhabitants were native), for instance, villagers were relatively easy to mobilize for collective action (Husaini & Bukhari, personal communication, March 8, 2010 & May 9, 2010 respectively). Merduati which had a lot of new inhabitants had difficulties in involving them in the participatory process (Turmuzi, personal communication, August 14, 2010). In the future it is important for Merduati to conduct any activities that can improve the sense of village ownership among new inhabitants, so that they will be willing to get involved in the village development process.

Other constraints of community participation included communities' reluctant to relocate or give their land for public facilities, low coordination between aid organizations and government, time consuming process of participation, and the negative effect of "the cash-for-work" projects. In Lam Teungoh, Lam Hasan, and Merduati, a common agreement concerning a redrawing of boundaries and land-use pattern between residents could not be achieved because post-tsunami land certification process from *BPN* (National Land Affairs Agency) took place slowly and/or the reluctance of residents to give their ancestor-inherited land even with compensation (Husaini, Bukhari, & Turmuzi, personal communication, March 8, 2010, May 9, 2010, & August 14, 2010 respectively). On the contrary, Lambung leaders (the head of the village and religious leaders) succeeded in convincing residents to give their land to build more

organized settlements. The leaders stated that contributing land was part of religious service which would bring merit to residents' ancestors (Zaidi, personal communication, July 2, 2010)

Low coordination between aid organizations and government particularly in the beginning period of reconstruction leading to unsuccessful projects in Lam Teungoh and Lam Hasan, for instance, also resulted in the decrease in community's moral in getting involved in the participatory process. The unusable boat dock due to the mistake of development location choice (quite far from the beach line) done by BRR in Lam Teungoh and the unfunctioned tap water pipelines built in Lam Hasan by BRR because of not gaining support from Local-owned Water Supply Company or *PDAM*) resulted in disappointment among communities. Apart from the improper feasibility study of the project, the former case also happened since BRR did not properly involve the community, especially fishermen, in the planning phase of the project. The fishermen then ignored the implementation of the project although they apprehended the wrong project location choice. The latter case was caused by the carelessness of BRR as the coordinator agency of post-tsunami redevelopment in involving the related agency in its project management (Husaini & Bukhari, personal communication, March 8, 2010, & May 9, 2010, respectively).

In Lambung, a common agreement on village mapping land consolidation among community members took a long and tough process. Permanent homes for residents could be occupied around 2007. However, residents' endurance and patience in the negotiation process as well as trust among them resulted in more organized settlements (Zaidi, personal communication, July 2, 2010).

The involvement of community members in the reconstruction effort was also distracted by the implementation of the cash-for-work (cleaning up the village) projects managed by several NGOs in the four case study villages. This project was a dilemma. On the one hand, it

provided an income for survivors in the emergency period. On the other hand, it led many community members to be reluctant to work for pure voluntary relief activities after the emergency period. They would seriously consider participating in the voluntary activities (attending village meetings, being reconstruction committee members, etc) as long as there were financial incentives in return. Nowadays, after the reconstruction process is over, *gotong royong kampung* (a traditional community self-help at the village level) that provides no financial incentives tends to be attended by a small number of residents (Husaini, Bukhari, Turmuzi, & Zaidi, personal communication, March 8, 2010, May 9, 2010, August 14, 2010, & July 2, 2010, respectively).

Aside from social ties, the performance and capacity of village bureaucrats and community leaders apparently was also a major determinant of involving the community in the village rebuilding process. The charismatic head of Lam Teungoh village took a leading role in the return of survivors to their village and initial post tsunami redevelopment in Lam Teungoh (Husaini, personal communication, March 8, 2010). Decisive action shown by head of Lam Hasan village by cancelling some delayed UPLINK's projects enabled this village to receive support from other relief organizations/agencies to maintain the continuity of the reconstruction efforts. Head of this village also contributed in giving input for capable candidates for TPKs' members, which in turn, accelerated village relief (Marziani, personal communication, July 27, 2010). In Merduati, close relations between village bureaucrats and informal community leaders led to a relatively smooth reconstruction management at the village level (Raja Dalam, personal communication, August 19, 2010). In Lambung, the head of the village's bravery and exact calculation in a community land adjudication decision was a starting point for the success of creating more orderly and planned village. In addition, his decision on the uniformity of house

construction types (by allowing only Rekompak/MDF to manage the whole housing project in the village) strengthened togetherness and avoided jealous feelings among community members (Dedi Setiawan, personal communication, September 3, 2010).

Last but not least, the community participation process also needs to be supported by networking and creativity. Lambung case shows that village's broad networking with various parties and individuals gave the village access to financial support and reconstruction information. Lambung's creative initiatives for opening a community bank account to receive donations (with public announcement) as well as the advertisement of village meetings in the media were also significant for creating a conducive environment for community driven development.



**Table 5.12. : Constraints, supporting factors, and benefits of community participation in the four case study villages**

Village	Lam Teungoh (less developed, very severely affected)	Lam Hasan (less developed, moderately to severely affected)	Lambung (more developed, very severely affected)	Merduati (more developed, moderately to severely affected)
Component				
Socio-culture	-coastal rural area -education level: 40% have no education -lots of native inhabitants	-coastal rural area -education level: 58% senior high, 7% undergraduate and higher -mix of native and new inhabitants	-semi urban area -education level: 62% senior high, 21% undergraduate -lots of native inhabitants	-urban area -education level: 48% senior high, 20% undergraduate and higher -lots of new inhabitants
Economy	-major occupation: fishermen and farmers -very low income (Rp 800,000 – 1 million)	-major occupation: private & state company workers and farmers -low income (Rp 1 – 1.2 million)	-major occupation: private company workers and civil servants -middle income (Rp 1.5 – 1.75 million)	-major occupation: private company workers, civil servants, and traders -middle income (Rp 2.5 million)
Supporting factors of community participation (strategies of participation)	-strong leadership -strong social ties -USAID/DAI facilitators' informal approaches to engage uneducated villagers in redevelopment	-capable community's committee members -decisive head of village's decision on reconstruction efforts -adequate time in exercising participation	-capable head of village and community leaders -strong social ties -creativity (public account, meeting adv't) -broad networking -religious approach --residents willing to relocate or give their land for village redev't -One type of house design and construction for all beneficiaries	-close working relations between village bureaucrats and community leaders
Constraints of community participation	-reluctant to relocate or to contribute land -low coordination among aid organizations -lack of knowledge and skills among lots of community members -"income generated" cash-for-work projects (debris removal) ruin traditional volunteer program <i>gotong royong</i>	-reluctant to relocate or to contribute land -low coordinations among aid organizations -"income generated" cash-for-work projects ruin traditional volunteer program <i>gotong royong</i>	-time consuming process of village mapping and land consolidation (about 2 years)	- many new residents were difficult to mobilized because of many of new residents - reluctant to relocate or to contribute land --"income generated" cash-for work-projects ruin traditional volunteer program <i>gotong royong</i>

Benefits of community participation	Immediate community's return to the village after tsunami accelerated the village recovery process	Qualified committee members resulted in the quickness of project management	More organized settlements as a result of villagers' endurance in the participation process & their willingness to contribute their land	Improved sense of village ownership (a little) among inhabitants due to the religious leaders' role
	<ul style="list-style-type: none"> <li>-Improving community capacity building in project management</li> <li>-Meeting community's needs</li> <li>-Providing more income for communities (from reconstruction jobs)</li> <li>-Reducing traumatic feelings.</li> </ul>			

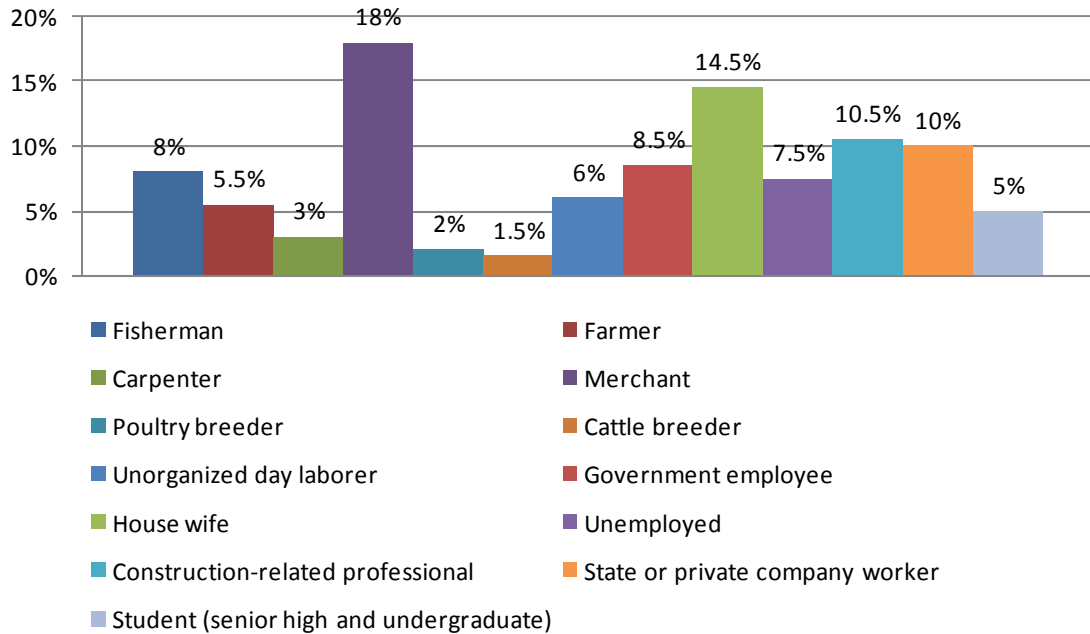
## **Community Members' Perceptions of and Preferences for Community Participation in the Redevelopment Efforts after the Aceh Tsunami**

### *Profiles of the Respondents*

#### Personal data

The sample size of the survey consists of 200 respondents (65.5% males and 34.5% females). The age of most respondents was between 26 and 55 years old (76.5%). The age of other respondents comprised 15-25 years old (12%) and over 55 years old (11.5%).

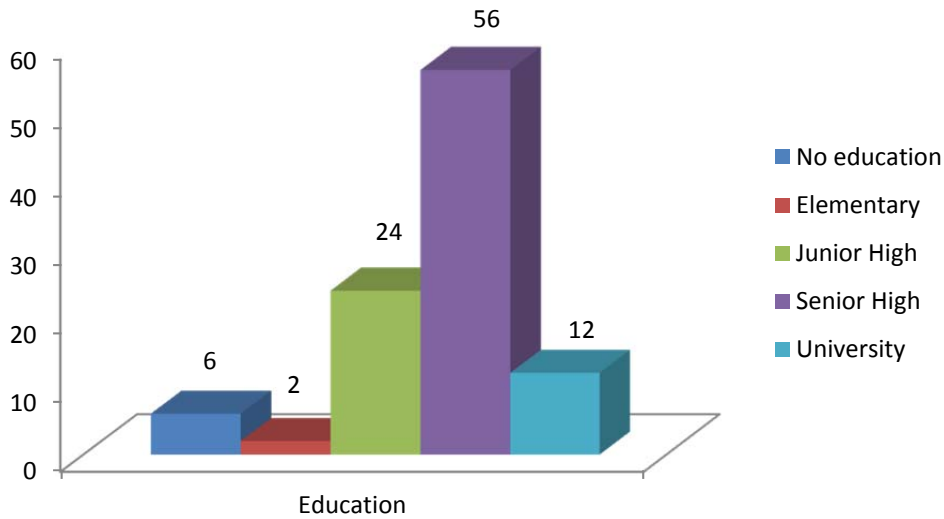
In terms of occupations, most of the respondents worked as merchants (18%). State and private company workers (prime occupations in Lam Hasan, Lambung and Merduati) and fishermen (prime occupations in Lam Teungoh), although not the largest numbers of respondents, were represented by 10% and 8%, respectively. Other respondents' major occupations were housewives (14.5%), construction related professionals (10.5%), government employees (8.5%), and farmers (5.5%) (Figure 5.1).



**Figure 5.1. Percentage distribution of respondents by occupation**

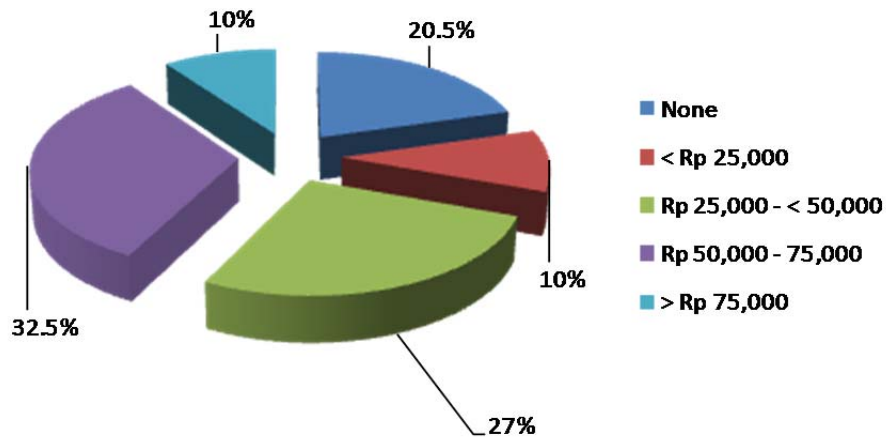
Other profiles of respondents included ethnic group, marital status, level of education, daily income and level of effect of the tsunami. With regard to ethnic groups, the majority of respondents were Acehnese (91.5%) and the remaining respondents were Javanese, Padangnese, Bataknese and other ethnic groups (8.5%). As for marital status, 69% were married, 24.5% single, and 6.5% widows/widowers. The high percentage of widows/widowers in this survey is understandable since many of Acehnese lost their spouses in the tsunami disaster.

Level of respondents education varied from no education to the university level of education (see Figure 5.2). Respondents with senior high education were the majority (56%) followed by junior high (24%), university (12%), elementary (2%) and no education (6%).



**Figure 5.2. Percentage distribution of respondents by level of education**

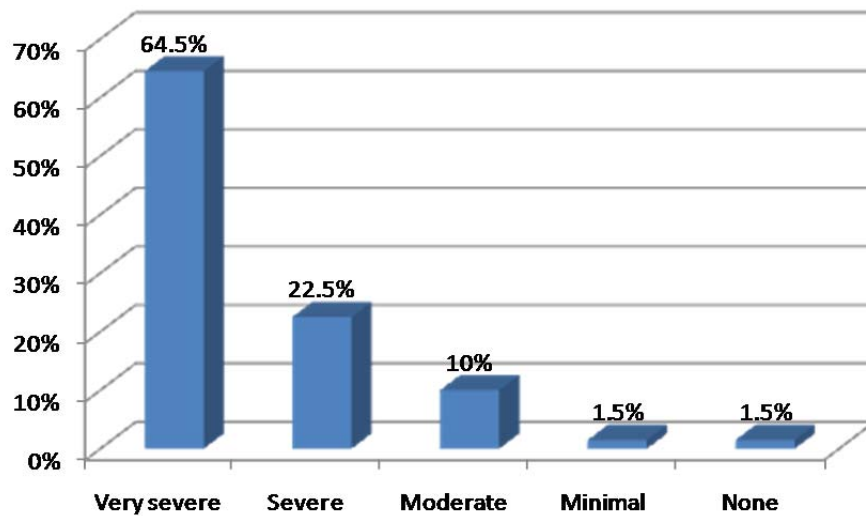
Like level of education, respondents' daily incomes also vary (Figure 5.3). Most respondents represents those with low to medium level of incomes, that is, between Rp 50,000 – < 75,000/day (32.5%), while the remaining respondents had an income of between Rp 25,000 – <50,000 (27%), no income (20.5%), more than Rp 75,000 (10%) and less than Rp 25,000 (10%). Housewife and student respondents were those who accounted for the large number of the “have no income” category.



**Figure 5.3. Percentage distribution of respondents by daily income**

In terms of level of effect of the tsunami on respondents (Figure 5.4), the majority of respondents experienced a very severe impact (64.5%), others experienced severe, moderate, minimal, and no impacts (22.5%, 10%, 1.5% and 1.5 %, respectively). The figures below describe percentage distributions of respondents by education, income, and the level of impact of the tsunami they experienced.

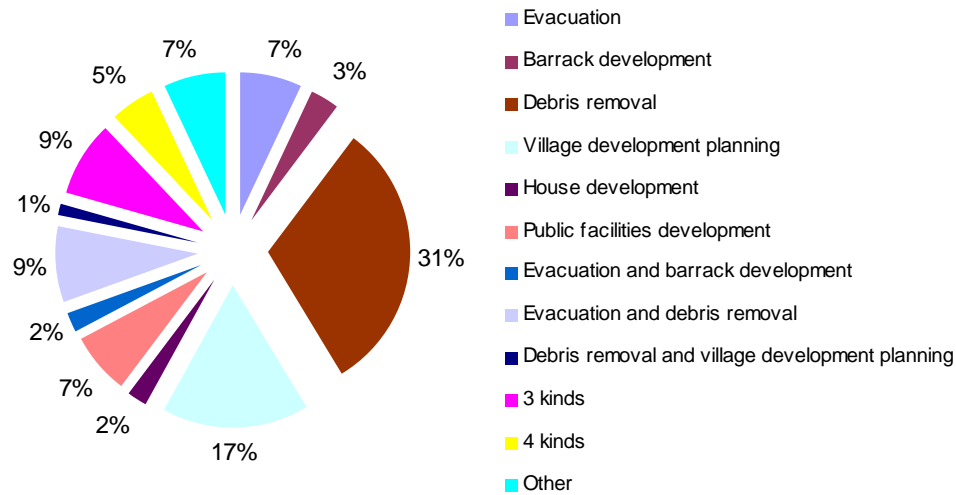
Details of the descriptive information about the respondents of each of the case study villages are presented in Appendix E (Table 5.20).



**Figure 5.4. Level of impact of the tsunami on the respondents**

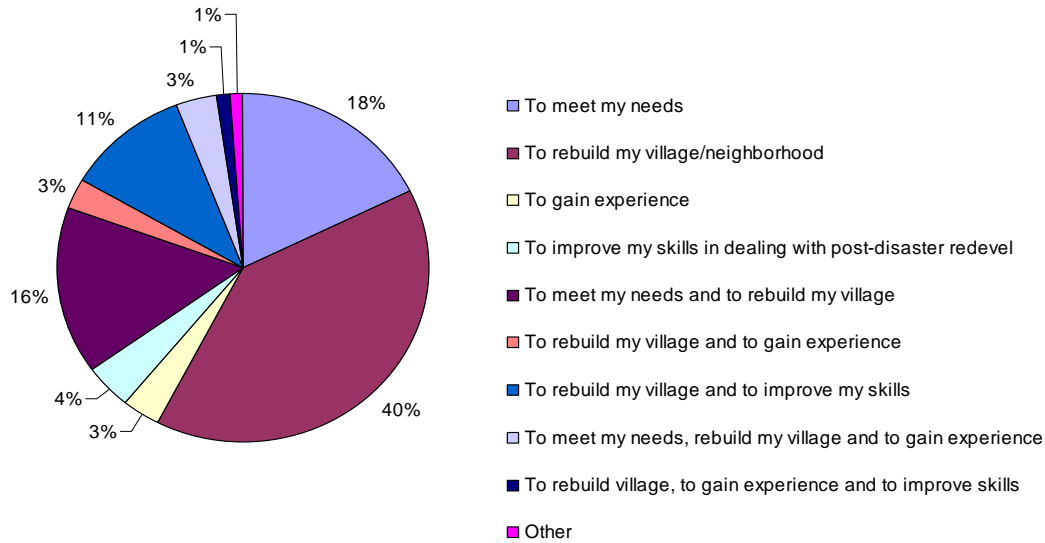
#### The Involvement in Post-Tsunami Redevelopment

87% of respondents stated that they participated in the tsunami relief efforts, 13% did not participate. Those who participated in the relief efforts got involved in a variety of activities, mostly in debris removal (31%) and village development planning (17%). This is not surprising given cash-for-work projects and village development planning were one of the massive recovery activities carried out by aid organizations/agencies following the tsunami. Those who participated in more than one activity, that is, debris removal and evacuation also indicated a significant number (9%). Others participated in barrack development, house development, public facilities development and the combination of those activities. Figure 5.5 presents the respondents' involvement in the tsunami relief efforts.



**Figure 5.5. Percentage distribution of respondents' involvement in post-tsunami relief activities**

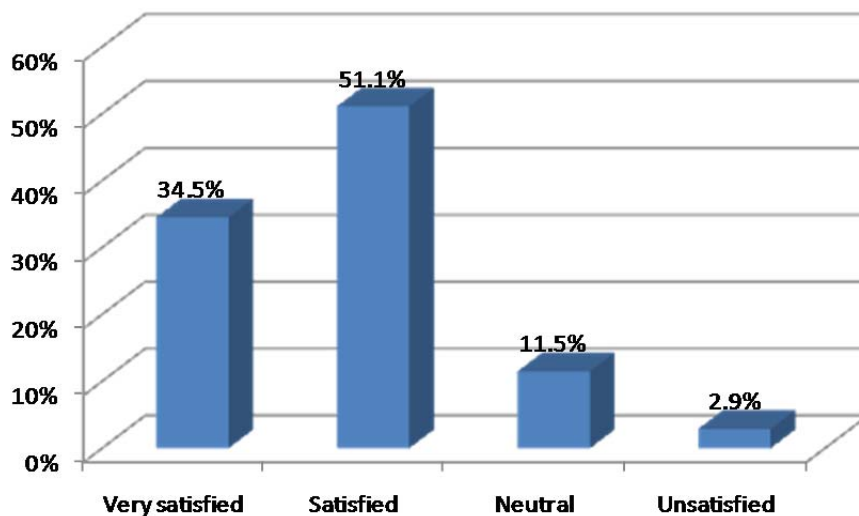
Respondents had various reasons why they got involved in the tsunami relief efforts. Interestingly, most of them stated that they participated because they wanted to rebuild their villages (40%), surpassing the number of those who intended to meet their needs (18%) and that of those who wanted to meet their needs and rebuild their villages at the same time (16%). This is not surprising since the development of the tsunami-affected areas would indirectly help the improvement of their inhabitants' lives (socially, economically) given the tremendous effects of the tsunami. Figure 5.6 shows the respondents' various reasons to participate in the tsunami relief efforts.



**Figure 5.6. Percentage distribution of respondents' reasons to participate in the tsunami relief efforts**

When asked about their level of satisfaction concerning their participation in the tsunami relief efforts, around 85.6% of the respondents stated they were very satisfied or satisfied. It means respondents were pleased with the participatory process they went through during the tsunami recovery. A small number of respondents were unsatisfied (2.9%) and neutral (11.5%), while there was no respondent who answered very unsatisfied. Figure 5.7 presents level of respondents' satisfaction on the involvement in the tsunami relief efforts

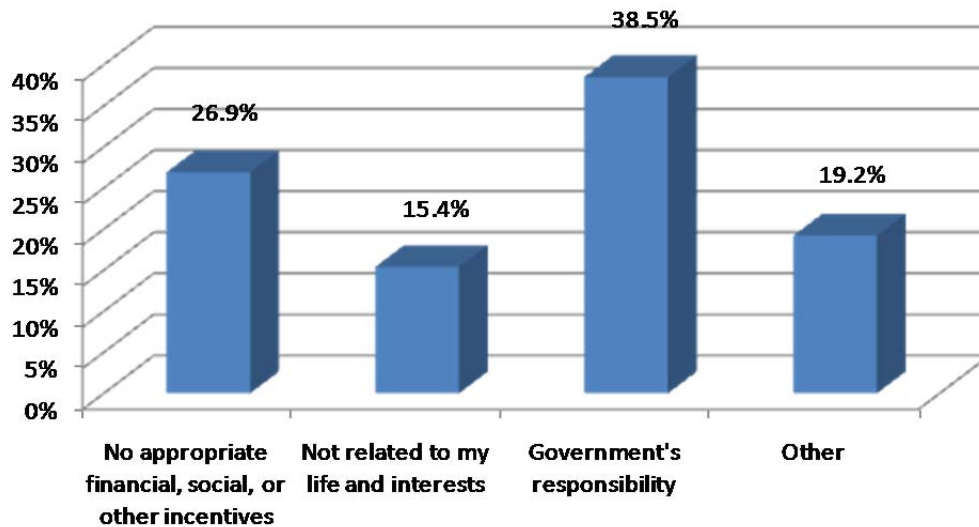




**Figure 5.7. Level of respondents' satisfaction on the involvement in the tsunami relief efforts**

In terms of how respondents participated in the relief efforts, the majority of the respondents stated their participation was based on their own awareness and initiative (88.5%). The remaining respondents were motivated by the following: village bureaucrats (5.8%), their families/relatives (4.6%), and their friends (1.1%). This underlines that respondents were quite independent in making decisions on their involvement in the tsunami relief efforts.

With respect to those who did not participate in the tsunami relief effort, they raised several reasons (see Figure 5.8). "Post-tsunami redevelopment is government's responsibility" was the main reason of the respondents (38.5%), followed by "post-tsunami redevelopment had no appropriate financial, social, or other incentives" (26.9%), and "the relief efforts were not related to my life and interests" (15.4%). The combination of those reasons were stated by 19.2% of the respondents.



**Figure 5.8. The reasons why respondents did not participate in the tsunami relief effort**

To some extent, the portrait of respondents' involvement in post-tsunami redevelopment in all case study villages explained above is relatively the same as that in each of the case study villages. The majority of respondents in each of the case study villages stated that they participated in the tsunami relief efforts. Most respondents of the case study villages, except for respondents from Merduati, stated that they participated because they wanted to rebuild their villages. Meanwhile, most respondents from Merduati participated because they intended to meet their needs. Except for respondents from Lambung, most of respondents of the case study villages participated in the cash-for-work projects (debris removal). In terms of how respondents participated in the relief efforts, the majority of respondents in each village stated they got involved in those activities because of their own awareness and initiatives. Most of the respondents in each village were also very satisfied or satisfied with their participation.

The differences among respondents in each village include the kinds of relief efforts in which they participated and the reasons why some respondents did not participate in the tsunami relief efforts. There were no respondents from Merduati, for instance, that got involved in

barrack development because of the absence of barrack development in this village. Meanwhile, most respondents from Lambung participated in the village development planning. This is not surprising given the success of this village's community leaders in mobilizing their residents to get involved in this relief activity. With regard to why respondents did not participate in the tsunami relief efforts, the majority of respondents from Merduati stated they did not participate because post-disaster redevelopment is government's responsibility. Most of the respondents from Lam Teungoh and Lam Hasan stated that their main reasons for not participating were that the tsunami relief efforts were not related to their life and interest and they had no appropriate financial, social, or other incentives. Meanwhile, respondents from Lambung did not have dominant reasons related to this issue. For detailed information about respondents' responses to their involvement in post-tsunami redevelopment and general development activities, see table 21 in Appendix E.

### ***Community Members' Perceptions of Community Participation in the Redevelopment Efforts after the Aceh Tsunami***

#### **Community Members' Perception of the Importance of Community Participation in the Redevelopment Efforts after the Aceh Tsunami**

Respondents' perceptions of the importance of community participation in Aceh post-tsunami redevelopment (by clustering the profiles of respondents) are examined by cluster analysis. This analysis is intended to group the respondents according to their perceptions on the matter. The importance of community participation asked in the survey includes the following four aspects: meeting the needs of communities, improving capacity building of communities, reducing traumatic feelings, and giving hope for a better future for communities

(see questions 1-4 of section III-A of the questionnaire). Cluster analysis in this research is guided by a non-hierarchy method (K-Means).

Using respondents' answers on the five-point scale of satisfaction with the importance of community participation in Aceh post-tsunami redevelopment, cluster analysis identifies two clusters, "tend to agree" with the importance of participation (cluster 1) and "tend to disagree" with the importance of participation (cluster 2). Each respondent is grouped into either one of the clusters based on their answers on the four aspects asked in the questionnaire. The first cluster, "tend to agree" with the importance of participation, consists of 172 respondents, and the second one, "tend to disagree" with the importance of participation, only consists of 28 respondents.

To know the profiles of respondents who "tend to agree" or "tend to disagree" with the importance (benefits) of participation in post-tsunami redevelopment mentioned above, cross-tabulations are used. In this case, respondents' sex, age, education and income are variables selected for cross-tabulation with the results of the cluster analysis. Below is the distribution of respondents' sex, age, education and income by the two clusters.

**Table 5.13. Distribution of sex by the two clusters**

Sex	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
<b>Male</b>	<b>109</b> <b>(83%)</b>	<b>22</b> <b>(17%)</b>	<b>131</b> <b>(100%)</b>
<b>Female</b>	<b>63</b> <b>(91%)</b>	<b>6</b> <b>(9%)</b>	<b>69</b> <b>(100%)</b>
<b>Total</b>	<b>172</b> <b>(86%)</b>	<b>28</b> <b>(14%)</b>	<b>200</b> <b>(100%)</b>

**Table 5.14. Distribution of age by the two clusters**

Age	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
<b>15-25</b>	<b>22</b> <b>(92%)</b>	<b>2</b> <b>(8%)</b>	<b>24</b> <b>(100%)</b>
<b>26-55</b>	<b>131</b> <b>(85%)</b>	<b>23</b> <b>(15%)</b>	<b>154</b> <b>(100%)</b>
<b>&gt;55</b>	<b>19</b> <b>(86%)</b>	<b>3</b> <b>(14%)</b>	<b>22</b> <b>(100%)</b>
<b>Total</b>	<b>172</b> <b>(86%)</b>	<b>28</b> <b>(14%)</b>	<b>200</b> <b>(100%)</b>

**Table 5.15. Distribution of education by the two clusters**

Education	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
<b>No education</b>	<b>8</b> <b>(66.67%)</b>	<b>4</b> <b>(33.33%)</b>	<b>12</b> <b>(100%)</b>
<b>Elementery</b>	<b>3</b> <b>(75%)</b>	<b>1</b> <b>(25%)</b>	<b>4</b> <b>(100%)</b>
<b>Junior High</b>	<b>41</b> <b>(85%)</b>	<b>7</b> <b>(15%)</b>	<b>48</b> <b>(100%)</b>
<b>Senior High</b>	<b>99</b> <b>(88%)</b>	<b>13</b> <b>(12%)</b>	<b>112</b> <b>(100%)</b>
<b>University</b>	<b>21</b> <b>(86%)</b>	<b>3</b> <b>(14%)</b>	<b>24</b> <b>(100%)</b>
<b>Total</b>	<b>172</b> <b>(86%)</b>	<b>28</b> <b>(14%)</b>	<b>200</b> <b>(100%)</b>

**Table 5.16. Distribution of income by the two clusters**

Income	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
<b>None</b>	<b>33</b> <b>(80%)</b>	<b>8</b> <b>(20%)</b>	<b>41</b> <b>(100%)</b>
<b>&lt;25,000</b>	<b>18</b> <b>(90%)</b>	<b>2</b> <b>(10%)</b>	<b>20</b> <b>(100%)</b>
<b>25,000 - &lt;50,000</b>	<b>46</b> <b>(85%)</b>	<b>8</b> <b>(15%)</b>	<b>54</b> <b>(100%)</b>
<b>50,000-75,000</b>	<b>60</b> <b>(92%)</b>	<b>5</b> <b>(8%)</b>	<b>65</b> <b>(100%)</b>
<b>&gt;75,000</b>	<b>15</b> <b>(75%)</b>	<b>5</b> <b>(25%)</b>	<b>20</b> <b>(100%)</b>
<b>Total</b>	<b>172</b> <b>(86%)</b>	<b>28</b> <b>(14%)</b>	<b>200</b> <b>(100%)</b>

Based on distribution of sex, age, education and income by the two clusters above, it is obvious that for all tables, the number of respondents in cluster 1 outnumber that in cluster 2. Therefore, it can be concluded that most respondents, regardless of sex, age group, education, and income level, agreed that community participation in Aceh post-tsunami redevelopment has benefited communities in terms of meeting needs, capacity building, reducing traumatic feelings and giving hope for a better future for communities. The smallest number of respondents who agreed with the aforementioned benefits of participation was in the “no education” category of respondents (66.67%). The highest numbers are in the “age of 15-25” and the “income of Rp 50,000-75,000” categories. These results indicate that respondents with the lowest level of education perceived that community participation in post-tsunami redevelopment was less important than those with higher levels of education. Meanwhile, young and middle-income respondents considered that participation has given more benefits than those of other group of ages and other level of incomes. These findings mean that respondents’ perceptions of the

benefits (importance) of participation by sex, age, education level and income clusters are in line with the benefits of community participation in post-disaster relief suggested in theory.

The results of cluster analysis for all respondents above are in line with those for respondents of each of the case study villages (see Appendix F). Most respondents from each of the case study villages, regardless of sex, age, group, and education and income level, agreed that community participation in post-tsunami redevelopment in Aceh has benefited communities in terms of meeting needs, capacity building, reducing traumatic feelings, and giving hope for a better future for communities. The smallest number of respondents who agreed with those benefits was from Lam Hasan with the “level of education of elementary school” category (50%).

#### Community Members’ Perception of the Constraints of Community Participation in the Redevelopment Efforts after the Aceh Tsunami

In this part, this research intends to examine whether a number of aspects have impeded the implementation of community participation in Aceh post-tsunami redevelopment. As discussed in the literature section, constraints on community participation in general development come from both the government and the community. The success of community participation depends on the government’s political will and skills to stimulate the participatory process, as well as the awareness and abilities of community members to participate in the process. Meanwhile, especially in the post-disaster term, the demand for quick decisions and issue complexity are also the main impediments for adopting the participatory approaches. In post-disaster redevelopment, the role of NGOs in the implementation of community participation was also critical since they are also the actors who execute the reconstruction effort along with other aid organizations or agencies.

The aspects (variables) which impeded the implementation of participation in post-tsunami redevelopment in Aceh examined in this research included the following (questions 3-14 of section III-B of the questionnaire presented in Appendix D):

- The demand for quick decision and actions
- Issue complexity caused by the tsunami
- BRR's political will to implement the participatory process
- BRR's skills to manage the participatory process
- NGOs' intention to implement the participatory process
- NGOs' skills to manage the participatory process
- Citizens' enthusiasm to get involved in the participatory process
- Citizens' skills to get involved in the participatory process
- The influence of Aceh's past military conflict on community members' awareness and capability of getting involved in the participatory process
- The influence of Soeharto's authoritarian regime on community members' awareness of getting involved in the participatory process
- The influence of Aceh's past military conflict on government's capability to deal with the participatory process
- The influence of Soeharto's authoritarian regime on government's ability to deal with the participatory process

It is important to note that Aceh's past military conflict and Soeharto's authoritarian regime eras are deemed important aspects since these eras were times in which Aceh community members and any other elements in society did not have freedom to speak up and act in social



activities. In many ways, the unsafe and uncomfortable environment during these periods prevented the community at large from improving their socio-cultural lives.

To identify underlying factors (variables), that explain the pattern of correlation within a set of observed variables presented above, factor analysis is conducted. But a KMO (Kaiser-Meiyer-Olkin) and Bartlett test should be applied beforehand to determine whether factor analysis can be employed to those variables. The test shows that KMO is 0.659 (> 0.5) which means that factor analysis can be employed. The results of the KMO and Bartlett test is displayed below.

**Table 5.17. KMO and Bartlett Test**

KMO	Bartlett Test of Spherity		
	Approx. Chi-Square	Df	Sig.
(1)	(2)	(3)	(4)
0.659	719.400	66	0.000

Meanwhile, the *Total Variance Explained* table shows that there are five factors obtained (based on Kaiser criteria). These factors explain 73.366% of the constraints of participation of the variance among all of the questions (see table 5.18). In the *Rotated Component Matrix* table, the correlations between 12 indicator variables and factor loadings (with the varimax rotation method) are presented.

**Table 5.18. Total Variance Explained**

Component	Initial Eigenvalues	% of Variance	Cumulative %
(1)	(2)	(3)	(4)
1	3.270	27.250	27.250
2	1.650	13.748	40.997
3	1.529	12.739	53.736
4	1.302	10.849	64.585
5	1.054	8.781	73.366

**Table 5.19. Rotated Component Matrix**

No.	Variable	Component				
		1	2	3	4	5
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Quick_decision	<b>.845</b>	-.012	.088	-.005	.142
2.	Issue_complexity	<b>.836</b>	.046	.085	-.025	.154
3.	BRR_political will	.228	-.047	-.064	<b>.772</b>	.071
4.	BRR_skills	-.067	.064	.023	<b>.863</b>	.036
5.	NGO_intention	-.084	.200	.078	-.021	<b>.842</b>
6.	NGO_skills	.226	-.207	.054	.144	<b>.754</b>
7.	Citizen_enthusiasm	.184	.206	<b>.780</b>	.058	.267
8.	Citizen_skills	.090	.009	<b>.905</b>	-.078	-.067
9.	Aceh_conflict impact_citizen	<b>.630</b>	.326	.166	.250	-.201
10.	Soeharto's regime impact_citizen	<b>.599</b>	.416	.085	.254	-.128
11.	Aceh_conflict impact_gov	.133	<b>.873</b>	.114	.038	.065
12.	Soeharto's regime impact_gov	.098	<b>.896</b>	.052	-.042	-.015

Given correlation between indicator variables and factor loadings in the *Rotated Component Matrix* table above, it can be concluded that the constraints on community

participation in post-tsunami redevelopment from the biggest to the smallest according to respondents are as follows:

1. The demand for quick decisions and actions, issue complexity caused by the tsunami, and the impact of Aceh's military conflict and Soeharto's authoritarian regime on citizens' awareness and capability of getting involved in the participatory process (27.25% of variance explained).
2. The impact of Aceh's military conflict and Soeharto's authoritarian regime on government's capability of dealing with the participatory process (13.748% of variance explained).
3. Citizens' enthusiasm and skills to get involved in the participatory process (12.739% of variance explained).
4. BRR's political will and skills to implement and manage the participatory process (10.849% of variance explained).
5. NGOs' intention and skills to implement and manage the participatory process (8.781% of variance explained).

With regard to the biggest constraints on community participation in post-tsunami redevelopment for each of the case study villages, factor analysis show different results among the villages. The biggest constraints for each village include NGOs' intention and skills to implement and manage the participatory process, and citizens' enthusiasm to get involved in the participatory process (in Lam Teungoh, 28.839% of variance explained); NGOs' intention and skills to implement and manage the participatory process (in Lam Hasan, 22.281% of variance explained); the demand for quick decisions and actions, issue complexity caused by the tsunami, BRR's political will to implement and manage the participatory process, and the impact of

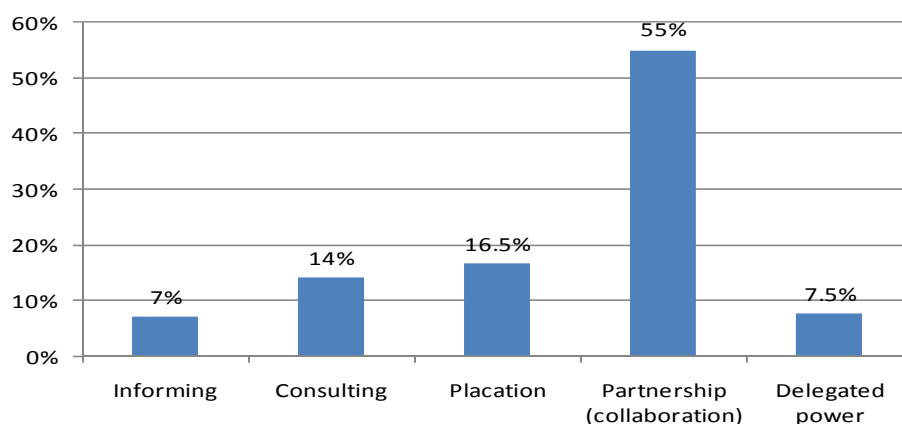
Aceh's military conflict and Soeharto's authoritarian regime on citizens' awareness and capability of getting involved in the participatory process (in Lambung, 34.651% of variance explained); and citizens' enthusiasm to get involved in the participatory process, and the impact of Aceh's military conflict and Soeharto's authoritarian regime on government's capability of dealing with the participatory process (in Merduati, 30.243% of variance explained) (for detailed information, see Appendix G).

***Community Members' Preferences for the Community Participation Approaches in the Redevelopment Efforts after the Aceh Tsunami***

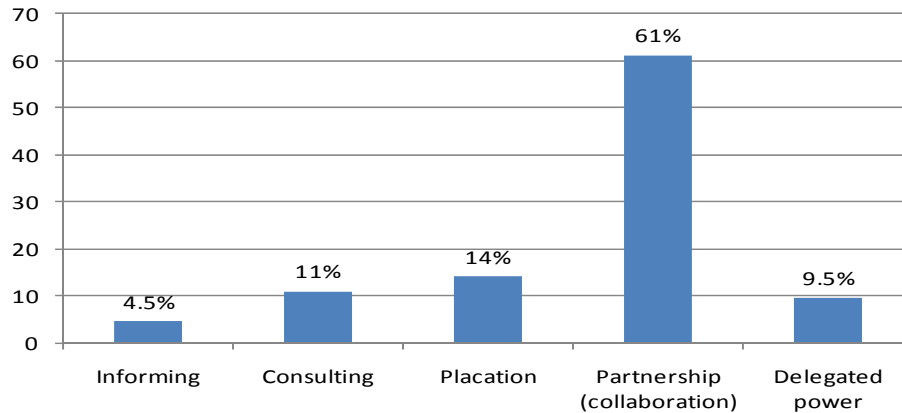
Community members' preferences for the community participation approaches in Aceh post-disaster redevelopment asked in the survey relate to several issues (questions 1-6 of section IV of the questionnaire). In this regard, community members were asked to what extent they agree with the issues. The first issue is provision of education and training as to participatory approaches for all stakeholders (community members, associated government agency employees, NGO workers, etc). The second issue is the formulation of specific guidelines for community participation in the rebuilding process. The third issue is representative participation in decision making (community members are represented by their representatives). The fourth issue is direct participation in which community members get involved in decision making through public hearings and public meeting. In addition, respondents were also asked to choose the best participatory approaches promoted by the government and NGOs based on Arnstein's level of participation.

Research findings show that most of the respondents agreed with provision of education and training as to participatory approaches for all stakeholders and the formulation of specific guidelines for community participation (92.5% and 88% respectively). With respect to

representative and direct participation, the majority of respondents were in favor of the adoption of both representative participation (85%) and direct participation (86%). In this regard, based on interviews with community leaders, direct participation usually took place in identifying problems, setting goals and priorities, while representative participation took place in the advanced stages (the detailed planning and operational process, etc). In terms of Arnstein’s level of participation, the most preferable level of participations chosen by respondents was the “partnership” category in which government/NGOs collaborate with citizens and where the final decision is made based on agreement from government/NGOs and citizens. In the case of government-executed projects, the “partnership” category was chosen by 55% of the respondents (Figure 5.9), while for NGO-executed projects, this category was chosen by 61% of the respondents (Figure 5.10). More expectation on level of participation in NGO-executed projects perhaps resulted from better capacities of NGOs (compared to the government) in dealing with participatory approaches after disasters according to respondents.



**Figure 5.9. The best way for the government to involve communities in post-disaster redevelopment according to respondents**



**Figure 5.10. The best way for NGOs to involve communities in post-disaster redevelopment according to respondents**

Given the research findings above, it can be concluded that most of the respondents considered provision of education and training as to participatory approaches for all stakeholders (92.5%) as well as the formulation of specific guidelines for community participation (88%) important to support community participation in post-tsunami redevelopment. Interestingly, most of the respondents agreed with both representative participation and direct participation (85% and 86%, respectively). It means most respondents hoped the implementation of the two types of participation in decision making as suggested by theory. In accordance with to what extent governments/NGOs should cooperate with community members in executing governments/NGO’s relief projects, more than half respondents were in favor of supporting collaboration approaches (the “partnership” level of participation). 55% respondents agreed with the “partnership” participation for government-executed projects and 61% respondents also agreed with this level of participation for NGO-executed projects. This means many respondents wanted to get involved actively in the recovery efforts and they hoped they had the same bargaining position as the governments and/or NGOs in decision making.

## **CHAPTER VI**

### **CONCLUSION**

This chapter includes the summary of findings, the limitations of the study and a discussion of future research. The summary of findings includes the implementation of community participation and community members' perceptions of and preferences for community participation in the Aceh post-tsunami redevelopment. This chapter begins with the summary of findings and then followed by the limitations of the study and future research, and conclusion and recommendations.

#### **Summary of Findings**

In terms of the implementation of community participation, the research findings show that the occurrence of "ad hoc" participation (participatory activities mainly mobilized by community members) in the four case study village was basically related to communities' urgent needs right after the tsunami as well as community members' creativity and networking. The urgent needs of communities led the residents of the four case study villages to participate in (1) corpse evacuation; (2) data collection on the death toll in their own village; and (3) disseminating disaster-related information. Communities had no choice except to participate in these activities because aid agencies were still not involved actively in the relief effort at that time. All case study villages, except for Merduati, also participated in barrack/temporary shelter development. The non-existence of temporary shelter development in Merduati resulted from the lack of coordination among its community members due to the death of its former head of village in the tsunami and its proximity to the capital city which resulted in easy access to relief assistance.

The role of creativity and networking in exercising “ad hoc” participation can be seen in the case of Lambung village. This village made some breakthroughs through resident initiatives in village development planning, land contribution for public facilities, opening a bank account for public donations, advertising village meetings, and public facility construction with village funds.

With regard to aid organization/agency-promoted participation (participation promoted by NGOs, international agencies, and Indonesian Government Agencies), the findings indicate that the extent to which communities were involved in this kind of participation was associated with the willingness and capacity of aid organizations/agencies, the nature of recovery projects, and the readiness of communities to participate. In addition, adequate time in exercising participation (UPLINK case in Lam Hasan), and community facilitators’ informal approaches to engage communities in the reconstruction effort (USAID/DAI case in Lam Teungoh) are also significant for optimizing participation.

According to the interviews with the heads of the case study villages, the specific benefits of the implementation of community participation for communities included accelerating the village economic recovery process (Lam Teungoh case), a quick process of project management (Lam Hasan case), more organized settlements (Lambung case), and an improved sense of village ownership among inhabitants (Merduati case). Based on information from the heads of the villages, it can be concluded that constraints of community participation included low coordination among aid organizations/agencies (Lam Teungoh and Lam Hasan cases), lack of knowledge among community members (Lam Teungoh case), the long participatory process (Lambung case), and the bad influence of “income generated” cash for work projects (Lam Teungoh, Lam Hasan, and Merduati cases). Meanwhile, supporting factors of participation included leadership (Lambung, Lam Hasan, and lambung cases), social ties (Lam



Teungoh and Lambung cases), community facilitator's approaches (Lam Teungoh case), as well as information on participatory activities, networking, religious approaches, and residents' willingness to make contributions (Lambung case).

With respect to perceptions of community participation in Aceh post-tsunami redevelopment, most respondents, regardless of sex, age group, and education, and income level, agreed that community participation in the relief efforts has benefited communities in terms of meeting needs, capacity building, reducing traumatic feelings, and giving hope for a better future for communities (on average 86%). In terms of the constraints of participation, factor analysis indicates that, according to the respondents, the biggest constraints of community participation in post-tsunami redevelopment include the demand for quick decisions and actions, issue complexity caused by the tsunami, and the impact of Aceh's military conflict and Soeharto's authoritarian regime on citizen awareness and capability of getting involved in the participatory process (27.25%).

In terms of preferences for community participation approaches, most respondents agreed with provision of education and training for participatory approaches for all stakeholders and the formulation of specific guidelines for community participation in post-disaster redevelopment (92.5% and 88%, respectively). The majority of respondents were also in favor of the implementation of both direct and representative participation (85% and 86%, respectively) in decision making. In terms of the extent to which respondents participate in the redevelopment activities executed by the governments and NGOs, more than half of respondents chose the partnership category of Arnstein's level of participation (55% for government-executed projects and 61% for NGO-executed projects, respectively).

### **Limitations of the Study and Future Research**

This study has several limitations, many of which should be addressed in future research. The first is that community participation in the four case study villages cannot really represent community participation in Aceh. A much larger number of villages with representative districts/cities affected by the tsunami will better reflect the portrait of community participation in the tsunami affected villages in the entire Province. Second, for the aid organization/agency, besides the addition of its number, its variety (in terms of, for instance, the scale of funding and country of origin) should also be considered so that aid organizations/agencies selected are more representative of all aid organizations.

### **Conclusion and Recommendations**

The research findings suggest that the success of community participatory approaches requires the willingness and readiness of stakeholders (government, aid organizations/agencies, community leaders, and community members) and cooperation among them. Results also suggest that government should educate and train all stakeholders as to community participation approaches. The hope is that this effort help improve the awareness and capacities of the stakeholders in implementing community participation in post-disaster redevelopment. In addition, the government also needs to formulate specific guidelines for community participation as the basis for the legal participation action. Specifically, the guidelines should include minimum standards, forms, and techniques of community participation in the rebuilding process. The “partnership” participation, chosen as the best way of community participation by research respondents, should also be considered in revising the policy of community participation model in post-disaster redevelopment in Aceh and Indonesia in the future.

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## APPENDIX A



120 Ozark Hall • Fayetteville, Arkansas 72701 • (479) 575-2208 • (479) 575-3846 (FAX)  
Email: [irb@uark.edu](mailto:irb@uark.edu)

### Research Support and Sponsored Programs Institutional Review Board

September 28, 2009

#### MEMORANDUM

TO: Ichsan  
Brinck Kerr  
Valerie Hunt

FROM: Ro Windwalker  
IRB Coordinator

RE: New Protocol Approval

IRB Protocol #: 09-09-094

Protocol Title: *Community Participation in Post-Tsunami Redevelopment in Aceh: The Process and Community Members' Perceptions and Preferences*

Review Type:  EXEMPT  EXPEDITED  FULL IRB

Approved Project Period: Start Date: 09/28/2009 Expiration Date: 09/27/2010

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Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Compliance website (<http://www.uark.edu/admin/rsspinfo/compliance/index.html>). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

If you wish to make *any* modifications in the approved protocol, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 120 Ozark Hall, 5-2208, or [irb@uark.edu](mailto:irb@uark.edu).

## APPENDIX B



120 Ozark Hall • Fayetteville, Arkansas 72701 • (479) 575-2208 • (479) 575-3846 (FAX)  
Email: [irb@uark.edu](mailto:irb@uark.edu)

### Research Support and Sponsored Programs Institutional Review Board

September 14, 2010

#### MEMORANDUM

TO: Ichsan  
J. Brinck Kerr  
Valerie Hunt

FROM: Ro Windwalker  
IRB Coordinator

RE: PROJECT CONTINUATION

IRB Protocol #: 09-09-094

Protocol Title: *Community Participation in Post-Tsunami Redevelopment in Aceh: The Process and Community Members' Perceptions and Preferences*

Review Type:  EXEMPT  EXPEDITED  FULL IRB

Previous Approval Period: Start Date: 09/28/2009 Expiration Date: 09/27/2010

New Expiration Date: 09/27/2011

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Your request to extend the referenced protocol has been approved by the IRB. If at the end of this period you wish to continue the project, you must submit a request using the IRB approved form "Request for Continuation." Failure to obtain approval for a continuation on or prior to this new expiration date will result in termination of the protocol and you will be required to submit a new protocol to the IRB before continuing the project. Data collected past the protocol expiration date may need to be eliminated from the dataset should you wish to publish. Only data collected under a currently approved protocol can be certified by the IRB for any purpose.

If you have questions or need any assistance from the IRB, please contact me at 120 Ozark Hall, 5-2208, or [irb@uark.edu](mailto:irb@uark.edu).

## APPENDIX C

### **Interview Questions for Government Officials, Aid Organization/Agency Workers and Community Leaders**

1. Describe the actual process of community participation in redevelopment that took place in Aceh Province after the tsunami disaster.
2. Do you think community members should participate in the general policymaking process? Why or why not?
3. Do you think community members should have participated in the redevelopment efforts after the Aceh tsunami? Why or why not?
4. What are the advantages and disadvantages of community participation in the general policymaking process?
5. What are the advantages and disadvantages of community participation in post-disaster redevelopment?
6. Describe the process of community participation in post-disaster redevelopment in Indonesia before the Aceh tsunami.
7. Could you explain the participatory approach in the tsunami relief efforts stated in the Master for the Tsunami Rehabilitation and Reconstruction? What were the reasons behind the adoption of this approach?
8. What have been the constraints to community participation in post-tsunami redevelopment in Aceh?
9. How have government agencies and other actors (community members, community leaders, NGOs) supported or opposed the implementation of community participation after the tsunami?
10. To what extent have community members participated in the redevelopment process? Could you explain?
11. To date, what have been the effects of community participation following the Aceh tsunami?

## APPENDIX D

### Questionnaire questions for community members

#### I. Personal Data

1. Village's/neighborhood's name:  
\_\_\_\_\_
2. Address: \_\_\_\_\_  
\_\_\_\_\_
3. Occupation:  

<input type="checkbox"/> Fisherman	<input type="checkbox"/> Poultry breeder	<input type="checkbox"/> House wife
<input type="checkbox"/> Farmer	<input type="checkbox"/> Cattle breeder	<input type="checkbox"/> Unemployed
<input type="checkbox"/> Carpenter	<input type="checkbox"/> Unorganized day laborer	<input type="checkbox"/> Other (explain) _____
<input type="checkbox"/> Merchant	<input type="checkbox"/> Government employee	
4. Age: \_\_\_\_\_
5. Sex: \_\_\_\_\_
6. How long have you been living in your village/neighborhood \_\_\_\_\_
7. Ethnic group (please check one)  

<input type="checkbox"/> Acehnese	<input type="checkbox"/> Sundanese	<input type="checkbox"/> Padangnese
<input type="checkbox"/> Javanese	<input type="checkbox"/> Bataknese	<input type="checkbox"/> Other (please explain) _____
8. Are you (please check one)?  
 Single       Married       Widow/widower
9. What is your highest level of education? (please check one)  
 No education     Elementary     Junior High     Senior High     University
10. What is your daily income?  
 None     less than 25,000 R     25,000–less than 50,000 R     50,000–75,000 R     More than 75,000 R
11. Level of effect of the tsunami on you  
a. very severe    b. severe    c. moderate    d. minimal    e. none

#### II. General

1. Have you participated in any tsunami relief effort?  Yes  No (if no, go to question 6)
2. If yes, in what kind of relief effort(s) have you participated? (you may choose more than one)  
a. evacuation of dead people/ victims    d. village development planning    g. other (explain) \_\_\_\_\_  
e. house development
- b. barrack development    f. public facilities development (education buildings, infrastructure, etc)
- c. debris removal
3. Why have you participated in the tsunami relief effort(s)? (you may choose more than one)  
a. To meet my needs    c. To gain experience    e. other (explain) \_\_\_\_\_  
b. To rebuild my village/neighborhood    d. To improve my skills in dealing with post-disaster redevelopment
4. How have you participated in the tsunami relief effort(s)?  
a. by my own awareness and initiative    c. motivated by my friends  
b. motivated by my family/relatives    d. motivated by village bureaucrat(s)
5. How satisfied were you with your involvement in the tsunami relief effort(s)?  
a. very satisfied    b. satisfied    c. neutral    d. unsatisfied    e. very unsatisfied

6. If you have not participated in the tsunami relief effort (s), what have been your reasons? (you may choose more than one)
  - a. There have no appropriate financial, social, or other incentives.
  - b. The tsunami relief efforts have not been directly related to my life and interests
  - c. Post-disaster redevelopment is government's responsibility
  - d. Other (please explain)

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7. The governments promote participatory approaches in tsunami relief efforts \_\_\_ Yes \_\_\_ No
8. Have you previously participated in any development process before the Aceh tsunami? \_\_\_Yes\_\_\_No
9. If yes, what the development activity (ies) have you participated in? (you may choose more than one)
  - a. *Musrenbang* at the village level (the deliberative multi-stakeholder forum for development planning)
  - b. *Gotong royong kampung* (community self-help at the village level)
  - c. Other (explain)

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10. How satisfied were you with your involvement in the aforementioned development activity (ies)?
  - a. very satisfied    b. satisfied    c. neutral    d. unsatisfied    e. very unsatisfied

### ***III. Perceptions of Community Participation in Aceh Post-Tsunami Redevelopment***

#### ***A. The importance of community participation***

1. Community participation in post-tsunami redevelopment was vital to meeting the need of communities.
  - a. strongly agree    b. agree    c. neutral    d. disagree    e. strongly disagree
2. Community participation in post-tsunami redevelopment was vital to improving capacity building of communities.
  - a. strongly agree    b. agree    c. neutral    d. disagree    e. strongly disagree
3. Community participation in needs assessment in post-tsunami redevelopment has reduced communities' traumatic feelings.
  - a. strongly agree    b. agree    c. neutral    d. disagree    e. strongly disagree
4. Community participation in needs assessment in post-tsunami redevelopment has given hope for a better future for communities.
  - a. strongly agree    b. agree    c. neutral    d. disagree    e. strongly disagree

#### ***B. The extent and constraints of community participation***

1. In general, which of the following do you think the Reconstruction and Rehabilitation Agency of Aceh and Nias (BRR) have done to involve communities in post-tsunami redevelopment? (circle only one)
  - a. Informing citizens about the activities/programs that would be executed without involving them in decision making.
  - b. Consulting with citizens (through surveys, neighborhood meetings, or public hearings) about the activities/programs that would be executed, but the final decision has been made by BRR.
  - c. Involving community representatives on planning boards, but the final decision has been made by BRR.
  - d. Collaborating with citizens where the final decision has been made based on agreement from both parties.
  - e. Empowering citizens by placing final decision-making in the hands of citizens.

2. In general, which of the following do you think the Non Government Organization(s) has (have) done to involve communities in post-tsunami redevelopment? (circle only one)
  - a. Informing citizens about the activities/programs that would be executed without involving them in decision making.
  - b. Consulting with citizens (through surveys, neighborhood meetings, or public hearings) about the activities/programs that would be executed, but the final decision has been greatly influenced by NGO(s).
  - c. Involving community representatives on planning boards, but the final decision has been greatly influenced by NGO(s).
  - d. Collaborating with citizens where the final decision has been made based on agreement from both parties.
  - e. Empowering citizens by placing final decision-making in the hands of citizens.
3. The demand for quick decisions and actions has been the main impediment for the implementation of community participation in post-tsunami redevelopment.
  - a. strongly agree b. agree c. neutral d. disagree e. strongly disagree
4. Issue complexity has been the main constraint for the implementation of community participation in post-tsunami redevelopment.
  - a. strongly agree b. agree c. neutral d. disagree e. strongly disagree
5. BRR had no political will to stimulate and broaden the participatory process in post-tsunami redevelopment.
  - a. strongly agree b. agree c. neutral d. disagree e. strongly disagree
6. BRR did not have enough skills to manage the participatory process in post-tsunami redevelopment.
  - a. strongly agree b. agree c. neutral d. disagree e. strongly disagree
7. NGO(s) had no serious intention to stimulate and broaden the participatory process in post-tsunami redevelopment.
  - a. strongly agree b. agree c. neutral d. disagree e. strongly disagree
8. NGO(s) did not have enough skills to manage the participatory process in post-tsunami redevelopment.
  - a. strongly agree b. agree c. neutral d. disagree e. strongly disagree
9. Citizens were not enthusiastic about getting involved in the participatory process in post tsunami redevelopment.
  - a. strongly agree b. agree c. neutral d. disagree e. strongly disagree
10. Citizens did not have the skills to get involved in the participatory process in post-tsunami redevelopment.
  - a. strongly agree b. agree c. neutral d. disagree e. strongly disagree
11. Past military conflict in Aceh has led community members to have a lack of awareness and little capability of getting involved in the participatory process.
  - a. strongly agree b. agree c. neutral d. disagree e. strongly disagree
12. Long experience under Soeharto's authoritarian regime (1967-1998) has led to lack of awareness among community members of getting involved in the participatory process.
  - a. strongly agree b. agree c. neutral d. disagree e. strongly disagree
13. Past military conflict in Aceh has led the governments to be less capable of dealing with the participatory process.
  - a. strongly agree b. agree c. neutral d. disagree e. strongly disagree



14. Long experience under Soeharto's authoritarian regime has reduced the ability of the governments to deal with the participatory process.  
a. strongly agree   b. agree   c. neutral   d. disagree   e. strongly disagree

***IV. Preferences for the Participatory Approach in Aceh Post-Tsunami Redevelopment***

1. To support community participation in the rebuilding process, the government, NGOs and other concerned parties need to provide education and training concerning participatory approaches for affected communities, related government agencies employees, NGO workers, and the general public.  
a. strongly agree   b. agree   c. neutral   d. disagree   e. strongly disagree
2. The government should set specific guidelines for community participation in the rebuilding process, in terms of minimum standards, forms, techniques, etc.  
a. strongly agree   b. agree   c. neutral   d. disagree   e. strongly disagree
3. The involvement of community members in decision making in the recovery process should be implemented in a representative way (community members are represented by bureaucrats, community leaders, interest groups, and other individuals or parties).  
a. strongly agree   b. agree   c. neutral   d. disagree   e. strongly disagree
4. Community members should get involved in decision making in the recovery process at the village/neighborhood level through public hearings and public meetings.  
a. strongly agree   b. agree   c. neutral   d. disagree   e. strongly disagree
5. Which of the following do you think the best way for the governments to involve communities in post-disaster redevelopment? (circle only one)
  - a. Informing citizens about the activities/programs that would be executed without involving them in decision making.
  - b. Consulting with citizens (through surveys, neighborhood meetings, or public hearings) about the activities/programs that would be executed, but the final decision should have been made by BRR.
  - c. Involving community representatives on planning boards, but the final decision should have been made by BRR.
  - d. Collaborating with citizens where the final decision should have been made based on agreement from both parties.
  - e. Empowering citizens by placing final decision-making in the hands of citizens.
6. Which of the following do you think the best way for NGO(s) to involve communities in post-disaster redevelopment? (circle only one)
  - a. Informing citizens about the activities/programs that would be executed without involving them in decision making.
  - b. Consulting with citizens (through surveys, neighborhood meetings, or public hearings) about the activities/programs that would be executed, but the final decision should have been greatly influenced by NGO(s).
  - c. Involving community representatives on planning boards, but the final decision should have been greatly influenced by NGO(s).
  - d. Collaborating with citizens where the final decision should have been made based on agreement from both parties.
  - e. Empowering citizens by placing final decision-making in the hands of citizens.

## APPENDIX E

### Respondents' answers to the questions of the questionnaire

**Table 5.20. Descriptive information about the respondents (questions 3 – 11 of section I of the questionnaire)**

No	Item	Lam Teungoh		Lam Hasan		Lambung		Merduati		Total	
3	Occupation										
	Fisherman	11	5.50%	0	0.00%	4	2.00%	1	0.50%	16	8.00%
	Farmer	3	1.50%	8	4.00%	0	0.00%	0	0.00%	11	5.50%
	Carpenter	0	0.00%	6	3.00%	0	0.00%	0	0.00%	6	3.00%
	Merchant	8	4.00%	6	3.00%	6	3.00%	16	8.00%	36	18.00%
	Poultry breeder	3	1.50%	1	0.50%	0	0.00%	0	0.00%	4	2.00%
	Cattle breeder	2	1.00%	0	0.00%	0	0.00%	1	0.50%	3	1.50%
	Unorganized day laborer	2	1.00%	6	3.00%	1	0.50%	3	1.50%	12	6.00%
	Government employee	0	0.00%	4	2.00%	9	4.50%	4	2.00%	17	8.50%
	House wife	11	5.50%	4	2.00%	11	5.50%	3	1.50%	29	14.50%
	Unemployed	5	2.50%	2	1.00%	4	2.00%	4	2.00%	15	7.50%
	Construction-related professional	3	1.50%	3	1.50%	6	3.00%	9	4.50%	21	10.50%
	State or private company worker	0	0.00%	6	3.00%	5	2.50%	9	4.50%	20	10.00%
	Student (senior high & undergraduate)	2	1.00%	4	2.00%	4	2.00%	0	0.00%	10	5.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
4	Age										
	15 - 25 years old	10	5.00%	5	2.50%	9	4.50%	0	0.00%	24	12.00%
	26 - 55 years old	37	18.50%	41	20.50%	38	19.00%	38	19.00%	154	77.00%
	Over 55 years old	3	1.50%	4	2.00%	3	1.50%	12	6.00%	22	11.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
5	Sex										
	Male	32	16.00%	33	16.50%	30	15.00%	36	18.00%	131	65.50%
	Female	18	9.00%	17	8.50%	20	10.00%	14	7.00%	69	34.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
6	How long have you been living in your village?										
	≤ 5 years	6	3.00%	1	0.50%	3	1.50%	0	0.00%	10	5.00%
	6 - 15 years	2	1.00%	10	5.00%	4	2.00%	1	0.50%	17	8.50%
	16 - 25 years	8	4.00%	11	5.50%	10	5.00%	3	1.50%	32	16.00%
	> 25 years	34	17.00%	28	14.00%	33	16.50%	46	23.00%	141	70.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%

7	Ethnic group										
	Acehnese	48	24.00%	47	23.50%	47	23.50%	41	20.50%	183	91.50%
	Javanese	2	1.00%	1	0.50%	2	1.00%	4	2.00%	9	4.50%
	Sundanese	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Bataknese	0	0.00%	1	0.50%	0	0.00%	1	0.50%	2	1.00%
	Padangnese	0	0.00%	1	0.50%	1	0.50%	2	1.00%	4	2.00%
	Other	0	0.00%	0	0.00%	0	0.00%	2	1.00%	2	1.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
8	Are you?										
	Single	9	4.50%	8	4.00%	27	13.50%	5	2.50%	49	24.50%
	Married	40	20.00%	42	21.00%	21	10.50%	35	17.50%	138	69.00%
	Widow/widower	1	0.50%	0	0.00%	2	1.00%	10	5.00%	13	6.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
9	Level of education										
	No education	5	2.50%	4	2.00%	2	1.00%	1	0.50%	12	6.00%
	Elementary	2	1.00%	2	1.00%	0	0.00%	0	0.00%	4	2.00%
	Junior High	16	8.00%	15	7.50%	7	3.50%	10	5.00%	48	24.00%
	Senior High	25	12.50%	23	11.50%	32	16.00%	32	16.00%	112	56.00%
	University	2	1.00%	5	2.50%	9	4.50%	8	4.00%	24	12.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
10	Daily income										
	None	10	5.00%	9	4.50%	16	8.00%	6	3.00%	41	20.50%
	Less than 25,000 R	11	5.50%	3	1.50%	6	3.00%	0	0.00%	20	10.00%
	25,000 - less than 50,000 R	24	12.00%	9	4.50%	9	4.50%	12	6.00%	54	27.00%
	50,000 - 75,000 R	4	2.00%	26	13.00%	12	6.00%	23	11.50%	65	32.50%
	More than 75,000 R	1	0.50%	3	1.50%	7	3.50%	9	4.50%	20	10.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
11	Level of effect of the tsunami on you										
	Very severe	41	20.50%	39	19.50%	38	19.00%	11	5.50%	129	64.50%
	Severe	5	2.50%	6	3.00%	9	4.50%	25	12.50%	45	22.50%
	Moderate	1	0.50%	5	2.50%	2	1.00%	12	6.00%	20	10.00%
	Minimal	1	0.50%	0	0.00%	0	0.00%	2	1.00%	3	1.50%
	None	2	1.00%	0	0.00%	1	0.50%	0	0.00%	3	1.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%

**Table 5.21. Cross tabulation of responses to questions about participation in tsunami relief and general development activities (questions 1 – 10 of section II of the questionnaire)**

No	Item	Lam Teungoh		Lam Hasan		Lambung		Merduati		Total	
	Characteristic	-coastal rural area -40% have no education -lots of native inhabitants -major occupation: fishermen and farmers -very low income (Rp 800,000 – 1 million)		-coastal rural area -58% senior high, 7% undergraduate and higher -mix of native and new inhabitants -major occupation: private & state company workers and farmers -low income (Rp 1 – 1.2 million)		-semi urban area -62% senior high, 21% undergraduate -lots of native inhabitants -major occupation: private company workers and civil servants -middle income (Rp 1.5 – 1.75 million)		-urban area -48% senior high, 20% undergraduate and higher -lots of new inhabitants -major occupation: private company workers, civil servants, and traders -middle income (Rp 2.5 million)			
1	Have you participated in any tsunami relief effort?										
	Yes	44	22.00%	44	22.00%	47	23.50%	39	19.50%	174	87.00%
	No	6	3.00%	6	3.00%	3	1.50%	11	5.50%	26	13.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
2	In what kind of relief effort?										
	Evacuation of dead people/victims	3	1.72%	4	2.30%	0	0.00%	5	2.87%	12	6.90%
	Barrack development	3	1.72%	1	0.57%	2	1.15%	0	0.00%	6	3.45%
	Debris removal	10	5.75%	20	11.49%	7	4.02%	17	9.77%	54	31.03%
	Village development planing	2	1.15%	0	0.00%	19	10.92%	8	4.60%	29	16.67%
	House development	0	0.00%	1	0.57%	2	1.15%	1	0.57%	4	2.30%
	Public facilities development	2	1.15%	0	0.00%	9	5.17%	1	0.57%	12	6.90%
	Evacuation and barrack development	3	1.72%	1	0.57%	0	0.00%	0	0.00%	4	2.30%
	Evacuation and debris removal	3	1.72%	10	5.75%	1	0.57%	1	0.57%	15	8.62%
	Debris removal and village development planning	2	1.15%	0	0.00%	0	0.00%	0	0.00%	2	1.15%
	Three kinds of activities	8	4.60%	2	1.15%	3	1.72%	2	1.15%	15	8.62%

	Four kind of activities	8	4.60%	1	0.57%	0	0.00%	0	0.00%	9	5.17%
	Other	0	0.00%	4	2.30%	4	2.30%	4	2.30%	12	6.90%
	Total N	44	25.29%	44	25.29%	47	27.01%	39	22.41%	174	100.00%
3	Why have you participated?										
	To meet my needs	1	0.57%	2	1.15%	19	10.92%	9	5.17%	31	17.82%
	To rebuild my village/neighborhood	17	9.77%	24	13.79%	7	4.02%	21	12.07%	69	39.66%
	To gain experience	1	0.57%	0	0.00%	2	1.15%	3	1.72%	6	3.45%
	To improve my skills	1	0.57%	1	0.57%	0	0.00%	5	2.87%	7	4.02%
	To meet my needs & to rebuild my village	12	6.90%	5	2.87%	10	5.75%	0	0.00%	27	15.52%
	To rebuild my village & to gain experience	3	1.72%	2	1.15%	0	0.00%	0	0.00%	5	2.87%
	To rebuild my village & to improve my skills	5	2.87%	8	4.60%	6	3.45%	1	0.57%	20	11.49%
	To meet my needs, rebuild my village, & to gain experience	2	1.15%	1	0.57%	3	1.72%	0	0.00%	6	3.45%
	To rebuild my village, to gain experience, & to improve skills	1	0.57%	1	0.57%	0	0.00%	0	0.00%	2	1.15%
	Other	1	0.57%	0	0.00%	0	0.00%	0	0.00%	1	0.57%
	Total N	44	25.29%	44	25.29%	47	27.01%	39	22.41%	174	100.00%
4	How have you participated?										
	By my own awareness and initiative	41	23.56%	43	24.71%	43	24.71%	27	15.52%	154	88.51%
	Motivated by my family/relatives	1	0.57%	0	0.00%	2	1.15%	5	2.87%	8	4.60%
	Motivated by my friends	0	0.00%	0	0.00%	0	0.00%	2	1.15%	2	1.15%
	Motivated by village bureaucrat(s)	2	1.15%	1	0.57%	2	1.15%	5	2.87%	10	5.75%
	Total N	44	25.29%	44	25.29%	47	27.01%	39	22.41%	174	100.00%
5	How satisfied were you with your involvement?										
	Very satisfied	17	9.77%	16	9.20%	24	13.79%	3	1.72%	60	34.48%
	Satisfied	21	12.07%	23	13.22%	12	6.90%	33	18.97%	89	51.15%
	Neutral	4	2.30%	5	2.87%	10	5.75%	1	0.57%	20	11.49%
	Unsatisfied	2	1.15%	0	0.00%	1	0.57%	2	1.15%	5	2.87%
	Very unsatisfied	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Total N	44	25.29%	44	25.29%	47	27.01%	39	22.41%	174	100.00%
6	Why have you not participated?										

	No appropriate financial, social or other incentives	1	3.85%	2	7.69%	1	3.85%	3	11.54%	7	26.92%
	Not related to my life and interests	3	11.54%	1	3.85%	0	0.00%	0	0.00%	4	15.38%
	Government's responsibility	2	7.69%	0	0.00%	1	3.85%	7	26.92%	10	38.46%
	Other	0	0.00%	3	11.54%	1	3.85%	1	3.85%	5	19.23%
	Total N	6	23.08%	6	23.08%	3	11.54%	11	42.31%	26	100.00%
7	The governments promote participatory approaches in tsunami relief efforts										
	Yes	39	19.50%	45	22.50%	47	23.50%	45	22.50%	176	88.00%
	No	11	5.50%	5	2.50%	3	1.50%	5	2.50%	24	12.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
8	Have you participated in any dev. process before the tsunami?										
	Yes	44	22.00%	49	24.50%	46	23.00%	46	23.00%	185	92.50%
	No	6	3.00%	1	0.50%	4	2.00%	4	2.00%	15	7.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
9	If yes, what dev. activity(ies) have you participated in?										
	Musrenbang at the village level	1	0.54%	4	2.16%	0	0.00%	5	2.70%	10	5.41%
	Gotong royong kampung	34	18.38%	41	22.16%	26	14.05%	35	18.92%	136	73.51%
	Other	9	4.86%	4	2.16%	20	10.81%	6	3.24%	39	21.08%
	Total N	44	23.78%	49	26.49%	46	24.86%	46	24.86%	185	100.00%
10	How satisfied were you with your involvement?(#10)										
	Very satisfied	17	9.19%	13	7.03%	15	8.11%	6	3.24%	51	27.57%
	Satisfied	21	11.35%	33	17.84%	22	11.89%	37	20.00%	113	61.08%
	Neutral	5	2.70%	3	1.62%	9	4.86%	2	1.08%	19	10.27%
	Unsatisfied	1	0.54%	0	0.00%	0	0.00%	1	0.54%	2	1.08%
	Very unsatisfied	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Total N	44	23.78%	49	26.49%	46	24.86%	46	24.86%	185	100.00%

**Table 5.22. Cross tabulation of responses to questions about the importance of participation in tsunami relief (questions 1-4 of section III-A of the questionnaire)**

No	Item	Lam Teungoh		Lam Hasan		Lambung		Merduati		Total	
1	Community participation in post-tsunami redevelopment was vital to meeting the need of communities										
	Strongly agree	26	13.00%	14	7.00%	32	16.00%	12	6.00%	84	42.00%
	Agree	21	10.50%	34	17.00%	15	7.50%	29	14.50%	99	49.50%
	Neutral	3	1.50%	2	1.00%	3	1.50%	4	2.00%	12	6.00%
	Disagree	0	0.00%	0	0.00%	0	0.00%	5	2.50%	5	2.50%
	Strongly disagree	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
2	Community participation in post-tsunami redevelopment was vital to improving capacity building of communities										
	Strongly agree	22	11.00%	11	5.50%	21	10.50%	14	7.00%	68	34.00%
	Agree	27	13.50%	37	18.50%	25	12.50%	26	13.00%	115	57.50%
	Neutral	1	0.50%	2	1.00%	4	2.00%	4	2.00%	11	5.50%
	Disagree	0	0.00%	0	0.00%	0	0.00%	6	3.00%	6	3.00%
	Strongly disagree	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
3	Community participation in needs assessment in post-tsunami redevelopment has reduced communities' traumatic feelings										
	Strongly agree	14	7.00%	7	3.50%	20	10.00%	14	7.00%	55	27.50%
	Agree	31	15.50%	32	16.00%	22	11.00%	29	14.50%	114	57.00%
	Neutral	3	1.50%	5	2.50%	7	3.50%	4	2.00%	19	9.50%
	Disagree	2	1.00%	6	3.00%	1	0.50%	3	1.50%	12	6.00%
	Strongly disagree	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
4	Community participation in needs assessment in post-tsunami redevelopment has given hope for a better future for communities										

	Strongly agree	13	6.50%	5	2.50%	17	8.50%	15	7.50%	50	25.00%
	Agree	31	15.50%	29	14.50%	24	12.00%	25	12.50%	109	54.50%
	Neutral	5	2.50%	9	4.50%	8	4.00%	6	3.00%	28	14.00%
	Disagree	1	0.50%	7	3.50%	1	0.50%	4	2.00%	13	6.50%
	Strongly disagree	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%



**Table 5.23. Cross tabulation of responses to questions about the extent and constraints of participation in post-tsunami redevelopment (questions 1-14 of section III-B of the questionnaire)**

No	Item	Lam Teungoh		Lam Hasan		Lambung		Merduati		Total	
1	What BRR has done to involve communities in post-tsunami redevelopment?										
	Informing	12	6.00%	13	6.50%	15	7.50%	24	12.00%	64	32.00%
	Consulting	15	7.50%	24	12.00%	19	9.50%	16	8.00%	74	37.00%
	Placation	12	6.00%	12	6.00%	11	5.50%	9	4.50%	44	22.00%
	Partnership (collaborating)	11	5.50%	1	0.50%	5	2.50%	1	0.50%	18	9.00%
	Delegated power (empowering)	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
2	What NGO(s) has (have) done to involve communities in post-tsunami redevelopment?										
	Informing	2	1.00%	0	0.00%	3	1.50%	2	1.00%	7	3.50%
	Consulting	11	5.50%	3	1.50%	14	7.00%	8	4.00%	36	18.00%
	Placation	1	0.50%	11	5.50%	3	1.50%	10	5.00%	25	12.50%
	Partnership (collaborating)	34	17.00%	34	17.00%	22	11.00%	26	13.00%	116	58.00%
	Delegated power (empowering)	2	1.00%	2	1.00%	8	4.00%	4	2.00%	16	8.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
3	The demand for quick decisions and actions has been the main impediment for participation										
	Strongly agree	6	3.00%	2	1.00%	15	7.50%	7	3.50%	30	15.00%
	Agree	17	8.50%	27	13.50%	16	8.00%	24	12.00%	84	42.00%
	Neutral	9	4.50%	6	3.00%	5	2.50%	1	0.50%	21	10.50%
	Disagree	15	7.50%	12	6.00%	13	6.50%	16	8.00%	56	28.00%
	Strongly disagree	3	1.50%	3	1.50%	1	0.50%	2	1.00%	9	4.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
4	Issue complexity has been the main constraint for participation										
	Strongly agree	3	1.50%	3	1.50%	11	5.50%	10	5.00%	27	13.50%
	Agree	19	9.50%	26	13.00%	18	9.00%	21	10.50%	84	42.00%
	Neutral	8	4.00%	4	2.00%	3	1.50%	2	1.00%	17	8.50%
	Disagree	18	9.00%	14	7.00%	15	7.50%	13	6.50%	60	30.00%

	Strongly disagree	2	1.00%	3	1.50%	3	1.50%	4	2.00%	12	6.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
5	BRR had no political will to stimulate and broaden the participatory process										
	Strongly agree	6	3.00%	4	2.00%	8	4.00%	11	5.50%	29	14.50%
	Agree	20	10.00%	30	15.00%	22	11.00%	34	17.00%	106	53.00%
	Neutral	19	9.50%	8	4.00%	16	8.00%	3	1.50%	46	23.00%
	Disagree	5	2.50%	8	4.00%	3	1.50%	2	1.00%	18	9.00%
	Strongly disagree	0	0.00%	0	0.00%	1	0.50%	0	0.00%	1	0.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
6	BRR did not have enough skills to manage the participatory process										
	Strongly agree	6	3.00%	5	2.50%	3	1.50%	7	3.50%	21	10.50%
	Agree	15	7.50%	17	8.50%	18	9.00%	33	16.50%	83	41.50%
	Neutral	18	9.00%	10	5.00%	19	9.50%	6	3.00%	53	26.50%
	Disagree	11	5.50%	17	8.50%	9	4.50%	4	2.00%	41	20.50%
	Strongly disagree	0	0.00%	1	0.50%	1	0.50%	0	0.00%	2	1.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
7	NGO(s) had no serious intention to stimulate and broaden the participatory process										
	Strongly agree	3	1.50%	2	1.00%	1	0.50%	0	0.00%	6	3.00%
	Agree	8	4.00%	5	2.50%	8	4.00%	11	5.50%	32	16.00%
	Neutral	7	3.50%	9	4.50%	5	2.50%	4	2.00%	25	12.50%
	Disagree	24	12.00%	32	16.00%	32	16.00%	30	15.00%	118	59.00%
	Strongly disagree	8	4.00%	2	1.00%	4	2.00%	5	2.50%	19	9.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
8	NGO(s) did not have enough skills to manage the participatory process										
	Strongly agree	2	1.00%	2	1.00%	8	4.00%	5	2.50%	17	8.50%
	Agree	6	3.00%	4	2.00%	25	12.50%	36	18.00%	71	35.50%
	Neutral	8	4.00%	13	6.50%	8	4.00%	2	1.00%	31	15.50%
	Disagree	30	15.00%	29	14.50%	9	4.50%	7	3.50%	75	37.50%
	Strongly disagree	4	2.00%	2	1.00%	0	0.00%	0	0.00%	6	3.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
9	Citizens were not enthusiastic about getting involved in the participatory process										
	Strongly agree	1	0.50%	1	0.50%	4	2.00%	2	1.00%	8	4.00%
	Agree	3	1.50%	1	0.50%	1	0.50%	13	6.50%	18	9.00%
	Neutral	8	4.00%	8	4.00%	2	1.00%	5	2.50%	23	11.50%

	Disagree	25	12.50%	33	16.50%	31	15.50%	25	12.50%	114	57.00%
	Strongly disagree	13	6.50%	7	3.50%	12	6.00%	5	2.50%	37	18.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
10	Citizens did not have the skills to get involved in the participatory process										
	Strongly agree	3	1.50%	3	1.50%	3	1.50%	1	0.50%	10	5.00%
	Agree	9	4.50%	7	3.50%	2	1.00%	16	8.00%	34	17.00%
	Neutral	9	4.50%	9	4.50%	5	2.50%	3	1.50%	26	13.00%
	Disagree	26	13.00%	25	12.50%	31	15.50%	24	12.00%	106	53.00%
	Strongly disagree	3	1.50%	6	3.00%	9	4.50%	6	3.00%	24	12.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
11	Past military conflict in Aceh has led residents to have a lack of awareness and little capability of getting involved in the participatory process										
	Strongly agree	3	1.50%	6	3.00%	11	5.50%	6	3.00%	26	13.00%
	Agree	5	2.50%	27	13.50%	17	8.50%	24	12.00%	73	36.50%
	Neutral	17	8.50%	10	5.00%	4	2.00%	5	2.50%	36	18.00%
	Disagree	23	11.50%	7	3.50%	11	5.50%	11	5.50%	52	26.00%
	Strongly disagree	2	1.00%	0	0.00%	7	3.50%	4	2.00%	13	6.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
12	Soeharto's authoritarian regime has led to lack of awareness among residents of getting involved in the participatory process										
	Strongly agree	2	1.00%	10	5.00%	11	5.50%	11	5.50%	34	17.00%
	Agree	8	4.00%	19	9.50%	18	9.00%	18	9.00%	63	31.50%
	Neutral	19	9.50%	7	3.50%	6	3.00%	6	3.00%	38	19.00%
	Disagree	18	9.00%	12	6.00%	12	6.00%	13	6.50%	55	27.50%
	Strongly disagree	3	1.50%	2	1.00%	3	1.50%	2	1.00%	10	5.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
13	Past military conflict in Aceh has led the governments to be less capable of dealing with the participatory process										
	Strongly agree	3	1.50%	4	2.00%	2	1.00%	0	0.00%	9	4.50%
	Agree	9	4.50%	12	6.00%	10	5.00%	12	6.00%	43	21.50%
	Neutral	17	8.50%	16	8.00%	12	6.00%	11	5.50%	56	28.00%
	Disagree	20	10.00%	17	8.50%	24	12.00%	22	11.00%	83	41.50%
	Strongly disagree	1	0.50%	1	0.50%	2	1.00%	5	2.50%	9	4.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%

14	Soeharto's authoritarian regime has reduced the ability of the governments to deal with the participatory process										
	Strongly agree	3	1.50%	3	1.50%	2	1.00%	1	0.50%	9	4.50%
	Agree	9	4.50%	10	5.00%	8	4.00%	7	3.50%	34	17.00%
	Neutral	17	8.50%	20	10.00%	12	6.00%	14	7.00%	63	31.50%
	Disagree	20	10.00%	14	7.00%	27	13.50%	24	12.00%	85	42.50%
	Strongly disagree	1	0.50%	3	1.50%	1	0.50%	4	2.00%	9	4.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%

**Table 5.24. Cross tabulation of responses to questions about the participatory approach in post-tsunami redevelopment (questions 1-6 of section IV of the questionnaire)**

No	Item	Lam Teungoh		Lam Hasan		Lambung		Merduati		Total	
1	The government, NGOs and other concerned parties need to provide education and training concerning participatory approaches										
	Strongly agree	15	7.50%	11	5.50%	26	13.00%	6	3.00%	58	29.00%
	Agree	26	13.00%	35	17.50%	23	11.50%	43	21.50%	127	63.50%
	Neutral	7	3.50%	3	1.50%	1	0.50%	1	0.50%	12	6.00%
	Disagree	2	1.00%	1	0.50%	0	0.00%	0	0.00%	3	1.50%
	Strongly disagree	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
2	The government should set specific guidelines for community participation in the rebuilding process										
	Strongly agree	11	5.50%	5	2.50%	13	6.50%	7	3.50%	36	18.00%
	Agree	29	14.50%	40	20.00%	28	14.00%	43	21.50%	140	70.00%
	Neutral	9	4.50%	5	2.50%	6	3.00%	0	0.00%	20	10.00%
	Disagree	1	0.50%	0	0.00%	3	1.50%	0	0.00%	4	2.00%
	Strongly disagree	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
3	The involvement of community members in decision making should be implemented in a representative way										
	Strongly agree	8	4.00%	9	4.50%	20	10.00%	7	3.50%	44	22.00%
	Agree	30	15.00%	32	16.00%	21	10.50%	43	21.50%	126	63.00%
	Neutral	7	3.50%	9	4.50%	7	3.50%	0	0.00%	23	11.50%
	Disagree	5	2.50%	0	0.00%	2	1.00%	0	0.00%	7	3.50%
	Strongly disagree	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
4	The involvement of community members in decision making in the recovery process should be implemented through public hearings and public meetings										
	Strongly agree	11	5.50%	16	8.00%	19	9.50%	15	7.50%	61	30.50%
	Agree	30	15.00%	31	15.50%	23	11.50%	29	14.50%	113	56.50%
	Neutral	5	2.50%	3	1.50%	4	2.00%	3	1.50%	15	7.50%
	Disagree	4	2.00%	0	0.00%	4	2.00%	3	1.50%	11	5.50%
	Strongly disagree	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%

	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
5	The best way for the governments to involve communities in post-disaster redevelopment										
	Informing	8	4.00%	0	0.00%	2	1.00%	4	2.00%	14	7.00%
	Consulting	7	3.50%	4	2.00%	4	2.00%	13	6.50%	28	14.00%
	Placation	4	2.00%	16	8.00%	9	4.50%	4	2.00%	33	16.50%
	Partnership (collaborating)	26	13.00%	28	14.00%	34	17.00%	22	11.00%	110	55.00%
	Delegated power (empowering)	5	2.50%	2	1.00%	1	0.50%	7	3.50%	15	7.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%
6	The best way for NGO(s) to involve communities in post-disaster redevelopment										
	Informing	4	2.00%	0	0.00%	2	1.00%	3	1.50%	9	4.50%
	Consulting	7	3.50%	3	1.50%	5	2.50%	6	3.00%	21	10.50%
	Placation	2	1.00%	11	5.50%	10	5.00%	5	2.50%	28	14.00%
	Partnership (collaborating)	29	14.50%	35	17.50%	31	15.50%	27	13.50%	122	61.00%
	Delegated power (empowering)	8	4.00%	1	0.50%	2	1.00%	8	4.00%	19	9.50%
	Total N	50	25.00%	50	25.00%	50	25.00%	50	25.00%	200	100.00%

## APPENDIX F

### The profiles of respondents who “tend to agree” and “tend to disagree” with the importance of community participation in post-tsunami relief for each of the case study villages (cluster analysis)

#### Lam Teungoh

Table 5.25. Distribution of sex by the two clusters

Sex	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
Male	28 (88%)	4 (12%)	32 (100%)
Female	17 (94%)	1 (6%)	18 (100%)
Total	45 (90%)	5 (10%)	50 (100%)

Table 5.26. Distribution of age by the two clusters

Age	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
15 – 25	9 (90%)	1 (10%)	10 (100%)
26-55	33 (89%)	4 (11%)	37 (100%)
>55	3 (100%)	0 (0%)	3 (100%)
Total	45 (90%)	5 (10%)	50 (100%)

Table 5.27. Distribution of level of education by the two clusters

Education	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
No education	4 (80%)	1 (20%)	5 (100%)
Elementary	2 (100%)	0 (20%)	2 (100%)
Junior High	14 (88%)	2 (12%)	16 (100%)
Senior High	23 (92%)	2 (8%)	25 (100%)
University	2 (100%)	0 (0%)	2 (100%)
Total	45 (90%)	5 (10%)	50 (100%)

Table 5.28. Distribution of income by the two clusters

Income	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
None	9 (90%)	1 (10%)	10 (100%)
<25,000	10 (91%)	1 (9%)	11 (100%)
25,000 - <50,000	21 (88%)	3 (12%)	24 (100%)
50,000-75,000	4 (100%)	0 (0%)	4 (100%)
>75,000	1 (100%)	0 (100%)	1 (100%)
Total	45 (90%)	5 (10%)	50 (100%)



Lam Hasan

Table 5.29. Distribution of sex by the two clusters

Sex	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
Male	28 (85%)	5 (15%)	33 (100%)
Female	15 (88%)	2 (12%)	17 (100%)
Total	43 (86%)	7 (14%)	50 (100%)

Table 5.30. Distribution of age by the two clusters

Age	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
15 – 25	4 (80%)	1 (20%)	5 (100%)
26-55	36 (88%)	5 (12%)	41 (100%)
>55	3 (75%)	1 (25%)	4 (100%)
Total	43 (86%)	7 (14%)	50 (100%)

Table 5.31. Distribution of level of education by the two clusters

Education	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
No education	4 (80%)	1 (20%)	5 (100%)
Elementary	1 (50%)	1 (50%)	2 (100%)
Junior High	12 (80%)	3 (20%)	15 (100%)
Senior High	21 (91%)	2 (9%)	23 (100%)
University	5 (100%)	0 (0%)	5 (100%)
Total	43 (86%)	7 (14%)	50 (100%)

Tabel 5.32. Distribution of income by the two clusters

Income	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
None	6 (67%)	3 (33%)	9 (100%)
<25,000	2 (67%)	1 (33%)	3 (100%)
25,000 - <50,000	8 (89%)	1 (11%)	9 (100%)
50,000-75,000	24 (92%)	2 (8%)	26 (100%)
>75,000	3 (100%)	0 (0%)	3 (100%)
Total	43 (86%)	7 (14%)	50 (100%)

## Lambung

Table 5.33. Distribution of sex by the two clusters

Sex	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
Male	26 (87%)	4 (13%)	30 (100%)
Female	18 (90%)	2 (10%)	20 (100%)
Total	44 (88%)	6 (12%)	50 (100%)

Table 5.34. Distribution of age by the two clusters

Age	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
15 – 25	9 (100%)	0 (0%)	9 (100%)
26-55	32 (84%)	6 (16%)	38 (100%)
>55	3 100	0 (0%)	3 (100%)
Total	44 (88%)	6 (12%)	50 (100%)

Table 5.35. Distribution of level of education by the two clusters

Education	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
No education	2 (100%)	0 (0%)	2 (100%)
Elementary	0 (0%)	0 (0%)	0 (0%)
Junior High	7 (100%)	0 (0%)	7 (100%)
Senior High	28 (88%)	4 (12%)	32 (100%)
University	7 (78%)	2 (22%)	9 (100%)
Total	44 (88%)	6 (12%)	50 (100%)

Table 5.36. Distribution of income by the two clusters

Income	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
None	14 (88%)	2 (12%)	16 (100%)
<25,000	6 (100%)	0 (0%)	6 (100%)
25,000 - <50,000	7 (78%)	2 (22%)	9 (100%)
50,000-75,000	12 (100%)	0 (0%)	12 (100%)
>75,000	5 (71%)	2 (29%)	7 (100%)
Total	44 (88%)	6 (12%)	50 (100%)

## Merduati

Table 5.37. Distribution of sex by the two clusters

Sex	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
Male	28 (78%)	8 (22%)	36 (100%)
Female	12 (86%)	2 (14%)	14 (100%)
Total	40 (80%)	10 (20%)	50 (100%)

Table 5.38. Distribution of age by the two clusters

Age	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
15 – 25	0	0	0 (0%)
26-55	31 (82%)	7 (18%)	38 (100%)
>55	9 (75%)	3 (15%)	12 (100%)
Total	40 (80%)	10 (20%)	50 (100%)

Table 5.39. Distribution of level of education by the two clusters

Education	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
No education	0 (0%)	0 (0%)	0 (0%)
Elementary	0 (0%)	0 (0%)	0 (0%)
Junior High	8 (80%)	2 (20%)	10 (100%)
Senior High	26 (81%)	6 (19%)	32 (100%)
University	6 (75%)	2 (25%)	8 (100%)
Total	40 (80%)	10 (20%)	50 (100%)

Table 5.40. Distribution of income by the two clusters

Income	Cluster		Total
	1	2	
(1)	(2)	(3)	(4)
None	5 (83%)	1 (17%)	6 (100%)
<25,000	0 (0%)	0 (0%)	0 (0%)
25,000 - <50,000	9 (75%)	3 (25%)	12 (100%)
50,000-75,000	19 (83%)	4 (17%)	23 (100%)
>75,000	7 (78%)	2 (22%)	9 (100%)
Total	40 (80%)	10 (20%)	50 (100%)

## APPENDIX G

### The constraints of community participation in post-tsunami redevelopment for each of the case study villages (factor analysis)

#### Lam Teungoh

Table 5.41. *KMO* and *Bartlett Test*

KMO	Bartlett Test of Sphericity		
	Approx. Chi-Square	df	Sig.
(1)	(2)	(3)	(4)
0.563	190.975	66	0.000

Table 5.42. Total Variance Explained

Component	Initial Eigenvalues	% of Variance	Cumulative %
(1)	(2)	(3)	(4)
1	3.461	28.839	28.839
2	1.872	15.603	44.442
3	1.483	12.357	56.799
4	1.161	9.677	66.476
5	1.035	8.628	75.105

Table 5.43. Rotated Component Matrix

No.	Variable	Component				
		1	2	3	4	5
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Quick_decision	.169	-.036	.398	<b>.694</b>	.343
2.	Issue_complexity	.102	.007	.010	<b>.846</b>	.082
3.	BRR_politic.will	.033	-.047	.022	.073	<b>.907</b>
4.	BRR_skills	-.066	.418	.102	.173	<b>.701</b>
5.	NGO_intention	<b>.868</b>	.211	.026	-.037	.137
6.	NGO_skills	<b>.889</b>	-.138	.052	.071	-.087
7.	Citizen_enthusiasm	<b>.702</b>	.185	.137	.315	-.041
8.	Citizen_skills	.056	<b>.616</b>	-.241	.574	-.098
9.	Aceh_conflict_citizen	.100	.293	<b>.702</b>	.140	.107
10.	Soeharto_citizen	.057	.133	<b>.908</b>	-.009	-.006
11.	Aceh_conflict_gov	.079	<b>.748</b>	.347	-.084	.233
12.	Soeharto_gov	.120	<b>.758</b>	.273	.023	.039

The constraints on community participation in post-tsunami redevelopment from the biggest to the smallest according to respondents from Lam Teungoh are as follows:

- NGOs' intention and skills to implement and manage the participatory process, and citizens' enthusiasm to get involved in the participatory process (28.839% of variance explained).
- Citizens' skills to get involved in the participatory process, and the impact of Aceh's military conflict and Soeharto's authoritarian regime on government's capability of dealing with the participatory process (15.603% of variance explained).
- The impact of Aceh's military conflict and Soeharto's authoritarian regime on citizens' awareness and capability of getting involved in the participatory process (12.357% of variance explained).



- The demand for quick decisions and actions, and issue complexity caused by the tsunami (9.677% of variance explained).
- BRR's political will and skills to implement and manage the participatory process (8.628% of variance explained).

(These constraints explain 75.105% of the constraints on community participation in post-tsunami redevelopment).

Table 5.44. *KMO* and *Bartlett Test*

KMO	Bartlett Test of Sphericity		
	Approx. Chi-Square	df	Sig.
(1)	(2)	(3)	(4)
0.503	175.603	66	0.000

Table 5.45. Total Variance Explained

Component	Initial Eigenvalues	% of Variance	Cumulative %
(1)	(2)	(3)	(4)
1	2.451	22.281	22.281
2	1.956	17.779	40.060
3	1.699	15.447	55.506
4	1.433	13.026	68.532
5	1.241	11.284	79.816

Table 5.46. Rotated Component Matrix

No.	Variable	Component				
		1	2	3	4	5
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Quick_decision	.035	-.053	<b>.906</b>	.140	-.033
2.	Issue_complexity	.122	.104	<b>.903</b>	.001	.038
3.	BRR_politic.will	-.075	-.048	-.035	-.024	<b>.881</b>
4.	BRR_skills	.134	.169	.044	-.085	<b>.841</b>
5.	NGO_intention	<b>.923</b>	.046	.128	.051	.056
6.	NGO_skills	<b>.920</b>	.033	.035	.051	.009
7.	Citizen_enthusiasm	.373	.086	.124	<b>.718</b>	-.093
8.	Citizen_skills	.054	-.198	-.006	<b>.826</b>	-.109
9.	Aceh_conflict_citizen	-.302	.327	.103	<b>.671</b>	.092
10.	Aceh_conflict_gov	.055	<b>.909</b>	.107	.046	.109
11.	Soeharto_gov	.036	<b>.930</b>	-.057	-.008	.003

The constraints on community participation in post-tsunami redevelopment from the biggest to the smallest according to respondents from Lam Hasan are as follows:

- NGOs' intention and skills to implement and manage the participatory process (22.281% of variance explained).
- The impact of Aceh's military conflict and Soeharto's authoritarian regime on government's capability of dealing with the participatory process (17.779% of variance explained).
- The demand for quick decisions and actions, and issue complexity caused by the tsunami (15.447% of variance explained).
- Citizens' enthusiasm and skills to get involved in the participatory process, and the impact of Aceh's military conflict on citizens' awareness and capability of getting involved in the

participatory process (13.026% of variance explained).

- BRR's political will and skills to implement and manage the participatory process (11.284% of variance explained).

(These constraints explain 79.816% of the constraints on community participation in post-tsunami redevelopment).

Lambung

Table 5.47. *KMO* and *Bartlett Test*

KMO	Bartlett Test of Spherity		
	Approx. Chi-Square	Df	Sig.
(1)	(2)	(3)	(4)
0.679	347.147	66	0.000

Table 5.48. Total Variance Explained

Component	Initial Eigenvalues	% of Variance	Cumulative %
(1)	(2)	(3)	(4)
1	4.158	34.651	34.651
2	2.153	17.942	52.593
3	1.475	12.291	64.884
4	1.339	11.154	76.038

Tabel 5.49. Rotated Component Matrix

No.	Variabel	Komponen			
		1	2	3	4
(1)	(2)	(3)	(4)	(5)	(6)
1.	Quick_decision	<b>.832</b>	.134	.083	-.163
2.	Issue_complexity	<b>.850</b>	.140	.115	-.027
3.	BRR_politic.will	<b>.687</b>	-.191	.167	.064
4.	BRR_skills	.277	-.393	<b>-.488</b>	-.045
5.	NGO_intention	-.260	-.164	.205	<b>.801</b>
6.	NGO_skills	.091	.177	-.138	<b>.866</b>
7.	Citizen_enthusiasm	.125	<b>.943</b>	.165	.048
8.	Citizen_skills	.156	<b>.929</b>	.087	-.021
9.	Aceh_conflict_citizen	<b>.896</b>	.108	-.011	-.016
10.	Soeharto_citizen	<b>.820</b>	.130	.116	-.075
11.	Aceh_conflict_gov	.282	.122	<b>.824</b>	.105
12.	Soeharto_gov	.224	.063	<b>.909</b>	-.087

The constraints on community participation in post-tsunami redevelopment from the biggest to the smallest according to respondents from Lambung are as follows:

- The demand for quick decisions and actions, issue complexity caused by the tsunami, BRR's political will to implement and manage the participatory process, and the impact of Aceh's military conflict and Soeharto's authoritarian regime on citizens' awareness and capability of getting involved in the participatory process (34.651% of variance explained).
- Citizens' enthusiasm and skills to get involved in the participatory process (17.942% of variance explained).
- BRR's skills to implement and manage the participatory process, and the impact of Aceh's military conflict and Soeharto's authoritarian regime on government's capability of dealing

with the participatory process (12.291% of variance explained).

- NGOs' intention and skills to implement and manage the participatory process (11.154% of variance explained).

(These constraints explain 76.038% of the constraints on community participation in post-tsunami redevelopment).

Table 5.50. *KMO* and *Bartlett Test*

KMO	Bartlett Test of Sphericity		
	Approx. Chi-Square	df	Sig.
(1)	(2)	(3)	(4)
0.572	288.528	66	0.000

Table 5.51. Total Variance Explained

Component	Initial Eigenvalues	% of Variance	Cumulative %
(1)	(2)	(3)	(4)
1	3.629	30.243	30.243
2	1.891	15.761	46.004
3	1.655	13.790	59.793
4	1.304	10.863	70.657
5	1.076	8.969	79.626



Tabel 5.52. Rotated Component Matrix

No.	Variable	Component				
		1	2	3	4	5
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Quick_decision	.219	<b>.876</b>	.074	-.149	.159
2.	Issue_complexity	.298	<b>.831</b>	.194	-.112	.133
3.	BRR_politic.will	-.203	.134	.005	<b>.866</b>	.046
4.	BRR_skills	.205	-.220	-.017	<b>.864</b>	-.098
5.	NGO_intention	.021	.258	-.126	.111	<b>.619</b>
6.	NGO_skills	-.360	<b>.667</b>	.025	.241	-.021
7.	Citizen_enthusiasm	<b>.669</b>	.101	.185	.160	.483
8.	Citizen_skills	.071	-.049	.192	-.204	<b>.826</b>
9.	Aceh_conflict_citizen	.185	.125	<b>.939</b>	-.014	-.009
10.	Soeharto_citizen	.217	.091	<b>.936</b>	.005	.098
11.	Aceh_conflict_gov	<b>.876</b>	.149	.158	-.042	.120
12.	Soeharto_gov	<b>.888</b>	.020	.211	-.052	-.113

The constraints on community participation in post-tsunami redevelopment from the biggest to the smallest according to respondents from Merduati are as follows:

- Citizens' enthusiasm to get involved in the participatory process, and and the impact of Aceh's military conflict and Soeharto's authoritarian regime on government's capability of dealing with the participatory process (30.243% of variance explained).
- The demand for quick decisions and actions, issue complexity caused by the tsunami, and NGOs' skills to implement and manage the participatory process (15.761% of variance explained).
- The impact of Aceh's military conflict and Soeharto's authoritarian regime on citizens' awareness and capability of getting involved in the participatory process (13.790% of

variance explained).

- BRR's political will and skills to implement and manage the participatory process (10.863% of variance explained).
- NGOs' intention to implement and manage the participatory process, and citizens' skills to get involved in the participatory process (8.969% of variance explained).

(These constraints explain 79.626% of the constraints on community participation in post-tsunami redevelopment).