Post Disaster

Redevelopment Strategies;

Reviewing the community participation approach in Banda Aceh

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Preface:

I hereby present to you the P4 graduation thesis report of my proposed graduation thesis. My graduation is taking place the laboratory of Urban Area Development. This is the second part of the graduation project towards obtaining my master’s degree in Real Estate & Housing from the Faculty of Architecture of the Delft University of Technology in the Netherlands. The graduation process takes approximately three quarters of a year.

This paper contains my draft research proposal and graduation plan for the master thesis project. It begins with my motivation and by the introduction (chapter 1). In chapter 2 you will find the problem statement, the research questions, the research results, the research methods and the research program that will form my draft research proposal. In chapter 3 I describe the ways of organizing my research, along with a planning and a time schedule leading to the final evaluation and the actual graduation (PS). Chapter 4 consists of the graduation plan and the theoretical framework required to conduct this research. Chapter

Theodore A. Klouvas
18 May 2014
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Abbreviations:

PDUR: post disaster urban redevelopment
PDR: post disaster redevelopment
PDRS: post disaster redevelopment strategies
UR: urban redevelopment
NGO: non governmental organization
PD: post disaster
FEMA: federal emergency management agency
IFRCRCS: International Federation of Red Cross and Red Crescent Societies
UN: United Nations
UNHCR: United Nations High Commissioner for Refugees
CREW: Cascadia Region Earthquake Workgroup
FDEM: Florida Devision of Emergency Management
PDRP: Post Disaster Redevelopment Plan
Motivation:

For my graduation thesis I was looking for a topic in which I would feel I had a personal interest. Ever since I started studying architecture I wanted to focus on development projects. This is the reason why I decided to choose the post disaster urban redevelopment. Working on a topic that draws my preferences and includes my personal objectives is most important in order to have a fruitful and productive year. It was quite a long path before I came up with a clear choice for my topic of Post Disaster Urban Redevelopment (PDUR). I spoke to many professors and teachers about this specific topic and I find the complexity of it very interesting. I do realize that it is this complexity that will challenge my abilities in the upcoming months but I responsibly and gladly accept the challenge.

My personal interest lies with those vulnerable societies affected by disasters all over the world. In 2008 I visited South east India and saw with my own eyes the devastation that the Tsunami caused in the area. I undertake this graduation project as my chance to dig deeper, from my background point of view, to this topic and make an effort to map issues and make a proposal on how to enhance post disaster redevelopment strategies.
Introduction:

This research proposal aims in exploring the application and implementation of Post Disaster Urban Redevelopment (PDUR) strategies in disaster affected areas within different social-cultural conditions. The specific research subject is post disaster redevelopment strategies and the goal is to discover how can the community participation be improved and enhanced. In this way, the case study of the Asian tsunami in 2004 and in particular the Indonesian case of the city of Banda Aceh is selected as a central case study for this research. Specific reasoning is developed later on, in the research methods part. First a general introduction to the topic follows and then a description of the disasters phases will be elaborated, in particular the third one which is the main focus of this research.

1.1. Natural Disasters

In order to understand the topic, a short description of “What is a natural disaster” is required. In her book Natural Disasters Lesli Favor defines the topic as following: “A natural disaster is caused after a natural hazard has stricken a particular area. A natural hazard is a dangerous geophysical event (such as the Sumatra earthquake) or condition (such as drought in the horn of Africa) that could cause a natural disaster. The event or condition becomes a natural disaster when it causes human, economic, or environmental losses that exceed the affected area’s ability to cope without outside help”. Disasters can be distinguished in two types Natural and Human caused disasters. This distinction can be as obvious as the difference between a volcanic eruption and the explosion of a nuclear power plant. Complex circumstances from a variety of sources lead to natural disasters. For example, fertile land along river draws farmers close to flood-prone areas. Similarly, fishing villages grow up in coastal areas likely to be struck by typhoons, hurricanes, or tsunamis. Natural hazards that can cause disasters can be distinguished in several types: Hurricanes, Tornadoes, Drought, Floods, Earthquakes, Tsunamis, Volcanoes, Limnic Eruptions, Landslides and Avalanches, Wildfires, Extreme weather and Plants and Animal diseases.

1.2. Facts & figures

The number of natural disasters around the world has increased by more than four times the last 20 years, according to a report released by the British NGO Oxfam. Oxfam analyzed data from the Red Cross, United Nations and from researchers at Louvain University in Belgium. It found that the earth is currently experiencing approximately 500 natural disasters per year. This is a much

Figure 1. International Disaster Database.
http://ihrr.files.wordpress.com/2012/04/nat-disasters-reported.jpg
larger number in comparison to the 120 per year in the early 1980’s (Oxfam Climate Alarm, 2007). Figure 1 above gives an overview of the number of disasters occurred between 1900 and 2010. Looking at those figures and taking into account the whole process we can recognize that a continuous study in such events is crucial, not only in order to minimize the effects but also to improve the strategies used during and after such events in the future.

Figure 2, below gives an overall image of the economical and human impact that natural disasters caused the last 12 years.

Figure 2. United Nations International Strategy for Disaster Reduction, http://www.unidr.org
1.3. Natural Disaster Response & the disaster management cycle

After a disaster event takes place a major operation is started in order to support the affected area. This whole process has been illustrated in a disaster management cycle, which is based on the work of Ian Davis from the Cranfield University. This cycle includes three main phases—pre-disaster, disaster response, and post-disaster—each of which has an appropriate range of activities. Important to mention is that those phases appear with different names in the literature. Pre-disaster is also called Preparedness phase. The response phase is often also called relief phase and the third phase is also called rehabilitation and reconstruction phase. This cycle gives an overview of the key actions in each phase. Academics and practitioners in the field have identified those based on knowledge from previous disasters (Independent Evaluation Group, WorldBank, Natural Disaster Response, 2011). This cycle is important because it shows the interrelationship between the different phases associated with disaster and the types of assistance that are most effective in preparing for and responding to such events. Important to mention is that these phases do not have clear boundaries, but overlap chronologically, as well as in terms of the ongoing activities.

![Disaster Management Cycle](http://ieg.wordbankgroup.org)

The post disaster urban redevelopment strategy is part of the third phase. The post disaster phases includes activities in the fields of recovery, rehabilitation and reconstruction. It also affords an opportunity to develop disaster risk reduction measures, which can be applied during the next phase the risk assessment and pre-disaster (which is phase 1). This third phase includes, according to the literature about “lessons from evaluation of the World Bank and others”, and also according to the “Hyogo framework of action 2005-2015” (UN ISDR, 2005) the following actions:

- Decisions and actions taken after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk.
- Restoring the basic services needed to enable life to move back towards “normality.”

- External support, such as loans to governments, technical assistance, resources for farmers, and help for businesses to restart.

- Rebuilding homes and industry, which is linked to restoration of social and economic development. It is important at this stage to design stronger buildings that are able to withstand future disaster effects.

- Activities focused on enabling communities to protect themselves. Such measures need to be particularly available to those at greatest risk—the poorest and most vulnerable in the community.

(World Bank and Other, IEG et al. 2011)

This research will focus on the second part of the third phase of the disaster management cycle. Namely the post disaster response, part “B”. This part incorporates the Urban Redevelopment strategies that arise in order to bring the affected society back to function and normality. Furthermore this research will lay a focus on the restoration of the basic services that are required in order to enable life to move back towards normality. Furthermore it will investigate the stake of influence of the community in the formation of the strategies, policies and programs for the redevelopment and in the execution and implementation stage. This is of course an interrelated part of the whole redevelopment process and involves many factors and actors in a bigger and broader integrated redevelopment plan. Questions such as what are the resources available to restore those basic services, what are the limitations by the local government, by the local context, what can NGO’s provide for that and how can this collaboration of actors be structured are just some to name. Those need to be taken into consideration during my further research upon that. I am hoping to discover the strategy used for this particular part and understand how the opinions of those affected the most was taken into consideration. A list of elements that are forming the “basic services” has been assessed later in this research. A draft definition is given below.

**Basic services/facilities** are those who are important for a community in order to start functioning as it did in its pre-disaster stage. Community facilities include schools, clinics, refuges, buildings for local government administration, and meeting spaces. Schools and clinics contribute to the resumption of normal life by providing space for social services. Local government buildings and meeting spaces allow local public services to resume and facilitate community planning and the reestablishment of local governance. Further infrastructural measurements are also important because they improve and upgrade the accessibility of the area in general (World Bank, 2010).
1.4. Post Disaster Urban Redevelopment

In order to understand the whole process the question of “what is a post disaster redevelopment strategy” who designs one, who is involved in it and why” needs to be answered.

A post disaster redevelopment strategy is a strategy developed by the government (national & local) of the affected area in collaboration with the United Nations that assist during the formation, implementation and execution of it, when and if required. This is not always the case because governments sometimes refuse international help. This was the case in Burma where the government refused international aid after the cyclone Nargis had stricken the country causing at least 138.000 fatalities (Wikipedia: Cyclone Nargis, 2012). The United States of America has for instance an agency that is responsible, on a national level, for Disasters. The Federal Emergency Management Agency, also known as FEMA. The agency’s primary purpose is to coordinate the response to a disaster that has occurred in the United States and that overwhelms the resources of local and state authorities. Its goes without saying that developed countries have initiated such authorities. This is not always the case in less developed countries. The aim of the strategy is to provide tactics of coordination in the redevelopment phase and the policies incorporated in that will provide the methodology required for the programs that will be initiated.

Post disaster reconstruction and rehabilitation is a complex situation with several dimensions. Government, nongovernmental and international organizations have their own stakes in disaster recovery programs, and links are established among them, as well as with the community to ensure an effective redevelopment. In other words, post-disaster rehabilitation and recovery programs should be seen as opportunities to work with communities and serve local needs (Shaw, 2005). Beyond that, since many disasters occur every year, the new redevelopment strategies can build upon innovative solutions known – learned and developed from other disasters (Skinner et al. 2002). What derives from the literature review so far is the fact that Post Disaster Urban Development has been and is a hot topic for further improvement and research since it can significantly contribute to the improvement and or resolve problems from the past (Jayasuriya et al., 2010). It is often seen as a “window to opportunity” because the affected area has the chance to “build back better”.

Accordingly, PDUR never stands alone but forms integral part of a broader context by influencing the city developments and structures and by contributing to the new social re-formation, since redevelopments are regenerating the affected city-area-region and their effects can last for a long period. However the management of PDUR strategies was and is a complex decision making process that involves many actors (national and international agencies, governments, multilateral donors, NGO’s and individuals) whose relationship might differ according to their objectives and to socio-cultural conditions. Finding a way to connect those objectives and maintain a structure in the process that incorporates all demands is crucial. Often it is proven that this is where all disaster coordination teams struggle with during the PDUR phase.
The post disaster phase:
During the recovery phase, as the third phase is also called, social and other infrastructure is restored and the economy has started to revitalize. The rehabilitation/reconstruction/redevelopment phase typically starts at the end of the response/relief phase and may last from several months to several years. The short-term plans for the recovery process are clearance of debris, building housing units, and restoration of lifelines and infrastructure, while the long-term objective is to build a safer and sustainable livelihood. Past experiences show that these efforts are sustainable only with community-government partnership, while the role of NGOs and international organizations is reduced after a certain period (Shaw, 2005).

To whom it may concern:
This research project is intended for (local) Emergency planners and disaster managers of various agencies, institutions and organizations active in the context of post disaster redevelopment. However, the purpose of this research is to suggest improvements in how to carry out post disaster redevelopment in an effective way and enhance community participation in all scalars of the redevelopment process. A list of criteria of how to define what effective redevelopment has been formulated and then tested to the existing literature afterwards reviewed by experts on the field (see interviewers later on) and finally used in order to make suggestions in this research. The suggested improvements or adaptations will derive from the analysis of the case study and will be supported later on by findings from the field visit in Banda Aceh and interviews conducted there with experts and local people. Furthermore it plans to contribute to the general academic research of this area by exploring the different strategies in PDUR. Important to mention and emphasize is that this research is not going to be prepared with the aim of finding fault with the response to the 2004 tsunami, which will be the main research case study. Doubtless some mistakes were made then, and doubtless not every single one of the very large number of redevelopment programs were successful. Rather, the aim is going to be to review the overall redevelopment strategy following the 2004 tsunami disaster in the city of Banda Aceh, analyze through literature review the existing approaches and consider what broad lessons for an effective strategy that takes the community into account might be drawn from this experience. This will happen after having set a list of criteria in order to framework the effectiveness of the strategies and their community involvement. After all the overall aim is to suggest a redevelopment strategy that takes all those lessons into account.

All in all, to develop a thesis in Urban Area Development has not been an easy task. As I have mentioned earlier, it was challenge, but I have upgraded through this, my professional background with the knowledge and skills acquired in this master thesis. My aspiration is to play a future role not only as a designer as I am now, but also as a consultant or even a disaster manager in future redevelopment projects. Paying a contribution in a more resilient future environment is my ultimate goal. This thesis forms my foundation.
Chapter 2

Research Proposal
2.1. Research Project
This research proposal is about analyzing and suggesting improvements for effective PDUR strategies in areas stricken by a disaster with the aim to embrace community participation even more. This research is located in the third phase of the disaster management cycle and will investigate among other the “bringing back basic services” topic, which is positioned in the second part of the third phase. In short the research proposal will study and state the “problems” of a specific case in Indonesia, that of Banda Aceh. In particular a sub district of the city center called Meuraxa. This will be done in order to discover issues of the current redevelopment strategies and suggest improvements that will be beneficial during the redevelopment phase in other future events. Community participation and interference, effectiveness in these processes are going to be keywords in this research. Specific reasoning for the choice of the Aceh case study will follow later in this report in paragraph 2.6.

2.2. Problem statement
Natural disasters of various kinds are an ever-present risk in most Asian countries. In recent years, a number of mega disasters have struck the Asian region and are unfortunately going to continue to do so in the future. Since it is a very complex process many issues occur which do not support a more “effective” redevelopment. In strategies with multi-stakeholder relationships the issues occur most often because of the differences they have in:

1. Objectives → short and long term results
2. Budget → scale of the organization and fund they have available
3. Social cultural conditions → Religion, racial, age etc.

Some other issues, that most often occur in this post disaster phase, are a lack of community driven redevelopment, an artificial inflation of material prices, little promotion of safety culture and awareness and exclusion of beneficiary choices such as for instance architectural aspects a lack in capacity and local experts etc. Those are just a few to name. Many others can be stated on different levels of the redevelopment phase (Joakim, 2010).

In the Indonesian case many good and bad stories have seen the light with respect to the effectiveness of the redevelopment strategy. Although the first response in the Aceh region received many credits by the international community and seemed to have been a resounding success soon after the relieve operations began, problems with the relief reconstruction effort began coming to light. Those occurred mostly due to coordination failures (Jayasuriya, 2010) but also due to corruption incidents. But these aren’t the only problems. Redevelopment strategies seem to find difficulties in connecting the involved actors. This is the case in most countries hit by a disaster (World Bank, 2011).

In Indonesia according to the study of Telford in 2006 he observed that:
Some international agencies managed well; but many did not . . . Local contexts, institutions and contributions were frequently neglected. Affected people’s will and capacity to move from reliance on handouts to rebuilding their lives were inadequately exploited . . . They were marginalized, even undermined, by an overwhelming flood of international agencies controlling immense resources.

It can be said that problems that the Aceh region faced during the 2004 tsunami and for the period of 5 years after the event are similar to the problems other stricken areas are challenged with. This is not a conclusion but more an assumption aroused during a seminar about Urban Emergencies with redevelopment experts Jim Kennedy and Henk Meijerink\(^1\) on October 24\(^{th}\), 2012. A common problem that derives from a lack in efficient coordination between the local and international actors, in the redevelopment phase, is the implementation of the initiated redevelopment strategy, if at the end there is one. Although almost all stakeholders are aware of the designed “Master Plan”, personal objectives and a lack of communication with other actors and a lack in local knowledge constitute one of the mayor problems in the implementation of it. They cause stress situations, which consequently result in significant, constrains for effective redevelopment. Apart from that, a Master Plan often does not involves agencies already working with the communities in the field, who in turn do not dedicate resources to the formation of that master plan. Furthermore commitments of assistance from both domestic and international organizations are not always clear and local people have therefore unrealistic expectations. This situation leads to a misunderstanding of the actual task of PDUR and consequently missing opportunities for positive effects in the redevelopment phase (Collins, Disaster and Development, 2009).

Figure 4. Banda Aceh, costal front before and after the tsunami struck the city.

\(^1\) Jim Kennedy has been working in post disaster redevelopment projects for many years and was recently the coordinator of
2.3 Hierarchy of problems

Consequently after having read the problem statement a hierarchy of problems can be drawn. In this way we can distinguish the problems into internal and external, divided into three categories. In this way we can formulate a research question that will take into account current issues in post disaster urban redevelopment.

![Hierarchy of problems diagram]

Figure 5. Hierarchy of problems in PDUR based on analytic hierarchy process and conjoint analysis.
2.4. **Research Question**

2.4.1. **Main research question**

The main research question will form the guiding line in this research. Important to examine is the good and poor examples that the past has provided us in the field of disaster redevelopment. Many factors, such as cultural, geomorphological, political, etc. are of crucial importance and need thorough investigation in order to support findings and conduct a research on this specific topic.

*How did the redevelopment in Banda Aceh facilitated community participation?*

2.4.2. **Sub-questions**

The sub-questions are forming a step-by-step plan towards answering the main research question. They constitute the foundation for the main research question. The aim of those is to understand the dynamics in PDUR. Furthermore, answering and finding those out will clarify the main research question with arguments. Important to mention here is that those can differ in the further elaboration of the research since more detailed and in depth information will arise.

**Sub-questions supporting the investigation of the main research question are:**

1. What is the role of the community in Post Disaster Urban Redevelopment?
2. What are the main challenges of community participation?
3. How to evaluate the role of the community?
4. How to improve community participation based on its demands?
2.5 Research Results

2.5.1 Research goals
The objective of this research is to understand the dynamics involved in the implementation of PDUR strategies in affected areas from both the internal as from the external stakeholders participating in it. This will be done, by taking into account the changing context of the event. The goal is to suggest improvements that will contribute in the effectiveness of the community participation when implemented and will empower the redevelopment of the area in general. By general I mean the local people (participation) and area (in terms of infrastructure and other basic needs such as water sanitation, education and public facilities etc.). The challenge is to identify the issues and challenges occurring during implementation and application in the second part of the 3rd phase. A guidebook with effective strategies in PDUR context, does not exist; a compilation of findings from existing paradigms can contribute in the formation of a more coherent approach that takes all factors into account. Keeping in mind that this must be thoroughly investigated in order to understand what has gone wrong, what are good practices so far, and how to incorporate those lessons learned from the past is important in order to derive at a more generic redevelopment model in future events.

2.5.2 Expected results
This research points out to make recommendations for improvement of community participation in Post Disaster Urban Redevelopment situations in disaster-affected areas at two levels:

1. First to provide a model in which the desired community participation is depicted in the different scales were can community can be used.
2. And second, to give general recommendations for improvements of the stakeholders application and implementation of PDUR strategies with respect to the community;

2.5.3 Hypothesis
The hypothesis is that in order to have a high satisfaction score of the PDUR process at the end, the programs of reconstruction have been completed; community participation should score high in all scalars of the redevelopment actions.

2.6 Research methods
After having the main and sub research questions defined, the next step is to select the research methods and the appropriate techniques to collect and analyze data in order to reach the intended results. Therefore, this research will use two kinds of methods: case study supported by literature review. Apart from that, interviews will be taken and a field visit will be made in order to test findings
arisen from the research so far and monitor the redevelopment 9 years after the event. But first the choice of the case study is of imperative importance.

2.6.1 Case study
This research method is used to investigate the contemporary tsunami event within the Indonesian context related to the post disaster redevelopment process in general. A single case study is chosen because it will provide more in depth knowledge and understanding of the situation. Accordingly the research will start by analyzing the Aceh case with a final goal to understand the process and gain knowledge on this specific topic with regards to the strategy used, the implementation of it and the participation of the different actors with a focus on the community. Below follows reasoning of the choice of Aceh as the case study.

Indonesia was the most affected country by the tsunami in 2004. In particular the costal area of the Aceh region was almost completely devastasted. Infrastructure was ruined and homes and buildings were washed away. Between 80,000-110,000 new homes were needed, 3,000 kilometers of road were impassable, 14 of 19 seaports were badly damaged, 8 out of 10 airports damaged, 120 arterial and 1,500 minor bridges were destroyed, more than 2,000 school buildings damaged, more than 8 hospitals destroyed or damaged and 114 health centers destroyed (World Bank, BRR, 2005). In an research report by Elisabeth Jammes she states: “Systems used to maintain administrative stability and underpin accountability such as bank records, land titles and work permits were destroyed in the disaster. Many officials who operated these systems died. From the outset it was clear the local and national capacity would be overwhelmed by the sheer size of the construction that lay ahead” (James, 2006). Due to the impact of the tsunami mayor actions have taken place in that region in order to bring the society back to normality. Although the small province was largely unfamiliar to the rest of the world it suddenly became the center point of international attention. An unprecedented response came from all over the world resulting in a huge amount of funds available for projects with regards to urban redevelopment. Funds started flowing from everywhere into the province. From the Indonesian Government’s own budget, from the Multi Donor Trust Fund (MDTF) for Aceh and North Sumatra. The World Bank managed the ‘off-budget’ resources from multinational organizations such as the United Nations, ‘off-budget’ resources from bilateral aid providers such as Australia, the United States and Japan, Non-Government Organizations and even private individuals (James, Clean or Corrupt, 2006). Many redevelopment projects of different scales have taken place there and a Master Plan was created as anchor strategy for the redevelopment. After all, the second reason for choosing Aceh is the fact that there is a large amount of information and literature concerning the redevelopment phase there. It is therefore that this region is well suited to be used as a case study for further investigation with respect to its redevelopment strategy and the stake of the community in it. The case study will lay a particular focus in the capital of the region, the city Banda Aceh. In there a
particular area will be chosen to research dipper into the questions stated above.

The case study approach includes historical and descriptive analysis of data, reviews of developments related to PDUR in general terms and review on specific redevelopment plans within the selected case study. Furthermore, an evaluation of the Aceh master plan will be carried out, by using an observation approach of the actors who were active. Finally, interviews with experts in the redevelopment of Aceh and local people will be used to learn from the real practice and from their experience and by pointing out the obstacles they faced during the implementation of the overall redevelopment strategy. The data collected will be then analyzed most probably in a data-matrix in order to provide “answers”, to the problem statement. This will result in a streamline of their concerns (Swanborn, 2008).

Persons to be interviewed:

1. Henk Meijerink, active in post disaster redevelopments among others in Pakistan, Haiti, Indonesia and Iran
2. Jim P. Kennedy, responsible for the shelter program provided by the Care organization in Haiti
3. Wim Piels, independent NGO consultant, was active in Indonesia, Pakistan, Georgia, Haiti, USA etc.
4. Fiona Zakaria, PhD student at the Unesco IHE in Delft. Fiona is from Banda Aceh; she is a specialist in emergency sanitation. She was worked as a civil engineer for Unicef 3 years after the Tsunami for the construction of education facilities.
5. NGO representatives
6. BRR officials
7. Local People
2.6.2 Literature review

This research method will provide input for the empirical outcomes that will derive from the previous research approach. Hereby the reflection of the case study will be frame worked in the existing knowledge and literature concerning post disaster strategies. The aim of this method is to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to this particular topic. The literature review will start with a more holistic approach, thereafter will focus on a national level and the differences that appear on that level and will then investigate the local experience.

![Diagram showing International, National, and Local experience]

2.6.3 Field visit

During the field visit the intention is to see and investigate the current situation. Test if the findings arose by the literature review are indeed correct and if not why? Furthermore speak with local experts that were active in different organizations and agencies (e.g. BRR, UNDP, UNHabitat etc.) and talk to local people. Apart from that I will visit the Institute of Technology in Bandung (ITB) and talk to professors that where in the National Research committee and the Tsunami Disaster Management Research Center (TDMRC) in Banda Aceh.
Some contacts are already laid with the Indonesian central planning agency (BAPPENAS). After all, the field visit can help me test my thoughts and suggestions so far into the real case. Questioning experts there will provide me with a more solid understanding of the post disaster redevelopment process and its issues.
2.7 Research Organization

2.7.1 Research design

The research is organized by following the structure of Baarda et al. about research methods. Accordingly, the research consists of several components, which will be approached in the following sequence:
Chapter 3

The theory framework

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3.1.1. The complexity of UR
3.1.2. Actors in UR
3.2. Post Disaster Urban Redevelopment (PDUR)
   3.2.1. The complexity of PDUR
   3.2.2 Formulating & managing a strategy in PDUR
3.2.3. Actors in PDUR
3.2.4. Community participation & its importance
3.2.5. Similarities and differences between UR & PDUR
3.3 Research Framework
Theoretical framework

In the introduction chapter the problem statement, the interrelated questions that arise from there together with the research methods have been described. A statement was taken to understand the long-term development of a post disaster area; processes of collaboration among stakeholders and the role of the community need to be understood in order to facilitate further research upon this topic. This chapter aims to review critical points of the current theory and substantive findings in practice. It describes what urban regeneration (UR) is and what is encompasses. Furthermore it goes deeper into the complexity of the urban regeneration process by describing the elements of UR such as the formation of an UR strategy, the actors that are involved and their role in it. It then proceeds into the Post Disaster Urban Redevelopment (PDUR) context. There the elements of PDUR are elaborated together with the complexity of it, the challenges and the opportunities that disaster situations bring along and the stakeholders involved in it. Furthermore the impact of PDUR in the urban fabric is described. Finally it ends with a chapter that aims to address the similarities and differences between the two different types of redevelopments.

3.1 Urban Regeneration

First of all in order to eliminate possible misunderstandings in the plethora of phrases such as: urban regeneration, revitalization, renewal and renaissance, that have come to characterize the key themes of this research and are being used by the media, governments and even academics, it is stated that they all are interchangeable terms that are essentially relating to the same process. Urban Redevelopment is according to the Oxford dictionary of Geography part of urban regeneration. There have been arguments in the past about the different use, meaning and connotation of each term but currently regeneration remains the most recognized and widely used term by professionals and academics alike (Tallon, 2010, p.5). The definition of urban regeneration Robbert & Sykes (2000, p.7) give, says:

Urban regeneration is a comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change.

What is important to add, as a comment to this definition, is that it is disputable if regeneration is comprehensive says Tallon (2010), and it can be the case that the urban problems addressed are not resolved in practice because they can be amongst the most intractable and complex problems in society. In Tallon we can find three distinctive features of contemporary urban regeneration:
1. It is intended to change the nature of a place and in the process to involve community and other actors with a stake in its future.
2. It embraces multiple objectives and activities that cut across the main functional responsibilities of central government, depending on the area’s particular problems and potential.
3. It usually involves some form of partnership working amongst different stakeholders although the form of a partnership can vary.

At a more abstract level, regeneration has come to be associated with any development that is taking place in the urban environment. This research will take ‘the urban’ to mean ‘relating to towns and cities’. But what is an urban area and what are the ingredients of urban area development?

**What are urban areas?**

Urban areas are complex and dynamic systems and reflect the many processes that drive economic, social, physical and environmental transition (table 1). Subsequently, urban regeneration can be seen as the outcome of the interplay between these many processes, and is also a response to the opportunities and challenges that are presented by urban regeneration (Robberts; Sykes, 2000). Since urban redevelopment is part of the whole urban regeneration process it is important to identify the ingredients that constitute urban regeneration.

**The ingredients of urban regeneration**

The context of an area very much determines the intervention methods necessary for urban regeneration. Without having a clear understanding of the context, urban regeneration leads to a less than optimum result or is even doomed to fail. There are several factors that are playing an important role. A context of social change (economic, social, geographical etc.) will have a direct effect on spatial development, as well as an impact on the urban management process. Furthermore, economic and social developments (economic revitalization, safety, social environment etc.) are especially influential in urban regeneration and demand special attention. In addition, the policy context (municipal, regional, provincial national, etc.) and the judicial context (legislation framework, bureaucracy etc.) of an area will have their effect on urban regeneration. Finally the processes involved in urban regeneration are also influenced by a multiplicity of actors, with all having their individual interests and responsibilities. The manner in which these parties participate in the process is crucial towards achieving the desired results. The content of urban regeneration is about creating compositions wherein various uses can co-exist harmoniously. These compositions must be cohesive and integrate units. The context, as described above, has a very strong influence on the content of urban regeneration. Social issues have a particularly strong impact on development projects, not least in their claims on space. Yet, close attention must also be paid to political, economic, ecological
and certainly socio-cultural aspects. All these factors need to be combined in such way that the result has sufficient spatial and market quality. Without a coherent direction for allocating resources such as money and land, urban regeneration cannot lead to the desired result. But it is not merely financial means, land available and land policies that are the only instruments of redevelopment. Knowledge and skills capacity are also required, and these are used to formulate a direction. They allow insight into the spatial and social consequences brought about by interventions (Franzen et al. 2011).

All these elements are the ingredients that form the urban regeneration process. The process itself can be divided into: initiation, planning, realization, maintenance and followed by redevelopment in which the process repeats itself. All the above-mentioned ingredients, given the right recipe, can ensure a successful urban regeneration. The recipe is a transparent management structure wherein the architecture of the process, the collaborative spirit shared by all and the managerial approach are keys to success. We can depict the management process in the following scheme developed by Van ‘t Verlaat:

![Scheme 1. Management process scheme in UAD, Van ‘t Verlaat](image)

Furthermore we can classify urban regeneration in a number of ways, but for the purpose of this research Tallon’s categorization of ‘people’, ‘business’ and ‘place’ appears appropriate. In terms of people, regeneration aims to enhance skills, capacities and aspirations to enable them to participate in and benefit from opportunities. Regeneration also aims to improve economic competitiveness in terms of business performance to create more local jobs and prosperity. To attract both people and business, regeneration aims to improve the general appeal of a place. A balance of all those three elements can ensure a sustainable future (Tallon, 2010, p.5). Urban sustainability has become a key word in regeneration nowadays and will be described more thoroughly later on. In addition part of the complexity of an urban regeneration is hereby clearly visible. Each category requires special attention and planning. The dimensions of urban regeneration are: economic, social and cultural, physical and environmental, and governance related in nature, as briefly described before (table 1). All can vary of course according to the local context, the political and civil support and according to geographies. All four dimensions are exclusive but interconnected. Important to mention is that
short-term, fragmented, ad hoc and project-based approaches to regeneration without an overall strategic framework for citywide development are weak says Tallon (Tallon, 2010, p.5).

Table 1. Dimensions and concerns in urban regeneration, By author based on Fransen et al.,

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>Job creation, income, employment, skills, employability, development</td>
</tr>
<tr>
<td>Social &amp; Cultural</td>
<td>Quality of life, health, education, crime, housing, quality of public services</td>
</tr>
<tr>
<td>Physical &amp; Environmental</td>
<td>Infrastructure, built and natural environment, transport and communications</td>
</tr>
<tr>
<td>Governance</td>
<td>Nature of local decision-making, engagement of local community, involvement of other groups, style of leadership</td>
</tr>
</tbody>
</table>

*Urban Sustainability*

Nowadays sustainability has become a term that is often used and play a key role in any development. Its definition has been subject to many debates and in there are many who have tried to define it. Furthermore it is important to make a distinction between sustainability and sustainable development. The first is an objective and the second a method to reach the objective. Brundtland sets the most used definition in 1987. It states that: “*Humanity has the ability to make development sustainable, to ensure that it meets the need of the present without compromising the ability of future generation to meet their own needs*” (Brudtland, 1987). Today, urban redevelopment is even stronger associated with sustainability, which forms an integral part of the redevelopment due to higher demands, new legislation and due to a larger consideration of our nature. Some of the key elements of new urban development plans are: livability, vitality and equity based on the protection and maintenance of natural systems. Conceptually, as the basis for developing future communities, sustainability is not just achieving a balance across environmental, social and economic considerations, but rather is about achieving the integration of these issues within the natural environment, to the long-term benefit of all (Muñoz Gielen, 2011; FWR group, 2012; Collins, 2009, p. 88-92). Furthermore sustainability refers to practices developing an environment in which degradation does not exceed the capacity of regeneration within the system. An example would be, a public park. If the number of visitors exceeds the carrying capacity of the park, degradation occurs and public officials may have to limit hours or visitors to ensure the sustainability of the park’s attributes.
The goals of urban sustainability are sometimes categorized as the triple-bottom line, which addresses the management of three areas, often referred to as profit (economic), people (social), and planet (environmental). John Elkington, founder of SustainAbility, coined the wordplay in 1994. The triple bottom line philosophy ascribes equal importance to each of these three areas. Businesses and communities that pursue this strategy aim to achieve a long-term balance between economic, social and environmental sustainability.

### 3.1.1 The complexity of UR

As has been mentioned before that UR is due to its nature and practice, far from being a completely fixed set of guiding principles and practices, and does not have a proven or well-established track record of success. Urban regeneration strategies are aware, Tallon says, of the difficulties arising from ‘one size fits all’ approaches and of the complicated local context and geographies. Urban regeneration has a major impact to a wide range of actors and stakeholders including local communities; city, regional and national government; property owners and investors; business; environmental organizations; residents; and visitors at all levels from local to the global level. Its goes without saying that such complex actions require excellent resources, planning and preparation in order to, at least have a progress towards the desired end result that will improve the previous situation and will allow the community to benefit from the new (re)development. In general urban regeneration has become increasingly complex in recent times. This is not only because of the number of actors involved and the complexity of social development, it is also because of the implications of it that reach far beyond physical boundaries. Nowadays a large amount of procedures are added into the list of implications. Urban regeneration occurs in a complex context and is a long-term process that may last from several months to several years. Different interests have a stake in such projects and can vary from interests of users or residents to socio-economic, political and financial interests. To conclude this part, Urban Regeneration may be described as: “the sum of a large number of complex processes performed by many individual actors and organizations with their own interests and claims and involving international competition between cities while being subject of the influence of events from far beyond the region itself” (Franzen et al., 2011).

**Formulating and managing a strategy in UR**

Before analyzing the strategy formation process in in UR and PDUR and since strategy is a key word in UR as it is in PDUR a clear explanation of what is strategy and what does strategy encompass is required. First of all, it must be stressed that, in spite of the huge literature, there is no single, universally accepted definition of strategy. Different authors, planners and managers use it and define it differently. Nor is there a single standard approach to strategic thinking, planning or management according to Mintzberg (1994), even if the classical strategic planning based approach has been in many spheres of policy-making. Before dealing in more detail with Post Disaster Redevelopment Strategies, some basic definitions are clarified. Henry Mintzberg provides a very basic distinction
between intended strategies and realized strategies. According to him, it is also possible to distinguish deliberate strategies, where intentions that existed previously are realized, from emergent strategies, where patterns are developed in the absence of intentions, or despite them. Thus, strategies may go unrealized, while patterns may appear without precondition such as in a Post Disaster situation. For a strategy to be truly deliberate would seem to be unlikely. Precise intentions would have had to be stated in advance by the leadership of the organization, these would have had to be accepted as is by everyone else, and then realized with no interference from market, technological or political forces, which is a major challenge. A truly emergent strategy is again unlikely, requiring consistency in action without any hint of intention. (Mintzberg 1992, p. 12-14; Sotarauta, 2004, p.16 ;).

Strategy can basically be seen as: ‘a guiding pattern for the ever-flowing stream of single actions and decisions. It gathers them under the same “umbrella” and leads them in the right direction’. According to this definition, strategy is consistency in behavior, whether it is intended or not. Intended strategies can be used as mirrors to guide consistency of behavior, to make emergence a little bit more intended. For the purpose of this research this definition will be used.

In order to get a better understanding of the process of UR it is pertinent to explore what I done during the formulation of an UR strategy and who does the management of the different parts of it? In the past development projects were formulated and run, most often, by public bodies. Nowadays this has changes since market demands and developments together with the spatial quality have become important factors that are considerate while formulating a development strategy. Furthermore, while redeveloping existing urban areas serious consideration is given to existing functional relationships. What is understood by this it that economic social and other structures and networks are forming an integral part of the urban (re)development strategy (Van ‘t Vertlaat and Wigmans, in Franzen et al., 2011). In order to have a sustainable urban development an integrated vision needs to be developed based on long-term trends and preferences of the society, says Van Hoek and Wigmans. Such a development strategy is constructed though an interactive and bottom-up process that can be described in a few steps:

1. Assess the regional strengths, weaknesses, opportunities and threats (spatial analysis);
   Ascertain relevant developments for the region (spatial analysis);
2. Identify all stakeholders and discuss their demands and ideas. Try to find shared values on the future. Define which aspects need to be resolved most urgently (key issues). During this exercise, political and social criteria are being applied;
3. Setup a vision comprised by realistic, measurable and specific strategic goals. Herewith the evaluation will be easier. At this stage one could set out different scenarios depicting the alternative assumptions for the future.
4. The actual plan. Formulate a number of main policy objectives with priorities, directed towards the regional or urban development interventions. This will result in more concrete
areas of attention in the different policy areas and subsequently even more concrete points of action. These actions can be related to specific districts or Urban areas, as well as specific projects;

5. Indicate strategic networks, which will be responsible for the realization of the area development and projects, as well as the ways to organize financing;

6. Finally evaluate the strategy and set specific points. A key aspect of a strategic plan is to be flexible so that either the strategy or the vision can be adapted.

Scheme 2, Development strategy process, based on Van ’t Verlaat.

What is important is not only the content of the vision but also its ability to create public support within the urban environment. The content of the vision forms the platform for debate and discussion, which is a process that involves many actors, particularly business trade and industry leaders as well as other stakeholders, argues Van Hoek and Wigmans. Practical tasks are subsequently carried out by the public sector, such as municipal bodies. Crucial in realizing this vision is that it needs to be executed in such way that all participants identify their vision in it, and committing them herewith, to its realization. Similar to this approach is the way Castells and Borja describe the function and significance of a strategic plan. According to them a strategic plan is the setting out of a city project that unifies, diagnoses and specifies public and private measures and establishes a coherent framework of mobilization of the cooperation between the urban social agents. Furthermore they state that such a plan can be seen as a guideline and a mean of communication (Van Hoek and Wigmans in Fransen et al., 2011). The ability to develop and implement an integrated urban development vision largely depends on achieving sufficient organizational capacity. This refers to the organizational capabilities of an urban area to develop and implement an integrated strategy. It is increasingly important to make use and take advantage of the existing competencies and expertise
Leadership
- Political support
- Societal support
- Spatial-economic conditions

Vision & strategy

Strategic networks

Public sector
Private sector

Performance

Scheme 3. Organizing capacity framework (Source: Management of Urban development processes in the Netherlands, Fransen et al., 2011)

Challenges in UR

There are many challenges that come into play in UR. Due to the globalization, cities are changing their focus points and adjust their strategies based on the economic situation and their competitive position with regards to other similar cities. Furthermore they are adopting an more entrepreneurial approach in their expansion and development policy which responds to currents needs, but those current needs can be very dynamic and change over time. The adjustability of a city to such circumstances is a major task. The most significant challenges cities are confronted with are:

- **Intercity competition**: who is going to attract more business and create a desirable living environment

- **Change from welfare state towards an economic development state**: as mentioned before a shift it visible towards an entrepreneurial city. A city that responds to the market demands
- **Cross-boarder co-operation:** make strategic alliances with other cities and collaborate in cross boarded project that will enhance their urban quality.

- **Connectivity:** cities have to invest in their infrastructure and remain well accessible for its users and inhabitants.

- **Develop but also maintain or strengthen their local character:** in the world of globalization and international urban environments, cities need to enhance their identity but not loose pace of the global trends and developments.

- **Political support on the different levels:** cities rely often to governmental funds and development project often needs apart from the public and market support also the support on the politician in order to be granted with funds.

### 3.1.2 Actors and interactions in UR

In order to make the processes involved in Urban Redevelopment clearer, a definition of actors and stakeholders and the difference between them is required. According to Grimble and Wellard (1997) stakeholders are: “all those people who have stake (or share) in a particular issue or system. Stakeholders can be groups of people, organizations, institutions and sometimes even individuals”. Other terms sometimes used in a similar way to stakeholders are “actors” and “interest groups”. The word “actors” stresses that stakeholders are active and interact with each other. The use of the words “interest groups” indicates that people can be grouped according to a common interest. Stakeholders can be at any level or position in society, from international to the national, regional household or intra-household level. Stakeholders include all those who affect and are affected by policies, decisions or actions within a particular system. To sum up stakeholders are:

1) Those whose interests are affected by the issue or those whose activities strongly affect the issue;

2) Those who possess information, resources and expertise needed for strategy formulation and implementation, and

3) Those who control relevant implementation, instruments.

Urban regeneration, as argued previously, involves a multiplicity of actors and stakeholders. Both further shape the context of urban redevelopment. It is therefore pertinent to give an extended explanation about their function, role and interaction in the UR process. Actors have roles and contributions that vary according to their legitimate interests in specific urban issues in UR. It is therefore that a clear understanding of those interests of the many different stakeholders is a fundamental prerequisite for a successful participatory urban governance process. A basic tool to achieve this understanding is a “stakeholder analysis”. In order to ensure a balanced representation,
such an analysis should examine and identify stakeholders across a number of different dimensions. For example, the analysis should separately identify relevant groups and interests within the public, the private and civic society sector (scheme xx). In addition, the analysis can seek out potential stakeholders to ensure proper representation in relation to ethnicity, gender, poverty or other locally relevant criterion. Cutting across these categories it is also important to look at stakeholders in terms of their expertise, information and resources applicable to the specific project, issue. They can be categorized in gender, age, occupation, cast etc. All the previous mentioned are able to give a social identity but divide people and cut across the “community” boundaries. It is the role of the researcher and the stakeholders that should determine which groups need to be subdivide when the different interest have become clear for the research question or project (Grimble and Wellarrd, 1997). Below follows a description of the dimensions wherein stakeholders can be identified.

Public Sector
First of all, there are the municipal players who make and take decisions regarding the territory on which specific urban regeneration is taking place. The role of the municipality is in public law, such as land-use plans, building permits etc. In addition municipalities can also participate as partner in a development if it is in their interest. Within the municipality one can identify various departments such as the spatial planning department, the department of economic affairs, the traffic and transport or public works department etc. In some large municipalities the expertise is in house whereas in smaller ones those are leased. This means that external consultants are then involved in the process. All these disciplines stand for their own interests within the municipality and must therefore be given a place in the process of urban regeneration. Quite often urban regeneration activities may involve multiple municipalities. This happens when the area extends beyond the boundaries of one municipality. Higher authorities (regional planning office, ministries, central government etc.) can also be involved in urban regeneration projects. In the case of supra-local interest, these higher “levels” can establish policy principles that deeply affect the urban regeneration concerned. Higher authorities such as the central government can for instance financially contribute in actual developments with subsidies, but that results in a stake in the decision making process. On regional and local levels we sometimes even find large state owned companies such as power, public transport and water companies that can often emerge as difficult actors in urban regeneration because their interest lies elsewhere (Franzen et al. 2011). This leads us to the next important dimension: the private sector.

Private Sector
In the private sector there are many actors that participate in urban regeneration. Private project developers play a significant role in some processes in urban regeneration because they undertake projects at their own expense and risk within the context of the current market. Among private developers we can identify many types such as investors, banks, builders and even architects.
Another indispensable party is the investors. Their core aim is to gain a sound return on the long-term investment. Finally there are the users (current and future), such as entrepreneur’s, residents and even visitors who will use or are using the area that is being developed.

Civic societies, as they are also called, are actors of ultimate importance, as they play a central part in achieving the desired result in the development. Their demands and interests must be taken seriously into account. The interests of these users often differ significantly. For instance residents may required car free areas whereas the shop owners might desire the area to be accessibly by cars. Often, the play a crucial role in UR since they can participate in consultations, discussions and debates about their living environment and change the focus points of the development if they dislike the nominated developments. Other parties can be voluntary interest groups and environmental organizations. These last ones can cause significant delays to projects if they have the opinion that certain development or parts of it influences negatively the environmental elements of an area (water, flora, fauna) that has been subject to change. Concluding we can state that this list of involved actors in urban regeneration and the processes that come along is not conclusive. The development is always related to context and content as explained above (Franzen et al., 2011). Below follows an example of a scheme with several actors divided in the three basic dimensions.

Table 2. Actors in Urban Regeneration, by author

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Organizations</th>
<th>Sub-organizations</th>
<th>Area</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public sector</td>
<td>Municipalities</td>
<td>Central governments</td>
<td>Local</td>
<td>Knowledge Capacity</td>
</tr>
<tr>
<td></td>
<td>Municipal departments</td>
<td>State owned companies</td>
<td>Regional/ national</td>
<td>Information Governance</td>
</tr>
<tr>
<td></td>
<td>Regional departments</td>
<td>Urban planners</td>
<td></td>
<td>Subsidies</td>
</tr>
<tr>
<td></td>
<td>Ministries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Central Government</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private sector</td>
<td>Developers</td>
<td>Architects</td>
<td>Local/</td>
<td>Financial Knowledge</td>
</tr>
<tr>
<td></td>
<td>Investors</td>
<td>Financial institutions</td>
<td>regional</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Small &amp; medium entrepreneurs</td>
<td>Owners of land</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Banks</td>
<td>Housing association</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Builders</td>
<td>Urban designer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citizens &amp;</td>
<td>Inhabitants</td>
<td>Ethnic population group</td>
<td>local</td>
<td>Information Knowledge</td>
</tr>
<tr>
<td>interest groups</td>
<td>Users</td>
<td>Sport association</td>
<td>regional</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Voluntary interest groups</td>
<td>Cultural group</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environmental organizations</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Apart from the categorization in dimensions one can divide actors, also in different levels as mentioned previously. Below follows an example of stakeholders in an UR project for the Msc2 master in Real Estate and Housing at the TU Delft for the greater urban area of the city of Rotterdam. Actors are divided in levels (by author, 2012).
### Table 3. Actors in Urban Regeneration divided by levels, by author

<table>
<thead>
<tr>
<th>Levels</th>
<th>Stakeholders</th>
<th>Example</th>
<th>Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>International</td>
<td>International agencies</td>
<td>European Union</td>
<td>Sustainably development</td>
</tr>
<tr>
<td>National</td>
<td>National government</td>
<td>Central government</td>
<td>National security, economic development</td>
</tr>
<tr>
<td></td>
<td>Ministry of infrastructure and Development</td>
<td>Rijkswaterstaat</td>
<td>Adequate transportation and infrastructural connections, water management</td>
</tr>
<tr>
<td></td>
<td>Nature preservation board</td>
<td>Natuurbescherming Nederland</td>
<td>Nature preservation in the area</td>
</tr>
<tr>
<td></td>
<td>Financial Institutions</td>
<td>ING Real Estate</td>
<td>Invest and get interests</td>
</tr>
<tr>
<td>Regional</td>
<td>Regional authorities</td>
<td>Province of South Holland</td>
<td>Urban structure</td>
</tr>
<tr>
<td></td>
<td>Spatial planning department</td>
<td>Rotterdam City Development corporation</td>
<td>Sustainable urban Growth</td>
</tr>
<tr>
<td></td>
<td>Traffic and transport department</td>
<td>Transportation company</td>
<td>Accessibility</td>
</tr>
<tr>
<td></td>
<td>Economic affairs</td>
<td>Depart. Economic affairs Rotterdam</td>
<td>Economic development</td>
</tr>
<tr>
<td></td>
<td>Urban Designer</td>
<td>TU Delft</td>
<td>Attractive residential environment</td>
</tr>
<tr>
<td>Local</td>
<td>Current residents</td>
<td>Neighborhood</td>
<td>Livelihood and safety</td>
</tr>
<tr>
<td></td>
<td>Future residents</td>
<td>(New) neighborhood</td>
<td>Livelihood and safety</td>
</tr>
<tr>
<td></td>
<td>Ethnic population group</td>
<td>Expat society</td>
<td>Networking</td>
</tr>
<tr>
<td></td>
<td>Local authorities</td>
<td>(sub) Municipality of Hillegersberg-Schiebroek</td>
<td>Enhance a positive residential environment</td>
</tr>
<tr>
<td></td>
<td>Local entrepreneurs</td>
<td>Local market</td>
<td>Food and supply</td>
</tr>
<tr>
<td></td>
<td>Project developers</td>
<td>DTZ</td>
<td>Developing new residential areas.</td>
</tr>
<tr>
<td></td>
<td>Housing Association</td>
<td>Vestia</td>
<td>Maintenance of existing housing stock and development of new housing.</td>
</tr>
</tbody>
</table>

**How to identify and analyze them; Stakeholder analysis in UR;**

As explained before *stakeholder analysis* is a vital tool for identifying those stakeholders who have significant and legitimate interests in specific urban issues. In order to understand this tool an explanation of the purpose, the principles and methodology of it, needs to be explained, in order to understand the processes involved in it.

**Purpose**

One of the main purposes of this tool is to ensure the inclusion of all relevant stakeholders. Experience has shown that inclusion of the full range of stakeholders is not only an essential precondition for successful participatory decision-making but also vital for promoting equity and social justice in urban governance. For example, when decisions are made, priorities set, and actions taken without involving those relevant stakeholders, the result is usually misguided strategies and inappropriate action plans which are badly (if at all) implemented and which have negative effects on the beneficiaries and on the city at large (UNEP, 1997). These approaches, which fail to properly involve stakeholders, have been widely proven to be unsustainable. This stakeholder analysis tool therefore encourages a far-reaching review of all potential stakeholder groups, including special
attention to marginalized and excluded social groups such as the poor, women, elderly, youth, disabled, or others. This allows identification of representatives of these groups, so that they may be included in the urban decision making framework.

Secondly, via a stakeholder analysis one can maximize the role and contribution of each stakeholder. It is well recognised that broad-based stakeholders involvement and commitment is crucial to successful strategy and action plan implementation and therefore to sustainable urban development. With a multi-stakeholder approach to implementation, a wider variety of implementation instruments can be utilised. The stakeholder analysis facilitates mapping of potential stakeholder roles and inputs and access to implementation instruments. This will indicate how best to maximise the constructive potential of each stakeholder whilst also revealing bottlenecks or obstacles that could obstruct realisation of their potential contributions. For example, an analysis could identify a particular stakeholders lack of information and skills for dialogue and negotiation, factors that undermine the contribution or influence of an otherwise importantly affected group of stakeholders (UN-Habitat, 2001).

Principles
“Stakeholder analysis ensures the inclusion of relevant groups while incorporating gender sensitivity”

The basic principles of this tool are:

- **Inclusiveness**: Ensure inclusion of the full range of different stakeholders, including marginalised and vulnerable groups.
- **Relevance**: Includes only relevant stakeholders; those who have a significant stake in the process (i.e., not everyone is included).
- **Gender Sensitivity**: Both women and men should have equal access within the participatory decision making process.

How does it work?
Since it involves many participants it is important to understand how it works. According to UN-Habitat (2001) a stakeholder analysis can be seen in terms of fine generally sequential stages of activity:

1. **Specifying issue(s) to be addressed.** Stakeholders are defined and identified in relation to a specific issue - people and groups only have a concrete "stake" in a specific issue or topic. Hence, the stakeholder identification process operates in respect to a particular specified issue.

2. **Long Listing.** With respect to the specified issue, a "long list" of possible stakeholders, as comprehensive as feasible, should be prepared, guided by the general categories of stakeholder groups (e.g., public, private, and community/popular, with further sub-categories for each, gender, etc.), also identifying those which:
• are affected by, or significantly affect, the issue;
• have information, knowledge and expertise about the issue; and
• control or influence implementation instruments relevant to the issue.

3. Stakeholder Mapping. The "long list" of stakeholders can then be analysed by different criteria or attributes. This will help determine clusters of stakeholders that may exhibit different levels of interest, capacities, and relevance for the issue. Knowledge of such differences will allow systematic exploitation of positive attributes. Identify areas where capacity building is necessary for effective stakeholder participation, and highlight possible "gaps" in the array of stakeholders. One of the several forms of stakeholder mapping is by degree of stake and degree of influence, as shown in the matrix below. Herewith the different types of stakeholders become apparent. These grids array stakeholders in a two by two matrix where the dimensions are the stakeholders interest, thus stake, in the organization or issue at hand, and the stakeholders power to affect the organizations or issues future. Four categories of stakeholders result: players who have both an interest and significant power; subjects who have an interest but little power; context setters who have power but little direct interest; and the crowd which consists of stakeholders with little interest or power. Power versus interest grids typically help determine which players interests and power bases must be taken into account in order to address the problem or issue at hand. They also help highlight coalitions to be encouraged or discouraged, what behaviour should be fostered and whose 'buy in' should be sought or who should be 'co-opted'. Finally, they provide some information on how to convince stakeholders to change their views. Interestingly, the knowledge gained from the use of such a grid can be used to help advance the interests of the relatively powerless (Bryson, J.M., 2004).

<table>
<thead>
<tr>
<th></th>
<th>Low influence</th>
<th>High influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low stake</td>
<td>Least priority stakeholder group (Subjects)</td>
<td>Useful for decision and opinion formulation, brokering (Players)</td>
</tr>
<tr>
<td>High stake</td>
<td>Important stakeholder group perhaps in need of empowerment (Crowd)</td>
<td>Most critical stakeholder group (context setters)</td>
</tr>
</tbody>
</table>

Scheme 4. Influence & stake matrix, by author.

4. Verify analysis and assess stakeholders availability and commitment. Review, perhaps utilising additional informants and information sources, the initial analysis to ensure that no key and relevant stakeholders are omitted. Also, assess the identified stakeholders availability and degree of commitment to meaningful participation in the process.

5. Devise strategies for mobilising and sustaining effective participation of stakeholders. Such strategies should be tailored to the different groups of stakeholders as analysed and classified above. For example, empowerment strategies could be applied to those stakeholders with high stake but little power or influence (UN Habitat, 2001).
Following the previous influence–interest matrix, the categorization of the stakeholders is hereby made possible. They can be either passive or active. An actor is a stakeholder who is actively involved, takes an action and has a stake in a process. We can find distinction in stakeholders and key stakeholders and between active and passive or between primary and secondary.

- **Key stakeholders** are those actors who are considered to have significant influence on the success of a project.
- **Primary stakeholders** are the intended beneficiaries of the project.
- **Secondary stakeholders** are those who perform as intermediaries within a project.
- **Active stakeholders** are those who affect or determine a decision or action in the system or project.
- **Passive stakeholders** are those who are affected by decisions or actions of others.

Additionally after having categorized the stakeholders it is important to investigate the linkages between them. Do they interact and why, under which conditions? Linkages are intersections between organizations, which allow the exchange or transfer of information, resources or power. These linkages included:

- **Structural mechanisms**, which are formal and institutionally recognized e.g.
  - Direct supervision or authority
  - Committees
  - Liaison positions

- **Operational mechanisms**, which may be informal or temporary; eg.
  - Meetings trainings events
  - Contracts partnerships
  - Publications, broadcasts
  - Joint activities
  - Friendships
In order to improve the overall knowledge and transformation system we need to manage and improve the linkages between actors, says Grimble and Wellard. Having identified the linkages between the different stakeholders it is important to have criteria in order to be able to assess those linkages. Inter-organizational linkages should be assessed by researchers and by the stakeholders themselves. Criteria that can influence the effectives of linkages include:

- Intensity and formality of contact
- One way or two way contact
- Stakeholders awareness of other stakeholders functions
- Relevance of services
- Urgency timeliness


<table>
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<tr>
<th>Accessibility</th>
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<tbody>
<tr>
<td>Quality of communication</td>
</tr>
<tr>
<td>Control over the relationship</td>
</tr>
<tr>
<td>Mandate of representatives</td>
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<tr>
<td>Legitimacy</td>
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</tbody>
</table>

These criteria can also be used for other purposes. Such as: to negotiate improvements in existing linkage mechanisms and develop new relationships. Another important aspect in stakeholders and stakeholder interactions is to be able to identify the reasons for poor linkages. There can be many reasons why linkages and linkage mechanism may not work. To name some:

- Weak management capacity
- Inappropriate organizational structure
- Unfavorable reward systems
- Constraints on time and money
- Inappropriate planning
- Little to no monitoring and evaluation of the process of interaction.
- Different organizational cultures, expectations and operating systems
An analysis of the reasons for poor linkages can help develop improvements in the functioning of the knowledge and information system. It is therefore that it is important to be examined in order to understand the dynamics involved in urban development processes.

It goes without saying that each stakeholder analysis is unique and there can be several ways to assess the stakeholders and their interactions in a UR process. But the necessity of such a tool becomes clear. Stakeholder Analysis ensures that no important stakeholder is missed out. It also provides the framework for optimizing the roles and contributions of stakeholders. Inclusiveness and the right mix of roles and instruments are key elements of successful stakeholder participation. Where participation is generated through careful analysis of the key players, their roles and contributions, the process becomes more effective and efficiency as well as equity gains will be maximized. Thus, there are links with the Good Urban Governance norms of equity, civic engagement, and efficiency (UN-Habitat, 2001; Robert & Sykes, 2005).
3.2 Post Disaster Urban Redevelopment

Disasters—natural ones, such as hurricanes, floods, or earthquakes, and unnatural ones such as terrorist attacks—are part of the human experience in the twenty-first century. The challenges of preparing for these events, withstanding their impact, and rebuilding communities afterward require strategic responses from different levels of government most often in partnership with the private sector and in accordance with the public will. Disasters have a disproportionate effect on urban areas. Dense by definition, cities and their environments suffer great damage to their complex, interdependent social, environmental, and economic systems. Social and medical services collapse. Long-standing problems in educational access and quality become especially acute. Local economies cease to function. Cultural resources disappear (Birch et al., 2008). Those are just some of the most important challenges and problems that Post-disaster areas are confronted with. There are significant differences in comparison with UR, which is most often executed under non-disaster circumstances. Yet there are also many similarities to learn from it and act accordingly.

From sustainability to resilience

When a disaster occurs although it is very important to keep sustainability in mind when designing, formulating and implementing redevelopment strategy resilience is what is most important in those vulnerable post disaster environments. But what do we understand by a resilient future? Which indicators contribute to a resilient city? According to the 'World Urban Campaign' initiated by the UNISDR the office for disaster risk reduction:

A *Resilient City* is one that can withstand and recover quickly from natural or human-made disaster. However, cities are increasingly vulnerable to multiple hazards that can hinder or derail development trajectories. Rapid urbanization, poor quality construction, unregulated expansion of urban settlements; weak governance capacities and climate change impacts are factors increasing cities’ exposure to multiple hazards and risks.

3.2.1 The complexity of PDUR

In addition to urban regeneration and taking into consideration the unique nature of a disaster affected urban situation, PDUR encompasses preventive measurements, with a different character than in urban regeneration. Those are aiming to ensure a more resilient future. Those measurements to ensure a resilient future can vary from rigorous measures, such as strengthening a coastline and allocating villages towards higher located areas, up to enforcing the foundation of buildings and providing more disaster resistant settlements. Actions, which are not always necessary in a ‘normal’ redevelopment, do demand unprecedented operations and special planning. By normal we refer to a
situation that hasn’t been affected by a disaster. Furthermore disasters do not only destroy the physical environment of an area but are able to severely disrupt even destroy crucial civil systems that are key elements for the proper functioning of a society. For instance systems that are used to maintain administrative stability and underpin accountability such as bank records, land titles that define which part of the land belong to whom and work permits can be destroyed depending on the type and magnitude of the disaster. Furthermore officials who used to operate these systems may die. The local and national capacity could be overwhelmed by the sheer size of the construction that lay ahead and this may increase the complexity in different aspects of PDUR (James, 2006). In general a Post-Disaster Redevelopment Strategy (PDRS) has to identify policies, operational strategies, roles and responsibilities for implementation that will guide decisions that affect long-term recovery and redevelopment of the community after a disaster. It is undoubtedly an even more complex process in comparison to UR due to the emergency that has occurred by the disaster and the stress that is associated with disasters. Responders are requested to cope with it. Furthermore cultural differences are an important factor that needs to be examined and understood thoroughly before starting any operations. Strategy in post disaster context now emphasizes more in seizing opportunities for hazard mitigation and community empowerment, consistent with the goals of the local comprehensive strategy and with full participation of the citizens. This should be the ideal case. But what derives from documentation and discussions about the topic is that the process and consequently the result vary strongly depending on the attitude of the (local) authorities and the international response (Jayasuriya et al. 2010, p.8). Recovery actions addressed in the strategy often include business resumption and economic redevelopment, housing repair and reconstruction, livelihood programs, infrastructure restoration and mitigation, short-term recovery actions that affect long-term redevelopment, sustainable land use, environmental restoration, and financial considerations as well as other long-term recovery issues identified by the community (Florida PDRP Focus Group, 2007). It can be said that all actions are interrelated to each other; they do not have clear boundaries but do influence each activity. This can also be seen in the Disaster Management Cycle, which is described in detail in the first chapter. The scale and context of all the above mentioned is considerably different from UR. Additionally, another major difference with a non-disasters related regeneration is the amount of international involvement. Various stakeholders such as NGO’s, organizations, agencies and even individuals’ response to the disaster and offer their immediate support. This requires a tremendous operation in order to be able to facilitate them and designate projects and actions they can undertake. The multifactorial decision making process has hereby become even more complicated. This is also because they represent different interests; objectives and they all have an opinion or approach, which at the end can enhance the complexity in the execution of a PDUR strategy. Additionally donors and major actors have real and nominal objectives. Their nominal objectives are the goals that they publicly proclaim. But the real objectives of policy may, and indeed often do, encompass both humanitarian objectives and other important goals, which will be described later on. Apart from all the above mentioned, most donors have strict time schedules, and
may require ‘quick’ results in their redevelopment actions, because that is what their initial donors back in their country of origin require. Furthermore if an affected area is situated in a disaster prone location, the threat of a new disaster is always present. This is a possibility that needs to be kept in mind constantly since not all disasters can be predicted, and due to the after effects disaster may have.

Following, in a situation where a disaster has taken place and has earnestly stricken a particular area, region or city, authorities are forced to take immediate actions in order to bring the society back to normalcy. Those actions include all the above-mentioned in urban regeneration. But they do require also a thorough investigation into the ‘old’ situation in order to gain insight its pre-disaster functions and dysfunctions and encounter them in the formation of the new post disaster redevelopment actions. Furthermore, time is a major constrain since the actions and projects intended to support a community that could be or is totally devastated by the disaster, can last from several months to several years (figure 6).

![Figure 1. Disaster phases, Lutheran partners in disaster response.](image)

Decisions are taken in a shorter time span than they would have done in ‘normal’ circumstances, meaning non-disaster situations. This requires excellent organization and a solid redevelopment strategy and continuous compromises among participating stakeholders in the negotiation phase. Budgets can also become an issue, because sometimes they depend strongly on the (international) response and financial means that are becoming available for the redevelopment but also because other issues may occur such as corruption.

### 3.2.2 Formulating a strategy in PDUR

Every post-disaster situation is unique. Therefore the strategy used can be named undoubtedly unique to. Critical issues depend on the characteristics of the country as well as the type and impact of the disaster. Understanding the local context in terms of geography, society, economics, politics, climate and hazards is a key consideration in developing an appropriate strategy for redevelopment in a post disaster area. This information provides the overall context for the plans of individual agencies and is essential background information for all individuals contributing to planning and implementation of the redevelopment actions (UNHCR, Handbook for emergencies, 2007). In order to
provide judgments concerning a Post Disaster Redevelopment Strategy (PDRS) we first need to understand when and why a PDRS is formulated and what are briefly the benefits of having one.

In some countries a PDRS can already exist if the country or in smaller scale the community affected by it, has in the past created such a plan in order to be (better) prepared when a natural disaster occurs again. This is more often the case in modern countries. In the United states, and more specific in the eastern costal areas, where hurricanes, floods and other disasters are not a strange phenomenon, the state of Florida has required to all counties to develop such a PDRS to ensure a more resilient future (Florida Division of Emergency Management, 2011). In countries where resources are limited and priorities are different, such a strategy is most often formulated shortly after the disaster has taken place and if it already exists it is either outdated or very poor in content. Having a PDRS can support the affected area to use the opportunity to rebuild communities better than they were before. Without a guiding vision in the process, short-term decisions may inadvertently restrict long-term, sustainable redevelopment and overlook opportunities to surpass the status quo. A PDRS strengthens the recovery process, and communities benefit from assessing their risk levels and crafting a long-term redevelopment strategy under non-disaster conditions.

The development of such a strategy is done, in most cases, by (local) government bodies and if present emergency departments of the government. But again this is not always the case in developing countries. If not, the government can request support from others. In that case it is created/developed and some times also coordinated in collaboration with multilateral organizations such as the United Nations and the IFRCRCS (International Federation of Red Cross and Red Crescent Societies, 2012). It could also appear that the plan is created with the support of neighboring countries, states or counties. This depends on the magnitude of the disaster and the decisions taken by the national government, their attitude (Drabek, T.E., 2003; CREW, 2007). An example is, the case of the Izmit earthquake in Turkey in 1999 where the national Turkish government requested help from outside. Greece responded immediately after the event, providing aid and support to its neighboring country since it had experience in disaster response from earthquake disasters (Karkatsoulis, 2004).

But why is it important to develop a PDRS? Although an entire research could focus on this question, there are several reasons we can distinguish why each vulnerable to disasters country should develop a PDRS to address long-term post- disaster recovery and redevelopments: 1) to reduce community vulnerability to disasters and make them more resilient; 2) it will safe sufficient time when needed because it will not be required to be planned from a zero point 3) it should be a prerequisite for coastal communities and encouraged for all other disaster prone communities; and 4) a PDRS will allow for a more successful and effective community recovery from disaster impacts. Apart from the previous mentioned point and according to the report of the CREW in 2007 “developing a PDRS provides a valuable communication and educational process for local officials, staff, and community
stakeholders to understand the complexity of decisions that will need to be made in order for the community to redevelop after a major disaster and agree to start making such decisions before something catastrophic happens.” Consequently what derives from the previous part is that the process of formulating a PDRS involves many actors and it is that process that can contribute and lead towards a more sustainable and resilient environment and future.

Key ingredients and critical factors for a successful redevelopment strategy that need to be incorporated during the formation of PDRS are: 1) community participation in the decision making process of all stages to ensure that their demands and visions are translated into the redevelopment plan, 2) understanding of the characteristics such as socio-economic and cultural aspects of the affected community in order to anticipate to their demands and visions 3) a clear commitment from the organization’s involved in the redevelopment. Herewith a division of tasks and responsibilities coupled to a timeline can be generated and 4) a solve oriented attitude of the (local) government to surpass policy and legislation issues that may occur in order to accelerate the redevelopment procedures, 5) a communication and information dissemination among stakeholders to guarantee that opportunities, threats and challenges that may occurred are shared in order to be prevented by others. It need to be stated that all the above mentioned together with the uniqueness of post disaster redevelopment and their contextual requirements meaning the stakeholders involved in redevelopment actions must adapt their practices to respond to the complexity inherent in these actions and achieve more desirable outcomes (Wardak, et al., 2013).

Type of strategies in Disaster responses

There are several types of strategies that can be used in post urban redevelopment processes. In order to get a better understanding of what kind of strategy is used and when, a further investigation is required. Since post disaster areas have a rapidly changing nature and operate in highly uncertain decision environments, the strategies need to lace the resources of the diverse agencies into an integrated whole says Drabek (Drabek, 2003). In the plethora of PDURS, this research will investigate strategies and approaches stated and developed by Drabek and FEMA. Important to mention is that each country has to choose one strategy that has tactics, which suites their specific post disaster circumstances and conditions. Specifically for a post disaster context in his book ‘Strategies for coordinating disaster responses’, Drabek distinguishes and describes five types of coordination strategies, which also include more specific strategies and are used nowadays. Those strategies incorporate in brief the following aspects:

1. **Core strategies:** they help to define the purpose of the strategy. Drabek used three approaches to support this type of strategy. Namely a domain clarification, a jurisdictional negotiation and a resource familiarization.
2. **Consequence strategies:** proposed that public leaders should introduce consequences into government agencies by requiring them to function as businesses with financial bottom lines (enterprise management) unless the activity is not one that could appropriately be charged to ‘customers’. Examples of these latter activities include protecting public safety or the environment.

3. **Customer strategies:** Drabek states that most (emergency) managers show a keen awareness of their ‘customers’. But when public organizations try to find out who their customers are, it can get very confusing. Therefore Drabek laid a focus in his investigation in four areas: communication of citizen expectations and requests, facilitation of media relations, documentation of damaged assessments, and documentation of disaster repairs and restoration. The relevance of each of these dimensions varies across the lifecycle of each event.

4. **Control strategies:** Drabek proposes that self-control among employees is not only feasible but also desirable in post disaster contexts. With a clear vision of mission and values (core strategy), control strategies can be implemented and give people much greater decision-making power to select and implement tactics that produce verifiable results in redevelopment actions. Drabek distinguishes eight types of Control strategies, which will not be further described.

5. **Cultural strategies:** by cultural strategies Drabek understands a set of behavioral, emotional and psychological frameworks that are deeply internalized and shared by the organization members. He describes with a clear example the approach Red Cross staff had in several disasters. He states that no matter the size or location of the communities, the Red Cross staff was very similar to each other; particularly in comparison with public works or law enforcement offices, which varied greatly. Effective redevelopment managers where those who understood the different experience they had and made use of a wide variety of appropriate strategies.

All the above-mentioned strategies have different tactics to cope with the PDUR. Elements of each one of them may apply to a specific disaster redevelopment situation. As mentioned before, there is no such thing as ‘best practice’ or ‘one size fits all’ in PDRS. Conditions are always context dependent and a strategy should always be developed according to the (local) needs of the affected area and community. But, lessons learned from previous disasters have resulted several amendments for existing strategies in PDR. Another important aspect to mention is that these strategies also strongly depend on the leadership (governance attitude), the participation (community involvement) and commitments of the involved stakeholders. Top-level and grassroots support is important to ensure that the strategy will be the guiding document for long-term redevelopment after the disaster. Different approaches to plan development strategies have been formulated:
• Adopt a Post-Disaster Redevelopment Ordinance
• Integrate Post-Disaster Redevelopment into the Local Comprehensive Plan
• Integrate Post-Disaster Redevelopment into the Local Mitigation Strategy
• Expand the Recovery Annex of the Comprehensive Emergency Management Plan to address Post-Disaster Recovery Issues
• Stand-Alone PDRS integrated with Other Local Plans

Those approaches have been applied mostly in developed countries, the United States of America and several Caribbean and Latin countries (Florida Division of Emergency Management, 2011, FEMA, 2010). Those could also be applicable in other disaster prone countries. As David Alexander says ‘disasters are sufficiently frequent and similar to each other to be normal, not abnormal, events. Although emergency powers and special measures are needed when disaster strikes, the requirements and exigencies are predictable enough to be planned for’. What derives from the previous quotation that is also used earlier in this research is that strategies are applicable globally if and only if they include the local circumstances and conditions.

In the evaluation of the central case study it is important to understand the strategy used. Therewith conclusions can be drawn that will provide lessons. Accordingly those lessons learned from issues that arose can be used as advices and improvements that can be applied in other future PDRS formations.

The Process in PDR mentioned earlier in this research is very complex, due to the involvement of many stakeholders. It has to deal with major challenges but does also deal with opportunities for improvement. Parties that are involved in it have different stakes and responsibilities and may enter the process of redevelopment at a different phase of it. The process of PDR can last from several months up to several years depending on the scale and type of the disaster. Creating a process to make smart post-disaster decisions and prepare for long-term recovery requirements enables a community to do more than react, prompting post disaster action rather than time-consuming debate. In developing countries, that time-consuming debate appears to be often a delaying factor (Skinner et al., 2002). By identifying appropriate planning mechanisms, financial assistance, and agency roles and responsibilities beforehand, a community begins the road to recovery more quickly. Due to the

![Figure 2: Time span Post disaster](image-url)
stressful circumstances a disaster brings along, time is a crucial element during the whole process. Furthermore there are several topics that constitute the PDR process. Those topics include several aspects that are also very important to be taken into consideration when determining a process for PDUR. Each of those different actions are conducted by different stakeholders, who are interrelated to each other and due to the circumstances they are positioned in the are required to closely collaborate (Skinner et al. 2002, Florida PDRP, 2010). Those topics are:

- **Land use**, which encompasses the following: 1) Phased reconstruction and streamlined permitting, 2) Reducing disaster vulnerability through voluntary mitigation programs and 3) Prioritizing areas in order to focus the redevelopment actions.

- **Housing** encompasses: 1) Temporary housing and the siting criteria required for it, 2) Transitioning residents back to permanent housing and 3) Rebuilding affordable and adequate housing for the affected community.

- **Economic redevelopment** encompasses: 1) Resumption and retention of major employers, 2) Tourism renewal to start generating a source of income and employment and 3) opportunities to sustainably restore the economic vitality of the community.

- **Infrastructure and public facilities** encompasses: 1) The infrastructure for the temporary recovery operations, 2) Financing the repair of the infrastructure and the public facilities and 3) relocating vulnerable infrastructure and public facilities to more resilient locations.

- **Health and social services** encompasses: 1) The health facility restoration, 2) the coordination and assistance for NGO’s and volunteers and 3) reopening (permanent) schools and higher education to start the process of normality for the children and students.

- **Environment** encompasses: 1) restore the beaches and the damaged dunes, if present, 2) conduct an environmental and historic review of the temporary sites and 3) enhance green rebuilding.

All the above stated topics and incorporated aspects are required in an integrated process of a holistic PDUR.

**Long – term redevelopment**

This research lays a focus on the second part of post disaster phase of the disaster management cycle showed in chapter one. The second part incorporates the long-term redevelopment actions, which are important to identify for the purpose of this research. Long-term redevelopment has three major components:

- **Reconstruction**: The long-term process of rebuilding a community’s destroyed or damaged housing stock, commercial and industrial buildings, public facilities, and infrastructure to the same or better pre-disaster levels and standards.

- **Holistic long-term Recovery**: The recovery of the economy and quality of life factors within the
community, including employment opportunities, social networks, cultural events, environmental quality, and educational and recreational opportunities.

- **Community Enhancement**: The process of going beyond restoring all aspects of the community to normal functions by creating conditions improved over those that existed before the disaster. Community enhancement is characterized by activities such as implementing hazard mitigation projects during rebuilding, strengthening building codes, changing land use and zoning designations, improving transportation corridors, building more affordable housing, and developing new economic opportunities.

The Post-Disaster Redevelopment Plan (PDRP), which includes all the specific PDURS, plays an integral role in all of these components and is the lead document for guiding these efforts. Part of the communication strategy of the PDRP should be to track recovery progress during the post-disaster, long-term phase (Skinner et al., 2002; FDEM, 2010).

As is shown in figure eight and explained earlier there is no specific timeframe for the long-term redevelopment actions. They can last from several months to several years. Those actions come to an end when they have reached certain milestones that are defined by the assessments in the initiated PDRP (FDEM, 2010). Milestones that may show a successful completion of the long-term Redevelopment period include the following:

- Replacement of housing stock adequate for the post-disaster population such that interim housing can be removed;
- Economic indicators show unemployment has stabilized at a rate near pre-disaster levels or comparative to other similar locations;
- 70% or more of businesses have reopened and remained in business for at least 3 months or have been replaced; and
- The percent of population dependent upon disaster assistance and social assistance programs has decreased to near pre-disaster levels

It goes without saying that elements of those milestones can only be measured in certain circumstances because in heavily disrupted by a disaster areas it is rather difficult to conclude that redevelopment actions have come to an end where no means are available to conduct such a research. This is mostly the case in less developed countries according to Da Silva (Da Silva, 2010). Special mechanisms are used to define the level of completion of certain actions.

**Challenges in PDUR**

As Wardak, Coffey and Trigunarsyah say in their report concerning successful redevelopment: Redevelopment actions are constantly threatened by challenges right from the initiation through to their closure. There are many challenges that appear in PDUR and one could devote a whole research
into defining the challenges of particularly PDUR. In this part a few prominent challenges will be addressed, such as: coordination, collaboration & communication, community participation, design challenges and interagency competition, corruption, funding gaps and mismatches but also a political situation in the disaster-affected area/nation and last by certainly not least community culture and beliefs. Those challenges are chosen because they play the most prominent role in PDUR. This research will investigate in the case study those challenges to. What can be seen is that PDUP has a strong correlation, apart from UR, also with disaster management. One could argue that the biggest challenge of a disaster is to implement, coordinate and facilitate an adequate PDUR strategy (PDURS).

The paradox about disasters according to David Alexander in his book: *Principles of emergency planning and management* is that:

“On the one hand they are extraordinary events that require special organization and resources to tackle the damage, casualties and disruption that they cause, and on the other hand they are sufficiently frequent and similar to each other to be normal, not abnormal, events. Although emergency powers and special measures are needed when disaster strikes, the requirements and exigencies are predictable enough to be planned for.”

What can derive from this is that no matter what kind of emergency occurs there is always a need for good coordination and planning during the aftermath of each event. Many modern countries have, especially the last decennium, developed an emergency plan for future disasters. This is not always the case in less developed countries according to the World Bank (2011). The challenges therefore are much larger in number. For the purpose of this research the following challenges are going to be used in order to investigate the stakeholders that comprise each challenge.

**Challenges in Coordination**

From the earliest stages of the Disaster management cycle, the often relatively large scale of international aid programs and the involvement of numerous actors raise complex coordination challenges. Coordination can be difficult not simply because of the number of actors of various types but also because they have a multiplicity of objectives and modes of operation, as shortly explained previously and because of the scale of the disaster. This is a recurring theme that runs throughout several discussions and literature; actors in the international aid and redevelopment arena have multiple, and often quite complex, objectives. There is an aspect that is called donor aid policy, which is tactfully left unmentioned in the international post disaster redevelopment literature according to Jayasuriya and McCawley. Donors, agencies and organizations are driven by various motives for providing help in each case. Those motives can be formulated by public response to the disaster, (geo) political interests and bilateral agreements. Coordination is closely related to the type of strategy used during the redevelopment.
Challenges in collaboration & communication

Another challenge is the collaboration of the involved parties and the partnerships that are formed by them. When talking about collaboration, what derives from the literature is that even when donors, international organizations and agencies say that they are committed to cooperate closely with each other, they often have specific agendas, which make it difficult to coordinate the aid efforts and maximize the effectiveness in the delivery of aid. These difficulties of coordination and collaboration apply just as much to the activities of NGO’s as to the programs of local/national governments. Furthermore, as Jo da Silva states it, it is highly unlikely that a single agency will be able to deliver all aspects of a transitional settlement or reconstruction program by itself. Aspects which fall outside their remit or core strengths will require partnerships with government, other agencies or local organizations. It is essential that the responsibility of each partner in contributing to the common goal of reconstruction is clearly defined and communicated. A shared understanding of timescales and risk allows expectations to be managed. This applies equally to the communities receiving assistance who are key partners in the process. The success of the redevelopment programs may lie in the effective partnership between the responsible authority for the redevelopment programs and the other stakeholders. It is therefore of imperative importance to establish a strong and reliable line of communication and information dissemination system. This system may ensure a more effective redevelopment according to Wardak et al. (2013).

Challenges from community participation

It is recognized that community participation helps the community re-focus after the disaster, take ownership of the situation and begin to think about their future development. Therefore, the central policy in PDUR should make this a requirement for spatial planning in reconstruction and redevelopment according to UNISDR (2005). Agencies though, find that a community-driven reconstruction process is time-consuming and involves substantial resources in order to cope with it, which simultaneously may result in friction. Planning and preparation prior to implementation often can take even a year. This process, includes selection of eligible households, appeals processes, plot mapping and regularization, spatial planning and agreement from the community, government, village and religious leaders if applicable. The length of time taken sometimes may result in frustrations but can prevent costly mistakes and help to ensure that the affected community takes ownership of the completed houses and that they are actually occupied when completed. Since community members have the most knowledge about their own communities and specific building requirements it is critical to involve them in all stages of redevelopment. But due to circumstances discussed before, this is not always the case. Participatory planning is of crucial importance and can therefore be a major challenge in PDUR. It should allow adequate time to ensure that the redevelopment process is community driven, or at least incorporates their needs and demands.
Challenges from the design process and interagency competition

The design process in PDUR components such as for instance the Shelters can be very challenging to. House design must meet relevant national and international standards, be culturally (local acceptable type of housing, architectural identity etc.) and climatically (open floor plan, large windows, with outdoor space etc.) appropriate, durable and easy to maintain, allow for future adaptation for instance expansion and be developed in partnership with the intended occupants (Silva, 2010). But issues of inequity within communities should be avoided and the variety of solutions produced should avoid competition between agencies and families.

Corruption, being a major challenge

Corruption is a challenge in every society at can be found in almost every sector. According to Transparency International corruption in humanitarian work, which includes redevelopment actions, is among the worst kind. The risk of corruption is acute because aid often flow through new, unmonitored channels and therefore it is extremely hard to keep track of the aid. Companies can bribe procurement officials to win contracts and or at least influence them. This can mean displaced families receive sub-standard housing. Because of the need for speed the agencies feel they some times bypass standard anti-corruption measures. This can result that powerful local groups and existing corrupt networks benefit. Those most affected miss out (Transparency International, 2013).

The challenge to face mismatches

The challenge to meet the real and actual needs is always big. Donors often tend to be supply-oriented rather than demand responsive. As was the case in various housing projects in Haiti (Oxfam, 2012; World Bank, 2011) the tendency of donors to deliver their preferred form of aid raises particularly difficult issues when the different agencies and donors do not meet the needs of the local customs, requirements and cultural sensitivities. The mismatches between donor and community views require special attention since they can lead to friction, and sometimes even open conflict. It is therefore of utmost importance because such situations can stigmatize the community and cause disruption in it.

The challenge of funding caps

Another significant challenge that PDUR may be confronted with is, the funding caps. When implementing a PDURS it is important to calculate the inflation in construction prices that will occur due to high demand in construction materials etc. in order to eliminate funding gaps that can possibly occur. This was the case in Sri Lanka after the 2004 tsunami were construction costs nearly doubled and resulted in tremendous funding gaps; significantly, this phenomenon was not an important issue in Thailand where there were fewer supply constraints. There is, according to Jayasuriya et al. (2010)
a potential trade off between the pace of reconstruction and the effective use of funds. Consequently a prioritization of construction activities when problems of this kind arise, is needed.

Challenges arisen by the political situation

The political situation and the attitude of the government after the disaster are a crucial determinant and a major challenge in PDUR. A clear example was the mega disaster caused by the tropical cyclone Nagris in Burma where approximately 100,000 casualties were encountered. The international response was entirely different. In contrast to the 14 billion US$ provided to the tsunami affected countries in 2004, Burma received less than 500 million US$ after the cyclone Nargis in 2008. The reason was that the government of Burma was not cooperative with the international donor community in receiving aid. But this was not the only reason donor countries and agencies linked offer to specific conditions that were likely to be rejected by the national government. What can be concluded from this case, is that an open attitude of the affected government is important for the international community to respond.

Challenges to meet the community culture and beliefs

According to researches conducted in the field of successful redevelopment in post disaster context an understanding of the characteristics of a community involved in redevelopment is of outmost importance in establishing a constraint for delivering successful projects and managing the community participation. For instance the housing designs must meet both the socio economic and cultural requirement of the affected community. Religion and the use of religious groups can be vital, Wardak (2013) argues. They can mobilize and persuade the affected communities to return to their area and actively participate in the redevelopment actions. The challenge that may arise, in such circumstances, is that actions initiated do not take into account the cultural and socio economic characteristics of the affected community and therefore satisfaction of those receiving the outcomes of the actions can be low.

In general Challenges in PDR context can be enormous and of various kinds as written above. In the academic field of PDR is has been stated that one of the key ingredients towards an effective and successful redevelopment is an integrated strategy that takes all those challenges into account in order for it to be effective (Drabek et al., 2003; Wardak et al., 2013; James, 2004).

Opportunities in PDUR

After a disaster has stricken a particular area and impacts severely a community many opportunities can occur after the catastrophic event. The international attention, the financial resources that are becoming available, the extreme stress that comes along with the disaster event and puts pressure to
the involved stakeholders together with the community’s will to improve and prevent future casualties are some important factors that create a ‘window to opportunity’ for the redevelopment of the affected area/city or nation. Long-term recovery after a disaster is always challenging, even if a community has planned for a worst-case scenario; however, by proactively creating a process to make smart post-disaster decisions and prepare for recovery needs, the community can do more than simply react. A disaster, while tragic, can also create opportunity. With a PDURS, a local government has a better chance of moving the community further down the road to resiliency. PDURS enables communities to integrate and advance their previous planning efforts to achieve a more sustainable and resilient community after a disaster. An example was, the astounding international response to the Asian disaster event in 2004, which led to increased interest in recovery operations. Through response and recovery efforts, a new approach to disaster recovery was popularized, particularly by government institutions and non-government organizations (NGOs), through the concept of "build back better” (Lloyd-Jones, 2007; Kennedy et al., 2008). This approach builds on vulnerability research and the theory that a ‘window of opportunity’ for disaster risk reduction and improved redevelopment is created during the post-disaster recovery period. During this period, local citizens may have increased awareness of disasters risks and place pressure on government and organizations to use reconstruction funds to remedy the weaknesses in developmental policies, infrastructure and institutional arrangements (Christopolos, 2006; Clinton, 2006; UNISDR, 2005).

Although many organizations and institutions have adopted the term “building back better” to define their reconstruction and recovery activities, defining what building back better encompasses has been difficult. It is known that many governmental institutions and aid organisations become involved in the recovery process, often with the stated goal of returning the community to its pre-disaster form. In recent years, this goal has evolved into an approach, termed building back better. Herewith situations that often where causing problems in the past, urban plans that were not functioning well, poor infrastructure etc. can now be rebuild-rearranged back better. But there is no such thing as “internationally accepted term “ for it. Alexander Rajan (2006) argues that in order for the concept of “build back better” to be effective, it must be operationalized under a holistic framework that offers a comprehensive vision of the future. While this comprehensive framework in the recovery literature is lacking, Clinton (2006) outlines ten key propositions for building back better. Those include:

**Proposition 1:** Governments, donors, and aid agencies must recognize that families and communities drive their own recovery.

**Proposition 2:** Recovery must promote fairness and equity.

**Proposition 3:** Governments must enhance preparedness for future disasters.

**Proposition 4:** Local governments must be empowered to manage recovery efforts, and donors must devote greater resources to strengthening government recovery institutions, especially at the local level.
Proposition 5: Good recovery planning and effective coordination depend on good information.

Proposition 6: The United Nations, World Bank, and other multilateral agencies must clarify their roles and relationships, especially in addressing the early stage of a recovery process.

Proposition 7: The expanding role of non-governmental organizations (NGOs) and the Red Cross/Red Crescent Movement carries greater responsibilities for quality in recovery efforts.

Proposition 8: From the start of recovery operations, governments and aid agencies must create the conditions for entrepreneurs to flourish and enhance herewith the (local) economy.

Proposition 9: Beneficiaries deserve the kind of agency partnerships that move beyond rivalry and unhealthy competition.

Proposition 10: Good recovery must leave communities safer by reducing risks and building resilience (Clinton, 2006, p. 3).

It is a matter of fact that when something is rebuild-regenerated, new developments and malfunctions from the past are taken into consideration and were possible eliminated when designing for the future. Although disasters can destroy almost an entire city, the “dysfunctions” and positives of an area-city are in most of the cases already known. The whole functioning (urban operation) of an area, in other words, is known. Disaster responders are often those who have the opportunity and are required to contribute to a better future planning and redevelopment of the affected area/city. Furthermore important to mention is that a disaster brings temporary changes to the affected society-area. People think about problems they normally do not consider: the risks they face from hazards, the quality of local housing, ways in which the society could be better planned and constructed, the local scenic and other natural resources, liveability. At the same time, public officials have the media attention that enables them to garner support to innovative ideas. A disaster forces a society to make seemingly endless series of decisions, some large, some small, some easy, and some quite difficult. Technical and expert advice becomes available from public and private sources. Financial assistance flows into the society, enabling it to tackle more ambitious projects than would normally be the case. These changes can be viewed as opportunities to rebuild in a better way, instead of succumbing to the natural desire to put things back the way they were as soon as possible. They can provide a change for a community to implement forward-looking activities that for one reason or another (usually financial or political) have not been undertaken. Some of those activities are:

1. Improvements of lifestyle
2. Safety
3. Economic opportunity
4. Environment
3.2.3 Actors and interactions in PDUR

As mentioned and analyzed before PDUR is complex, involving many people, agencies, and many governmental bodies at the international, national, regional and local levels. Although the circumstances differ in comparison to UR, there are several elements that can be compared with UR. In both situations we can see a multi-actor involvement divided over multiple levels with various resources and objectives defining each one of them. The dimensions of public, private and community remain the same, as do the different levels of international, national, regional, and local. Yet, in most of the PDR cases the international involvement can be much higher that it is in UR (UN-Habitat, 2006). It includes for instance many NGOs, which is an unusual stakeholder for UR projects that are conducted under normal circumstances. Furthermore the public bodies that are entering the arena of PDUR are much larger in numbers due to the complexity of the issues. In the scheme that follows below the same structure of UR that is used, including now a range of actors related to the post-disaster reconstruction process. The list of stakeholders is not inclusive. This scheme is the outcome of the case study research of this thesis supported by the literature study. The case study is the 2004 tsunami in Banda Aceh, Indonesia.

Table 4. Stakeholders mapping divided per sector. Example by author derived from the case study research.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Organizations</th>
<th>Sub-organizations</th>
<th>Area</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Sector</td>
<td>Central government</td>
<td>Ministries</td>
<td>National</td>
<td>Financial/knowledge/information/governance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>State own companies</td>
<td>National/regional</td>
<td>Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Military</td>
<td>National/regional</td>
<td>Knowledge/capacity</td>
</tr>
<tr>
<td></td>
<td>Regional departments</td>
<td>Spatial Planning department</td>
<td>Regional</td>
<td>Knowledge/information/governance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Economic Department</td>
<td>Regional</td>
<td>Knowledge/information/governance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transport &amp; planning</td>
<td>Regional</td>
<td>Knowledge/information/governance</td>
</tr>
<tr>
<td></td>
<td>Municipal bodies</td>
<td>Local councils</td>
<td>Regional/local</td>
<td>Knowledge/information/governance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>District heads</td>
<td>District/locail</td>
<td>Knowledge/information/governance/capacity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Village heads</td>
<td>Local/neighborhood</td>
<td>Knowledge/information/governance/capacity</td>
</tr>
<tr>
<td></td>
<td>Multilateral Organizations</td>
<td>United Nations</td>
<td>National/regional/local</td>
<td>Financial/knowledge/governance/capacity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>World Bank</td>
<td>National/regional/local</td>
<td>Financial/knowledge/governance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Asian Development Bank</td>
<td>National/regional/local</td>
<td>Financial/knowledge/governance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International Federation</td>
<td>National/regional/local</td>
<td>Financial/knowledge/governance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>of Red Cross and Red</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Crescent Societies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Sector</td>
<td>Financial Institutions</td>
<td>Central Bank of Indonesia</td>
<td>National/regional/local</td>
<td>Financial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regional Development Bank</td>
<td>Regional/local</td>
<td>Financial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International Labor Office</td>
<td>National/regional/local</td>
<td>Financial/capacity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Banks</td>
<td>Regional/local</td>
<td>Financial</td>
</tr>
<tr>
<td></td>
<td>Corporation &amp; Business</td>
<td>Investors</td>
<td>Regional/local</td>
<td>Financial/information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Land Owners</td>
<td>Regional/local</td>
<td>Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Housing Association</td>
<td>Regional/local</td>
<td>Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contractors/builders</td>
<td>Local</td>
<td>Knowledge/information/capacity</td>
</tr>
</tbody>
</table>
What becomes clear in this stakeholder mapping is that more governmental bodies are involved in the redevelopment. This has mainly to do with the urge of the situation, which requires authorities to react and decide on higher levels about the actions that are needed. If the circumstances surpass the ability of the nation to cope with it, then friendly nations and multilateral organization are offering assistance and support. In the scheme below a stakeholders mapping follows, from the PDUR actions of Banda Aceh, Indonesia. The scheme is divided in levels. Due to the high numbers stakeholders that are involved in post disaster situations, and for the purpose of this research the stakeholders are going to be clustered in stakeholders groups. Examples are going to be given for each group. In the case study chapter a more extended list is provided for its time moment. Accordingly a description of the important stakeholders and their main tasks is provided hereafter.

Table 5. Stakeholders analysis by levels. By author.

<table>
<thead>
<tr>
<th>Levels</th>
<th>Stakeholders</th>
<th>Example</th>
<th>Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>International</td>
<td>International agencies</td>
<td>UNDP</td>
<td>Sustainably development</td>
</tr>
<tr>
<td></td>
<td>Donors</td>
<td>Catholic Church</td>
<td>Support the Christian community affected</td>
</tr>
<tr>
<td></td>
<td>Environmental organization</td>
<td>WWF</td>
<td>Animal &amp; forest preservation</td>
</tr>
<tr>
<td>National</td>
<td>National governments</td>
<td>Central government</td>
<td>National security, economic development</td>
</tr>
<tr>
<td></td>
<td>NGOs</td>
<td>Oxfam Novib</td>
<td>Adequate housing</td>
</tr>
<tr>
<td>Regional</td>
<td>Regional authorities</td>
<td>Province</td>
<td>Urban structure</td>
</tr>
<tr>
<td></td>
<td>Spatial planning department</td>
<td>regional</td>
<td>Sustainable urban Growth</td>
</tr>
<tr>
<td></td>
<td>Traffic and transport department</td>
<td>Transportation company</td>
<td>Accessibility</td>
</tr>
<tr>
<td></td>
<td>Economic affairs</td>
<td>Depart. Economic affairs</td>
<td>Economic development</td>
</tr>
<tr>
<td>Local</td>
<td>Local communities</td>
<td>Neighborhood</td>
<td>Livelihood and safety</td>
</tr>
<tr>
<td></td>
<td>Local authorities</td>
<td>(sub) Municipalities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Local entrepreneurs</td>
<td>Local market</td>
<td>Food and supply</td>
</tr>
</tbody>
</table>
International Community - multilateral organizations (UN)
Multilateral organizations are organizations that are comprised from many countries. The most known multilateral organization is the United Nations. It is founded after the Second World War in 1945 and has 195 member states (anno 2011). It involves certain important institutions such as the: UNDP (UN-Development Program), the UNOCHA (UN-Office for the Coordination of Humanitarian Affairs) and UNICEF. Those institutions strive to empower lives, create more resilient nations and offer help and coordination to save lives, in countries that are in need for aid. Other known multilateral organizations are the World Bank, the World Health organization the Asian Development Bank etc.

INGOs (International Non-Governmental Organizations)
Another part of the international community is the Non-Governmental Organizations that are operating on an international level. These charitable institutions support the recovery process in post-disaster situations around the world and represent the altruism of their donors.

Government
The instant need to recover large dysfunctional urban areas, is one of the hardest task a government can be confronted with. Especially within less developed countries. The government that exists is often limited in their actions and has a lot of work to catch up from their predecessors.

Municipality
Municipalities are the representatives of the government within a local area, but their workforce can be very small. Communication and decisions making processes can often take a lot of time.

Local NGOs
Voluntary projects and actions organized by local initiators (such as: churches, wealthy local people, politicians, community leaders etc.) and operate on a local, (sub) district of neighborhood level. Those are also called CBOs (Community Based Organizations).

Private Organizations
Private organizations are local and international profitable organizations. They operate next to NGOs or in command by them. Often, local entrepreneurs can establish those organizations after a disaster has hit an area.

Local Community
Beyond local entrepreneurs (businessmen, farmers, shop keepers etc.), there are also other people who are able to contribute to the redevelopment process. The local community can become staff of the NGOs actions or (in)directly contribute to a redevelopment project.
Diaspora
People in less developed countries often have relatives living in developed countries who are sending them money and or supplies. Those relatives have often left the country in the past to find prosperity elsewhere and are called the Diasporas. The can organize networks and events to raise money and create awareness of particular disasters and in some cases they can play an important role in the post disaster redevelopment chessboard (Kent, 2006).

Donors
Donors can be individuals and organizations that collect funds after a disaster occurred and transfer these to NGOs who are able to convert this money into interventions.

Media
The media often closely monitors the interventions, directed by NGOs. Journalist who started to report the need of aid, often evaluate within their reports what aid have been given, and how the situation within an affected society has been changed. Furthermore they can share information and put pressure on the aid delivery. Therefore they are considered as important stakeholders in PDUR.

What is significant to mention is, that due to the different nature of PDUR, apart from having different stakeholders in comparison to UR, they also take different positions in the quadrants of the matrix of influence and interest in comparison to UR processes. This is the case in most stages of PDUR. It has mainly to do with the fact that conditions and priorities differ in PDUR situations depending on the time that such a matrix is designed. As seen in the disaster management cycle in the first chapter, the actions change, as do the priorities and challenges. The conditions are aimed to improve, as the development progress in time and the dynamics adjust to the circumstances and needs. This is the result of governance and management of the redevelopment efforts that are initiated, in order to return the affected area back to normalcy. Different stakeholders take, and have different roles in the process and this is depended on several factors:

1) the information they have,
2) The expertise they possess,
3) the capacity they have in terms of man power and financial means,
4) the power they have in the different negotiation phases and the implementing instruments they possess(funds, law, property,)
5) the influence they can have in the decision making process.

In the matrix below the position of the stakeholders groups is depicted shortly after a disaster has occurred (1year). Although the amount of stakeholders may keep increasing the stakeholders groups are already formulated and therefore we can position them in the matrix. The Matrix below is an
example and depicts the different stakeholders in the case study researched and elaborated further on in this thesis.


<table>
<thead>
<tr>
<th>Low influence</th>
<th>High influence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low stake</strong></td>
<td><strong>High stake</strong></td>
</tr>
<tr>
<td>Least priority stakeholder group</td>
<td>Important stakeholder group perhaps in need of empowerment</td>
</tr>
<tr>
<td>Useful for decision and opinion formulation, brokering</td>
<td>Most critical stakeholder group</td>
</tr>
<tr>
<td>• Corporation &amp; business</td>
<td>• Central government</td>
</tr>
<tr>
<td>• Diaspora</td>
<td>• Regional departments</td>
</tr>
<tr>
<td>• Environmental groups</td>
<td>• Municipal bodies</td>
</tr>
<tr>
<td>Financial Institutions</td>
<td>Religious groups</td>
</tr>
<tr>
<td>Multilateral organizations</td>
<td>NGOS</td>
</tr>
</tbody>
</table>

The focus within this research lies on the process of the housing program, executed by the different actors. In particular the role, the stake, the community had in those processes. This focus is taken because the community is in such events, the most affected group and because previous PDUR cases show that involvement of this group results in a higher acceptance and satisfaction of the overall outcome. The community is positioned in the process at the bottom, but involvement takes place at all levels. Between the United Nations (UN) and the NGOs, the community can act as a link between the needs of the state (top-down approach) with the needs of its own (bottom-up approach). It is therefore that the following part explains the community participation principles.

3.2.4. Community participation and its importance;

Before going deeper into the principles of community participation, certain aspects need to be clarified. The word ‘Community’ has different meanings and people define it in different ways. In the plethora of definitions the definition of McMillan and Chavis appears to be most influential among theories on psychological sense of community (McMillan, et al., 1986). According to them community is:

“A feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members needs will be met through their commitment to be together”.

They state that there are four elements of sense of community: membership, influence, integration and fulfilment of needs, and shared emotional connection. With regards to community participation
in post-disaster contexts, humanitarian builders, which can be international and national NGOs, and multilateral organizations, often design projects that aim to involve local populations. This is generally called community participation. The fact that community participation is regularly adopted in redevelopment is not surprising. Involving disaster victims in the rebuilding of their life is understood as a sustainable way of doing things, says Alicia Sliwinski in her paper about: “the politics of Participation” (Lizarrable, G., et al., 2010). Furthermore, Chambers (1983) in Kumar (2005) states that the popularity of community participation is evident from the proliferation of participatory projects since 1980s onwards. This is when bottom up approaches have become a condition in most redevelopment projects whereas in UR the opposite was the case. However, it was ironical as Midgley et al., (1986) in Kumar (2005) pointed out, that even though it was central to the issue of participatory development, the concept of community was still poorly defined. Kumar (2005) adds that community participation projects are also often found to be vague, whether the community is meant to be a means or end to the development programme. Based on those arguments, many have tried to formulate methods and ways to measure and streamline the way community participation can be applied, in order to strengthen the outcome of the redevelopment actions. From the abundances of choices of theories that present measurement tools of community participation and for the purpose of this research, Arnsteins ladder of community participation appears to be most useful and is therefore described in detail below.

The ladder of participation

In order to explain the level of participation of community, Arnstein (1969) created eight levels of citizen participation, which are called ‘A Ladder of Citizen Participation’ (S. Arnstein, 1969). The ladder consists of eight rungs. The bottom rungs of the ladder are rung (1) Manipulation and (2) Therapy. These two rungs describe levels of “non-participation” that have been contrived by some to substitute for genuine participation. Their real objective is not to enable people to participate in planning or conducting programs, but to enable powerholders to "educate" or "cure" the participants. Runes 3 and 4 progress to levels of "tokenism" that allow the have-nots to hear and to have a voice: (3) Informing and (4) Consultation. When they are proffered by powerholders as the total extent of participation, citizens may indeed hear and be heard. But under these conditions they lack the power to insure that their views will be heeded by the powerful. When participation is restricted to these levels, there is no follow-through, no "muscle," hence no assurance of changing the status quo. Rung (5) Placation is simply a higher level tokenism because the ground rules allow have-nots to advise, but retain for the powerholders the continued right, to decide upon the actions. Further up the ladder are levels of citizen power with increasing degrees of decision-making clout. Citizens can enter into a (6) Partnership that enables them to negotiate and engage in trade-offs with traditional power holders. At the topmost rungs, (7) Delegated Power and (8) Citizen Control, have-not citizens obtain the majority of decision-making seats, or full managerial power.
Obviously, the eight-rung ladder is a simplification, but it helps to illustrate the point that so many have missed, argues Arnstein, that there are significant gradations of citizen participation. Knowing these gradations makes it possible to cut through the hyperbole to understand the increasingly strident demands for participation from the have-nots as well as the gamut of confusing responses from the powerholders.

Though the typology uses examples from federal programs such as urban regeneration, anti-poverty, and Model Cities (see Arnstein, 1969, p. 216-224), it could just as easily be illustrated in the governments, currently facing demands for power from politicians and laymen who seek to change and or adjust their mission. The underlying issues are essentially the same - "nobodies" in several arenas are trying to become "somebodies" with enough power to make the target institutions responsive to their views, aspirations, and needs (S. Arnstein, 1969). For the purpose of this research and since the different rungs represent the amount of participation in the redevelopment process; the 8 rungs of Arnsteins ladder are going to be related to the differenten moments in PDUR that are

**Ladder of participation**

1. **MANIPULATION**
   - Stakeholders are kept informed of what is going on, but are not offered the opportunity to contribute themselves. Communication is one way.

2. **THERAPY**
   - To educate or cure the stakeholders. The idea is defined and the participation is aimed only to gain public support. 'If we educate the stakeholders, they will change their ill-informed attitudes and they will support our plans'.

3. **INFORMING**
   - Stakeholders opinions and views are sought through various means, but final decisions are made by those doing the consulting.

4. **CONSULTATION**
   - Stakeholders opinions and views are sought through various means, but final decisions are made by those doing the consulting.

5. **PLACATION**
   - Stakeholders have an active role as shapers of opinions, ideas and outcomes, but the final decision remains with the facilitators. Two-way communication is essential.

6. **PARTNERSHIP**
   - Stakeholders have direct involvement in the decision making process and actioning the decision. Each stakeholder has a clear role, set of responsibilities and powers - usually to achieve a shared common goal. Two-way communication is vital.

7. **DELEGATED POWER**
   - The goal is likely to have set by the facilitator but the resources and responsibility for solving the problem are passed to the stakeholders. There are clear lines of accountability and two-way communication with those giving away the power.

8. **CITIZEN CONTROL**
   - Stakeholders have the idea, set up the project and come to facilitators for advice, discussion and support. Facilitators do not direct, but offer advice for citizens to consider.

Scheme 7. Arnstein’s ladder of community participation correlation with percentage. (By author).
going to be examined. Important to mention is that this ladder is not ‘the’ way to measure community participation. Several factors play an important role in the determination of the percentages, and disaster dynamics are different in for instance America and different in Indonesia. Yet it is academically accepted that it is a useful tool to measure the community participation, if one would take the dynamics of the specific situation into account.

Having that said, it is therefore that the model was later modified by Chou Guill (1996) to fit into specific developing countries, since circumstances diver significantly there. Chou Guill (1996) classified a ladder of community participation into neglect, rejection, manipulation and support. Later on, Davidson et. al. (2007) combined these two theories to suit into community participation in housing reconstruction projects (Figure 9). It can be seen that the level of control of community reduces from the top to the bottom of the ladder, this is also the case in Arnsteins ladder. If the level of participation goes to the bottom rung of the ladder, community has little or no power to control or manage the reconstruction. In this case, they may be consulted about what their needs and expectations with no assurance that these concerns will be taken into account, or merely informed about the shape the housing project will take or even manipulated into taking part in the project (Davidson et al., 2007). On the top ladder, empowerment and collaboration can offer communities to have a control on the housing reconstruction project. These two levels should be the minimum level where housing reconstruction program could be called ‘Community Based’ or ‘Community Driven’ approach, says Davidson (Davidson et al., 2007). In practical, beneficiaries can act as the owner, as the supervisor or even as the contractor of their own housing reconstruction project. Herewith a sense of ownership and awareness is created.

![Ladder of community participation](image)

**Scheme 8: Ladder of community participation (Davidson et. al., 2007)**

The reasoning to use the ladder of community of Arnstein and not the ladder of Davidson, is because it provided a larger gradation in community participation. The reasoning to use this ladder in general is quiet clear since this research aims to examine the role of the community in the case study of Banda Aceh. What is apparent in literature related to disaster development is, that there are more
factors playing a role in the PDUR arena. It is therefore that the next part goes deeper into the importance of community participation and gives a thorough understanding of its features.

The importance of community participation

In the academic field of disaster management, PDUR and even in UR all have argued that a key factor to success of a redevelopment action is, the community participation in the process. The public’s involvement in PDUR implementation is imperative for it to succeed, many have argued (Da Silva, 2010; Drabek, 2003; FDEM, 2010; Jayasuriya & McCawley, 2010; Arnstein, 1969). But what does community participation encompass? According to the Florida Division of Emergency Management (FDEM) says that:

“a major component of any plan that involves the community’s should include strategies to educate and inform residents, business owners, and others on disaster preparedness, recovery, and long-term redevelopment. Implementing these strategies will require active engagement between government agencies and the public throughout each phase of a disaster. In order for the PDRP to remain a document reflective of the mindset of the community, the community needs to be kept involved in any decisions made during implementation. This could include the creation of policies that address a multitude of issues, including home rebuilding, property development, business recovery, and infrastructure restoration. The decision-making process should engage the general public, private-sector partners, non-governmental organizations, and government agencies both before and after a disaster” (FDMA, 2010).

This has been stated by other academics and organizations active in disaster development too, such as the: BRR in Indonesia, the FEMA in the United States and the UNISDR to name some. What is additionally of paramount importance is that community should be avoided of any gaps in communication as responsibilities shift from short-term recovery phases to long-term redevelopments and dynamics then change. The involvement of local government in public outreach efforts is particularly crucial during long-term redevelopment activities since the initial surge of media covering the disaster event will have decreased. It is clear that a comprehensive approach in PDUR that gives community a high stake of power and influence in the arena of PDUR is crucial. Therefore it is important to understand the different steps taken in a PDUR. In a schematic structure below is shown that “public participation” as community participation can also be called, is positioned in the middle of the process. Herewith the interrelations of the different steps and stakeholders of the process become apparent. Public participation is positioned in the middle and can interrelate with each component of every step of the process. Feedback and involvement of the public in the whole process, strengthens the acceptance of the plan, which is also argued by Arnstein. Furthermore it will most likely start functioning faster due to the personal involvement citizen’s feel they have with the redevelopment of their community. Each step has certain actions that need to be taken, in order to
formulate a strong strategy for the redevelopment. This scheme is going to be used as a guiding step-by-step approach during the field visit in order to structure the interviews with the stakeholders chronologically in terms of actions taken for the long-term redevelopment plans. Furthermore is will support, together with the ladder of participation and the power-influence matrix, the role of each stakeholders in each step. Herewith a more in depth analysis is possible. The steps are: 1) Initiating the process, 2) Organizing the stakeholder participation, 3) Conduct research and analysis to support the actions and planning process, 4) Facilitating the input, 5) Create the first draft strategy and adopt the comments of the stakeholder.

![Diagram of public participation in the process steps]

**3.2.5 Similarities and differences between UR & PDUR**

As mentioned and analyzed before, both UR and PDUR processes are complex because they involve many people, agencies, and many governmental bodies at the international, national, regional and local levels. In order to get a better understanding of the dynamics that cause changes or influence both processes, an overview of the points where they converge and where they diverge is appropriate. Herewith it becomes apparent, where best practices can be used and adjustments can be made in order to maximize the impact of the actions of both. The comparison of similarities and differences is divided in two main parts, Management (Strategy and Process) and Stakeholders (Public, private and civil society).
Differences
The most significant differences wherewith UR can be compared to PDUR are, the circumstances wherein PDUR is operating. The accumulated stress, response time, general disruption, human, environmental and financial casualties, geo-morphological changes etc. are almost completely different in comparison to UR.

In terms of management, UR is most often planned in advance whereas in disaster areas of mainly developing countries the PDUR planning is reactive in nature. The content of the UR program is an outcome of a long process wherein the needs and demands of an urban environment and its users, are monitored and then translated into a UR plan. Those needs and demands are generating the conditions that trigger the new UR projects. It is argued that in the western world, UR aims to increase the attractiveness of an area as a whole and increase competitiveness of it, in the global chessboard (Townsend, 2013). Although a shift in the approach is clear, most UR plans are designed top down. Local and national governments try to enhance the strengths and opportunities of their urban environment and diminish the weaknesses and threats in order to keep pace with the changing dynamics of their urban fabric (Ying Ho, 1999). In Post disaster situations, the formation of the redevelopment actions is most often based on the magnitude of the destruction that the disaster has caused in the urban environment, the casualties that are encountered and the resources that have become available. Initiatives are often designed bottom up; translating the emergent needs of the affected society into plans in order to return them into normalcy.

In terms of stakeholders the involvement is high in both cases, yet the amount and type of public stakeholders involved in PDUR situations is considered to be higher and different. This has mainly to do, with the nature of the actions that require administrative authorities on governmental level to respond and cope with the disaster; especially if a catastrophic event has severe impacts, to the functions of an area. Those public stakeholders have increased power since the can effect the decision making process, if they consider it to be of national interest. Furthermore, if the boundaries of an UR project does not cross the national boarders and have no or little international interests, then less international stakeholders will be involved; whereas in PDUR the international community responds in large numbers in order to support the vulnerable societies that have been affected by the disaster. Additionally in most of the PDUR cases the international involvement can be much higher that it is in UR also because it includes NGOs. A group of stakeholders, that is unusual for UR projects that are conducted under normal non-disaster circumstances. Some other significant differences that actors in PDUR may have in comparison to UR are:

1) Higher amounts of financial recourses available.
2) Lack of capacity and local information.
3) Specific interests and objectives in terms of their operations during the PDR.
4) Actors may have more specific target groups that they support in their operations based on gender preferences, religion etc.

5) A wider range of activities involving more than one stakeholder, which is the case in multilateral organizations and large NGOs that are most often present in PDUR situations.

6) Participation of different types of actors in comparison to UR (NGOs, Multilateral organizations etc.);

**Similarities**

The most common thing, that one can distinguish in UR and PDUR is the fact that both aim to make a change in the urban environment, which consequently will affect the different facets of the area that is subject to change. Regardless the content, both UR and PDUR want to sustain the future of their scope area, by creating interventions that support a sustainable living and growth. There is a multiplicity of stakeholders in both situations, but the civil society is playing a less prominent role in the UR that in PDUR. In a disaster situation the community is disrupted and regarding the long-term development they are active participants of the redevelopment arena. Furthermore both UR and PDUR are reactive in nature, the response to needs and demands of their urban environment. Additionally the lists of similarities and differences are not inclusive and one could dedicate a whole research in divining them.
3.3. Research Framework

Where the theories depicted previously have addressed the concepts of Urban Regeneration and Post Disaster Urban Redevelopment and their ingredients, the focus now lays on the evaluation of the process of PDUR in particular the community involvement and the interaction of it with the various stakeholders in the housing development program. In architecture we see that the principles of area development revolve around physical attributes complementing each other within the urban structure, here the policy of how to get there is emphasized. Area Development in both UR and PDUR involve multiple actors and takes a long time span, where the interaction between social structures, power and influence relationship, the expertise and policy determines the outcomes physically. In order to arrive at a more comprehensive development in PDUR, focusing on the connection of them is imperative.

Methodology

The theoretical chapter has moved in the line of UR and PDUR, including the ingredients that comprise them. Through a general stakeholder mapping in each investigated time moment (t=0 - t=3) and an interest and influence matrix that can also be conducted in the various stages and for each of the challenges that occur in the PDUR process, a tangible model is going to be created with which the outcome of the redevelopment phase can be assessed (scheme 6). Herewith the position, stake, power, and influence of the community as a stakeholder in the process will become apparent, as will the relationship of them with the other stakeholders. Thereafter in a two axes (x,y) graph made for each time moment we can depict the position (rung 1-8) of the three stakeholders groups (public, private and civic society) in the ladder of participation (see p.39). The graph summarizes the different challenges that occur in the PDUR time moments that are going to be examined in this thesis. Furthermore in model that is divided in different urban scales the level of participation for each time moment is going to be provided.

Accordingly, by comparing the different models and graphs of the different times moment’s (t=1, t=2, etc.) patterns can be recognized and conclusions with regards to the outcomes of the redevelopment program for housing can be drawn. The conclusions of those models, can them be used to provide and support amendments in the existing community participation knowledge, which is a central theme in this research.

Below follows the first scheme wherein a stakeholder analysis is depicted. It is an example from the case study research, which is going to be elaborated in the next chapter. The various stakeholders are accredited depending on their amount of influence they have in the housing reconstruction process, the amount of interest they have, and the capacity they have to cope with the housing reconstruction process. This is what defines their power in the PDUR arena. The scale used (1=low, 2=medium,
3=high) has derived from the literature study and the interviews conducted during the field visit of the case study location. The interviewees are from stakeholders groups and are questioned about the challenges during the PDUR process. Furthermore the scores are also supported by personal observations.

Table 6: Example of Stakeholders mapping & analysis in T=1. By author

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<thead>
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<th>WHO</th>
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<td>T= 1</td>
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<td>Influence</td>
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<td>Capacity</td>
<td>Implementation instruments</td>
<td>Affected</td>
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<td>Funds</td>
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<td>Central government</td>
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<td>Multilateral Org.</td>
<td>2</td>
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<td>Local business</td>
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<td>Financial Institutions</td>
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<td>NGOs</td>
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<td><strong>Civic societies</strong></td>
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<td>Local community</td>
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<td>Religious groups</td>
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<td>3</td>
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<tr>
<td>Local organizations</td>
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<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Scale 1-3; indicating 1=low, 2=medium, 3=high

Based on the scheme above and by using the outcomes, we can now continue with the stake and influence matrix wherein we can position the most important stakeholder groups in each challenge of PDUR. Herewith we can draw additional conclusions. Such a matrix is going to be designed for every chronological moment and challenge that the case study research examines.
When the characteristics of the stakeholders in the challenges have been mapped, we can then proceed to the next step, which is the graph of challenges and position of the stakeholders groups in the ladder of participation. In the Y-axes, the rungs of participation from the ladder of participation are given, and in the X-axes the challenges. After having all graphs for each time moment designed, we can compare the graphs and recognize where improvements can be achieved, in which challenges, in terms of community participation and draw conclusions and recommendations. It goes without saying that not each challenge will occur in each test moment. Some may appear in certain phases and some may not.

Graph 1: Percentage of stake in the different PDUR challenges in T=1 (By author).
Chapter 4

The Case study of Lampaseh Aceh village in Banda Aceh
4.1 Introduction

In the first three chapters, the problem statement, research questions and research theory framework, have been addressed. It was stated that the problem in post-disaster redevelopment is that the community has not always a correct stake in the overall process. Evidence from several international paradigms in literature, has proven that community involvement and involvement of local actors has not always been an integral part of the redevelopment process. Therefore the result is that beneficiaries are left with fewer benefits and a less optimum result. By evaluating a disaster case the aim it to contribute to the general body of knowledge of community participation. Therefore the main research question is:

“How did the redevelopment in Banda Aceh facilitated community participation?”

The research framework addressed previously, aims to examine the role and relation of the community in the different challenges that PDUR in this case, was confronted with. Thereafter recognize patterns that will support amendments in the community participation knowledge. By positioned the community in the middle, but actually being the bottom of the redevelopment process as the receiver, we can realize, what is where and when needed in benefit of the community. This research examines the stake of the community in the redevelopment phases and from this moment on, the theoretical positioning transgresses to the empirical understanding. It moves to the actual situation of the case study.
4.1 General description

In this chapter of the thesis research, a thorough description of the chosen case study, which is the Lampaseh Aceh village in the district of Meuraxa in the city of Banda Aceh, Indonesia, is provided. Additionally the actors and processes are introduced. Further an analysis of the case study and the processes involved are provided, with regards to community. The unfolding will be chronological and for the purpose of this thesis it will be divided in four moments in time. This corresponds to the disaster management cycle, explained in previous charters. The explanation will start with the general characteristics of the city before and after the tsunami and then it will focus on:

1. The tsunami event, the disaster situation (t=0);
2. The post-disaster situation (t=1) a year after;
3. Post-disaster situation, four years after (t=2) and ends with,
4. The current situation (t=2013) at the time of the field visit (2013);

Furthermore the analysis in this thesis will be divided in three different urban scales. It will start at the city level, then it will zoom in at a district level where one district has been selected, the Meuraxa district and it will end at a village level where the village of Lampaseh Aceh as mentioned before, is chosen. The redevelopment project Lampaseh Aceh was part of after the tsunami, was the Sheikh Khalifa city.

The data used in this case study research have derived from literature review, interviews conducted with key figures of the housing redevelopment in the housing program and a personal observation. The key figures interviewed in Indonesia are: government officials & representatives, NGO stuff, academics, and the local community of the village. They were all involved in various stages of the redevelopment actions. Among the local people that were interviewed the village head of Lampaseh Aceh is included. The questions that have been asked were based on the framework design shown in the previous chapter and is divided according to the disaster phases. The 'T' moments, mentioned previously. In the final part of this chapter the research findings of each time moment are compared and preliminary conclusions are drawn. Furthermore suggestions and recommendations are provided.
The case study area
Characteristics of Banda Aceh

Banda Aceh is the capital of the province Aceh and is situated in the Northern tip of Sumatra. The city was founded in 1205. The region of Aceh covers an area of 58,376 square kilometers and has approximately 5 million inhabitants and is considered to be the richest region of the country. The city regency covers an area of 64 square kilometers and had 264,618 inhabitants before the tsunami (BPS, 2007). As of the 2010 census the population was, 223,446 (UNData, 2014). The city itself is crossed by the Krueng Aceh river and morphologically the city has an elevation of approximately 21 meters. Banda Aceh City consists out of 9 districts (kecamatan), and has 89 villages (kebupaten/kota) in its broader urban area; Residential Banda Aceh was and remains about 8 km x 8 km, and has a grand mosque at the center. Banda Aceh is a bustling city, with crowded streets, markets and lots of small-scale businesses, such as coffee shacks, telephone and food shops before the tsunami. Those food carts were often very primitively constructed as an extension of the owner’s motorbike and could be found everywhere. People lived mostly outdoors, until late in the night. The coffee shacks played an important social role in the Acehnese society since they were places where people, mostly males, gathered and interacted. This is still the case in the city. Furthermore important to mention is that Aceh was and still is a special region in Indonesia and has the highest proportion of Muslims in Indonesia, mainly living according to the Sharia customs and laws, which was introduced in 2002. Life in Banda Aceh was for a big part, regulated by religion before the catastrophic event.
4.2.1 Spatial analysis

The spatial structure of Banda Aceh shows a "radial symmetrical pattern" in terms of concentration of activity. The highest density is in the center, and extends almost linear with the main road network pattern, relatively radial with the Baiturrahman Grand Mosque positioned in the middle of the city and its surroundings as a major hub supported by Aceh Market and Peunayong Market.

Banda Aceh and the surrounding areas are in the Krueng Aceh floodplain while 70% of its territory is less than 5 meters above sea level. Topography of the land greatly affects the drainage system. Drainage conditions in Banda Aceh are quite varying. They rarely inundated as they do in the eastern and southern cities of Aceh. They are occasionally flooded or are flooded continuously in the areas of the marsh by salt water. Fishpond's and pieces of land with an elevation below sea level are not only flooded during tide but also during ebb. The Banda Aceh Plain is an alluvial plain resulting from the deposition of sand and soil mainly from the Aceh River, flowing northward on a graben, which was formed by movement of the Sumatra Fault. Focusing on the downstream areas, the plain is characterized by deltaic and tidal lowland in the western part of the Drainage Canal of Aceh River, and by distinct rows of beach ridges and swales in the eastern part. The elevation of the plain is 1-3 meters above sea level in the former, except for the higher parts of natural levees along the present and abandoned river channels, while the latter is low-lying, with a small sand dune alongside beach ridges of 1-2 meters above the swale. This delta emerged mainly as a wide tidal area spreading over the 1-2 kilometers to the coast, which, based on the topographical map made in the 1940s, had given over to a widespread mangrove forest. The older villages for the most part are located on slightly higher places as natural levees, beach ridges and sand dunes. The city of Banda Aceh was originally developed in an area with natural levees being bordered on the north by the tidal flats. However, as the land surrounding Banda Aceh City had continued changing, urbanization and sprawl into the flood plain and tidal flats had brought cutting of the mangrove forest and diversions in economic activities such as pond cultivation and salt farming.

BANDA ACEH

SPATIAL ANALYSIS

1. Sub-urban character small compounds

2. City center, ground floor shops, housing or storage on the other floor’s

3. The post-disaster housing mostly at coastal areas
4.2.3 Societal & urban structure

Communities in Banda Aceh have a special, in comparison to other Indonesian areas, hierarchical structure starting at a neighborhood level and ending up to the provincial level. The traditional institutions of Acehnese are formed on the basis of social interaction and geographical conditions, which are closely interwoven. There are both religious and administrative roles. These roles are defined according to the geographical area they cover. It is therefore that, they constitute two major ingredients of the urban structure of the city. Some of those roles are given to people through elections, while the higher administrative bodies designate other more important roles in the society. These community structures are closely related to the urban structures that define the city. The scheme below, starts from the highest administrative role in a provincial level and goes down to the neighborhood representative and its inhabitants. Significant to mention is that one of the most important figures in the local community structure is the head of the Village, named keuckik. He regulates and has under his supervision the village he is living in. The keuckik was before the tsunami occurred, supported by a group of people who were responsible for different aspects of the village. Furthermore the keuchik, was consulted and supported, for all issues, by the village community council, which was consisted of the village respected elderly members called Tuha peut (see appendix 1), also know as LMD. The LMD was responsible to propose a new Keuckik when needed. Additionally the religious leader of the area the imeum had also an important role, since he could influence the decisions of the Keuckik, by supporting them or either criticizing them (Gayarti, 2009; Husin, et al., 2014).
Traditional gampong structure

This hierarchical structure mentioned previously can also be found back in the map of Banda Aceh. The city is divided into gampongs, which are a kind of large neighborhoods/villages with a strong social cohesion. Each gampong is entered through a gate and has its own mosques, schools and elected, as mentioned earlier, village head. The Keuckik, has the highest position within the hierarchy of a gampong. The next position is the secretary. The treasurer whose position is one level higher than the Lingkugans, who is head of the environmental affairs in the village, follows the secretary. A group of several nearby gampong’s is called Mukim, headed by an Imam or Mukim. A group of Mukims forms into a Kenegerian, which again unites into Sagoe led by Panglima Sagoe. The highest institutional level is the Kesultanan, led by a Sultan. The boundaries between gampongs are defined by either geographical elements, such as rivers and mountains, or by the original road structure. A space syntax analysis shows that these boundaries are the roads with high levels of interconnectivity within the city structure. In a few cases highly interconnected roads seem to cut straight through the middle of a gampong.
What is significant to mention about this structures is that each of those gamponds used to have its own sources of income and be, for a large part, responsible for its maintenance and for the employment of its inhabitants. There were self-sustained. Each gampong had room either for rice paddies or other cultivations, depending on its geographical location. Gamponds located near the coastline had their own fishing areas and or fishponds. Those gamponds fields and areas are meant to provide income to the community and work to local inhabitants. Those are under the supervision of the keuckik and the other local leaders. This was the case before the tsunami hit the city.

4.2.4 Culture and religion

Banda Aceh was and still remains in general a diverse city occupied by several ethnic and language groups. The major ethnic groups are the Acehnese. But there is also a significant population of Chinese, who are influential in the business and financial communities.

Aceh is considered, as the province in Indonesia where Islam has the strongest position. Its epicenter is the capital Banda Aceh. It is reign, as mentioned before, by the Islamic Sharia law. Sharia law was put into effect in January 2002, alarming non-Muslim minorities. In September of that year, the Aceh legislative council announced that caning or imprisonment would be the punishment for those who propagated beliefs other than Islam. Anyone who skips Friday prayers three times in a row without an acceptable reason would be fined a maximum of two million rupiahs, six months in jail or three strokes of the cane. Caning also applies to those who open their food stalls during Ramadan. Apart from Mosques, especially in urban areas such as Banda Aceh, there are many mushollas (small mosque) and meunasah (prayer hall), which are smaller Islamic praying rooms. Those can be found almost everywhere, even in offices, shops, airports etc. Every neighborhood has at least one, depending on the size of the neighborhood. During pray time shops used to close and public life, in general, stops in the city so that people can go and pray to the closest mosque or musholla.

The imeum meunasah, which is the religious leader of the village, is another law leader in the traditional gampong structure. He is in charge of the religious affairs in the gampong. He oversees the implementation of Islamic laws and has the management of the Islamic praying halls mentioned previously. Those, serve as the center for all religious activities in a gampong. A meunasah also serves as the center for gampong government. In this case, other than the congregational prayer purposes, it is used as an office for the Keuckik, the secretary, a venue for community discussion and deliberation. Furthermore it is used as an Islamic boarding school, and other social events of the gampong.
Historically both village and religious leader maintain a close professional and personal relationship. While the keuckik focuses on daily official affairs, the imeum meunasah directs his attention to leading the community to live with piety aiming at the hereafter (Husin, et al., 2014).

The above described religious structures together with the gampong structure has traditionally existed in the Acehnese community since the old days and is still in effect today (Gayarti, 2009; Husin, 2014). What becomes apparent by these structures is that the communities are structured in a very complex way that regulates their living according to religion in most cases. Their culture is interwoven with religion and in most cases defined by it. In particular nowadays.

![Image of a village meeting with representatives](http://gamuteunkot.blogspot.nl/)

**4.2.5 The chosen district and village**

For the purpose of this thesis and in order to get a better understanding of the PDUR process, one district and one village has been chosen, to be analyzed in depth and used for this case study. The district of **Meuraxa** and the **Lampaseh Aceh** village. Below a description of the characteristics of both, follows.

**The Meuraxa district**

Meuraxa is one of the 9 sub districts in the Banda Aceh municipality. It is located next to the sea and morphologically it is a very flat. The district area covers 7.76 square kilometers and is consisted of 16
villages which are: Ulee Lheue, Deah Baro, Alue Deah Tengoh, **Lampaseh Aceh**, Deah Glumpang, Asoe Nanggro, Lamjabat, Gampong Baro, Surien, Gampong Pie, Gampong Blang, Lambung, Cot Lamkeweuh, Blang Oi, Pungo, Ujong and Pungo Jurong. The total population of Meuraxa before the tsunami was 31,218 people. The capital of Meuraxa is Ulee Lheue, which is also the harbor of the city. Administratively this area is bordered by:

- North : Malacca Strait
- South : Jaya Baru Sub District
- West : Aceh Besar District
- East : Kutaraja Sub District

Before 2004, Meuraxa was a relatively mixed neighborhood: fishermen’s and fishpond farmers houses were grouped together near the port, in the villages: Ulee Lheue, Deah Baro, Alue Deah Tengoh, Gampong Blang, Gampong Pie, Lampaseh Aceh and Asoe Nangro villages, while civil servants from the middle and upper classes lived between the coast and the city center.

**Fig. 4.8: Meuraxa in summer 2004**
The Lampaseh Aceh village

The village is located at the east boarder of the Meuraxa district and is the fifth biggest village in the district. It is 1.7 kilometers away from the Grand Mosque, which is considered the center of Banda Aceh. In terms of population the village had 5,336 inhabitants before the tsunami. The village had approximately 205 houses. Every resident lived in a house with an area ranging from 36 square meter up to 45 square meters. Most of the population occupation was and still is fishermen, construction workers and in the informal sector. In the picture below the pre disaster situation of the village is shown. The southern part of the village is constituted of mostly dry land with dwellings and other buildings, such as places of worship, and fish and shrimps farms predominantly occupy the northern part of the village. The condition of the structures and infrastructure in the village were poor, roads were not all paved apart from the main road that leads to the harbor and capital of the district, Ulee Lheue. Local materials mostly constructed the houses, predominantly timber with corrugated aluminum plates as roofs.

Characteristics of Lampaseh Aceh:

- Area: 1,079,054 m²
- Population: <2004=5,336, 2013=2,083
- Men in 2013=1,139 (55%) and woman=944 (45%) (BPS, 2014)

Fig. 4.9. Lampaseh Aceh Village on 26.06.2004, source: google earth
4.3 \textit{T=0} The devastating Tsunami

4.3.1 Banda Aceh after the tsunami

Banda Aceh was not frequently the subject of international discussion until 26 December 2004 when the catastrophic event occurred. After the tsunamis 3 out of 9 districts (fig. 4.14) of the city were destroyed completely, 3 others were heavily damaged, and the others were not affected at all. It was estimated that approximately 60\% of the city was destroyed (Tinbergen Institute, 2013;). Out of the 10 markets operating before the tsunamis, only 4 manage to be again operational a year after the event. The total population of Banda Aceh before the tsunamis was 264,618. With 61,065 killed by the tsunamis, the population decreased to 203,553. With regards to the houses, almost all of them in the residential area were swept away, and houses standing more than 3 km from the coast were rare. Heavily damaged houses numbered 17,219 and partly damaged ones numbered 4,193, out of a total of 21,412. From city’s 285 schools, the tsunami destroyed 56 units and damaged 119, leaving 110 in good condition. Inundation continued about 5 to 6 km from the shoreline. In some low areas inundation went even up to 9 km inlands. Even houses flooded but not swept away, had such thick malodorous mud accumulate on floors, which made them uninhabitable. Figure 4.12 – aerial damage map of Banda Aceh after the tsunamis struck – indicates how greatly Banda Aceh was changed. The city’s harbor called Ulee Lheue was completely destroyed and the ferry facilities were devastated, which prohibited travels to Saban, the biggest nearby island. Public facilities were all swept away with inundations at 12.2 m above mean sea level (AMSL) were measured.
Fig. 4.10. Land use plan Banda Aceh in 2004 and in 2005. Source: Bappenas
Meuraxa immediately after the tsunami

The Meuraxa district was the most severely damaged area in Banda Aceh, especially its coastal areas. All of its villages sustained heavy damage, including Lampaseh Aceh. In addition to residents, many governmental buildings, 14 schools, places of worship, hospitals and shops were destroyed by the tsunami. Other elements of the infrastructure were also damaged, including road, bridges, water pipes etc. (IRP, 2007). An estimated 97.9% of the roads where completely destroyed in the district (see appendix 4). Furthermore it was estimated that 3000 houses were destroyed in the area (World Bank, 2011). The community sustained not only the loss of possessions and homes, but also family members. This sub-district was one of the least populated districts in Banda Aceh. The area had a population of 38.814 people in 2004 (BPS, 2007). After the tsunami the population dropped to 7.583 people. Almost 60% of the population died.

Fig. 4.11. Meuraxa district, Januari 28, 2005. Source: Google earth
Lampaseh Aceh immediately after the tsunami

After the tsunami the village was almost completely wiped away. The population after the disaster was drastically lower than its pre-tsunami level, consisting of 439 (BPS, 2007). Nearly 95% of the homes were completely destroyed, with 5% heavily damaged, and 100% of the public facilities and infrastructure sustained heavy damage. The village had approximately 205 houses and after the event only 2 remained (IRP, 2012) together with some other structures as shown in the picture below.

**DISASTER IN LAMBASEH ACEH**

**DAMAGE**

- 95% HOUSES DESTROYED
- 5% HEAVILY DAMAGED
- 100% ROADS DESTROYED

**POPULATION**

BEFORE: 5336

AFTER: 439

FISH & SHRIMPS FARMS DESTROYED

Fig. 4.12. Lampaseh Aceh Jan. 2005. Source: Google Earth
The stakeholders in T=0

In the aftermath of the tsunami almost all stakeholders suffered from severe losses. The (local) governmental bodies, not only suffered because of the facilities and buildings that were destroyed, but also from the staff that had died. The community, hence local gampong authorities was the group that encountered the most casualties. Local structures and leaders were wiped away or severely disrupted and their abilities had been diminished. The table below illustrates the characteristics of the stakeholders in that specific time. Since the scores illustrated in this mapping indicate that no stakeholders group had a high influence and or interest and capacities were severely damaged, it is not needed to provide a stakeholders matrix. It goes without saying that all suffered severe losses by the tsunami. Land use plans were destroyed and village boarders had vague out.

Table 1. Scores of the stakeholders groups

<table>
<thead>
<tr>
<th>WHO</th>
<th>WHY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>T= 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>Central government</td>
<td>1</td>
</tr>
<tr>
<td>Provincial council</td>
<td>1</td>
</tr>
<tr>
<td>Municipality</td>
<td>1</td>
</tr>
<tr>
<td>Multilateral Org.</td>
<td>0</td>
</tr>
<tr>
<td>Private</td>
<td></td>
</tr>
<tr>
<td>Local business</td>
<td>1</td>
</tr>
<tr>
<td>Financial institutions</td>
<td>1</td>
</tr>
<tr>
<td>NGOs</td>
<td>0</td>
</tr>
<tr>
<td>Civic societies</td>
<td></td>
</tr>
<tr>
<td>Local community</td>
<td>1</td>
</tr>
<tr>
<td>Religious groups</td>
<td>1</td>
</tr>
<tr>
<td>Local organizations</td>
<td>1</td>
</tr>
</tbody>
</table>

The projects that we initiated in the aftermath of the tsunami were concentrated around emergency efforts, aiming to provide first aids, food and emergency shelters to the victims of the tsunami. People did not participated in those actions. The governmental army together with army from USA, Japan, Australia and Singapore supported the emergency actions. NGOs started slowly approaching the area. The model below gives an overview of the participation level in the different urban scales.
1. MANIPULATION
2. THERAPY
3. INFORMING
4. CONSULTATION
5. PLACATION
6. PARTNERSHIP
7. DELEGATED POWER
8. CITIZEN CONTROL

T=0

Degree of citizen power
Degree of tokenism
Non-participation

National
Regional
City
District
Village
Project
4.4 T=1 Post disaster situation 1 year after

4.4.1 Banda Aceh a year after the tsunami

In the aftermath of the tsunami, the first assessments showed that 60% of the city of Banda Aceh was destroyed (Wikipedia, 2013; Brata, et al., 2013). A huge and unprecedented response was then triggered (Oxfam, 2005). Due to the date of the event, one day after Christmas, the attention given to the disaster by the media and the international community was one of the biggest ever recorded in history until today. A year after the tsunami occurred many actions have been started in this long process to return the city back to normalcy. The city first had to be cleaned from debris and dead bodies had to be collected as quick as possible to eliminate possible deceases, furthermore emergency shelters and health care facilities were created. According to estimations of the Multi Donor Fund (MDF) tsunami recovery waste management program (see appendix 3), 45 soccer fields full of debris with dimensions of 88,000 square meters each were collected with approximately 400,000 cubic meters of debris (MDF, 2012).

Shortly after the tsunami, the government of Indonesia supported by UN bodies, from which the country requested support, formed the agency for rehabilitation and reconstruction (BRR) under governmental regulation (see appendix 2). This was done, only after the president of the country had requested all of his ministries and line departments to mobilize available resources for the emergency response and recovery processes, and assigned an existing government emergency mechanism, the National Coordinating Board for Disaster Management and IDPs (Bakornas, PBP), to deploy all its resources to Aceh. The agency was mainly tasked with providing immediate assistance to tsunami survivors in the form of: search and rescue, food, shelter and medical help, as well as with burying the dead. Banda Aceh became the center for coordination of most of the actions. Some 15,000 of the 40,000 Indonesian military personnel (TNI) in Aceh were used for the humanitarian relief operation, and an additional 12,000 military personnel were sent to Aceh on January 14, 2005, to hasten the burial of bodies and the clearing of debris (Masyrafah et al., 2008; UNEP, 2007).

As soon as access to the city of Banda Aceh and the region in general, was opened, international NGOs and foreign government relief teams streamed in, together with thousands of volunteers from all levels of the government, from relief organizations, and communities from...
elsewhere in Indonesia. The international response that followed came from all corners of the world, with some 133 countries providing assistance to the humanitarian mission. During the emergency response, which lasted for 6 months, 16,000 foreign military personnel from various countries were deployed.

There is no doubt that international assistance was vital to the relief effort in Banda Aceh. They provided relief to thousands of tsunami victims, and helped prevent a far higher death toll. Led by Bakornas and with the UN Office for the Coordination of Humanitarian Affairs (UN-OCHA) to coordinate, a wide range of activities was immediately undertaken by numerous agencies. They had to focus on the emergency operations ranging from ensuring all basic needs were sufficiently met, such as food, medical supplies and clean water, as well as temporary shelters, to immediate income generation activities, such as the “cash-for-work” program. It is estimated that assistance worth more than US$500 million (BRR, 2007) was deployed during the relief phase. The humanitarian system initiated, realized early the need support for livelihood rehabilitation and had therefore distributed assets such as small boats and fishing nets, as well as cash for work to the people. With regards to emergency housing, needs were met through the initial provision of tents and barracks in the edges of the city, as well as starting the first constructions of permanent housing. Those, were the first steps in the long road to recovery (World Bank; UNEP, 2007, Masyrafah, 2008).

Shortly after the disaster the government of Indonesia recognized the urgent need of an agency with the power to undertake and overlook of actions taken in the affected areas. In April 2005 the BRR was created. This agency had the mandate to rebuild Aceh and Nias, and was directly responsible to the president to avoid bureaucratic tangle that could slow down the work process (BRR, 2009). For the purpose of this research the first phase in disaster circumstances, the emergency phase, is less relevant. Only the formation process of the initial Master Plan for the reconstruction and rehabilitation of the province and in particular of the city, together with the stakeholders involved in it are going to be subject of research.

Having a better understanding of the overall image of Banda Aceh, it is apparent to move on with the situation in the chosen district and village.
Meuraxa district 1 year after

The district was subject to major redevelopment actions since it was severely damaged. It was one of the three districts that saper the biggest distruction. Initially the government of Indonesia wanted to declare Meuraxa and the other two coastal districts as no building zones in order to protect the inhabitants of them, from future disaster events. But after major protests by the local people who had survived, that claimed that their lives and jobs were based in these areas, this plan was then withdrawn. During an interview with mister Edy Huznisal who worked as a community development specialist for UN-Habitat he stated about this plan of the government the following: ....their moving back, in deviance of government policy, became step one in a process of formulating a viable alternative which allows people to decide about their settlements and rebuild their lives in the same place. People were emotionally bonded to their living environment. Fishermen’s did not know what else they could do apart from fishing...

After the debris had been collected a damage assessment research was conducted and the first reconstruction plans had been slowly being developed, six months after the disaster. They were clustered in the first master plan. Barracks were constructed to house the survivors of the tsunami in several areas, and the harbor of Ulee Lheue was slowly being reconstructed to help the incoming flows of goods to the city. The scheme next indicates the level of destruction together with planned timeframe for housing reconstruction in the Meuraxa district a year after the tsunami. The picture below gives an overview of the housing providers in the different areas of Banda Aceh. Areas were divided to several agencies in order to structure the housing provision in the city.
Lampaseh Aceh village 1 year after

The village was completely destroyed and therefore it had to be rebuild, from scratch. There were several housing programs initiated in Lampaseh Aceh. The village was included in a housing program called the Sheikh Khalifa City, which was financed by the United Arabic Emirates (UAE) and will be described in the next phase. Furthermore the local organization Elsaka was also committed to construct some of the houses in the village. The organization that was responsible for the construction of the houses donated by the UAE, was UN-Habitat. In comparison to other NGOs and organizations it took UN-habitat almost a year before the first houses where built. The approach they used was different in comparison to the approaches used by the other housing providers. UN-HABITAT had taken a community-driven approach to reconstruction and rehabilitation in the tsunami-affected areas in general. Right from the start, UN-HABITAT advocated that the ‘recovery’ strategy must put people at the very center of decision-making so that reconstruction becomes part of a continuous recovery process (UN-habitat, 2007). In the mean time, people were housed in semi permanent houses provided by different aid agencies. Examples of such houses are shown below in picture 4.17. Furthermore in the next picture 4.18 the situation of Lampaseh Aceh village is shown, a year after the disaster occurred.
Table 2. General statistics of the Lampaseh Aceh Village

<table>
<thead>
<tr>
<th>Lampaseh Aceh village statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of family households (pre-tsunami residents)</td>
<td>5336</td>
</tr>
<tr>
<td>Number of family head after tsunami (new comers)</td>
<td>439</td>
</tr>
<tr>
<td>Number of houses (other buildings excluded) before tsunami</td>
<td>205</td>
</tr>
<tr>
<td>Number of houses after tsunami</td>
<td>2</td>
</tr>
<tr>
<td>Number of new houses planned after tsunami</td>
<td>450</td>
</tr>
<tr>
<td>Number of houses need repairs after tsunami</td>
<td>2</td>
</tr>
<tr>
<td>Number of houses do not need reconstruction or repairs</td>
<td>0</td>
</tr>
<tr>
<td>% Living in permanent housing in the village</td>
<td>150</td>
</tr>
<tr>
<td>% Living in not permanent housing in the village</td>
<td>55</td>
</tr>
<tr>
<td>New houses (plan)</td>
<td>1033</td>
</tr>
<tr>
<td>New houses (build)</td>
<td>740</td>
</tr>
</tbody>
</table>

(Source: BPS, 2007; World Bank, 2005; UN-Habitat, 2007; BRR, 2009)

Fig. 4.18 Lampaseh Aceh 6 months after the tsunami
4.4.2 Formulating the Master Plan

Shortly after the tsunami had taken place the government of Indonesia had to develop a master plan for the reconstruction and rehabilitation of the whole province of Aceh and Nias. This was done collaboratively with the support of various (international) stakeholders, both at the central and regional levels, which comprised government agencies and non-government agencies and multilateral organizations. The initial Master Plan was designed with the support of the United Nations. The type of strategy used included several characteristics of the proposed strategies illustrated in the previous chapter by Drabek. But the strategy that comes the closest was the Customer/control strategy (see p. 23). The government was, after the first assessments were completed, aware that the people were the most affected. Their needs and requests were the central point, around which the master plan was developed.

This Master plan for reconstruction and rehabilitation had to ensure that it was a holistic and comprehensive plan, which took into account the uniqueness of the area. Subsequently this master plan had to be used as a foundation for regional governments and the BRR together with the people of the province Aceh, in preparing the action plan and the implementation thereof. The Master Plan included 6 clusters that covered all aspects of the redevelopment process. These clusters were underpinned by plans. In this thesis only cluster 6, which deals with Infrastructure and housing, is elaborated and analyzed.

For each district of the province individual plans were designed in order to streamline the actions based on the local characteristics of the area but also based on the damage the tsunami caused in that particular area. Furthermore on a city level, individual plans were designed to rehabilitate the affected areas, in accordance to the general guidelines of the overall master plan. The municipality of Banda Aceh was responsible to development a comprehensive plan for the city (BRR, 2009). In the formation process of it, the remaining district leaders (Kecamatan), the BRR and several organizations assisted the city in the detailed design of the infrastructure and housing cluster. The total number of houses that needed to be constructed in Banda Aceh was 38,228 (BRR, 2009; World Bank, 2007; UN-Habitat, 2007)).

Actors in t=1

Initially, the emergency response of first rescue operations, food aid, medical and forensic response, was in the hands of the central government and the army of Indonesia, with some support of the US, Singapore, and Australian military, and with NGOs, bilateral and multilateral agencies coming in very rapidly, like Oxfam, Red Cross, US AID, AusAid, UN High Commission of Refugees, and many others. Owing to the fact that both the provincial and local governments of Aceh had substantial losses among their human resources (with thousands of local officers dead) and operational facilities, their
position was severely weakened. Thus, hindered from leading the rehabilitation and reconstruction process, they were heavily dependent on outside assistance from Jakarta and outside the country. While central government ministries had limited capacity in becoming operational on the ground, not surprisingly, international and national NGOs have become the real drivers of emergency aid, rehabilitation and reconstruction. At its peak in the beginning of 2005, more than 200 aid agencies, mostly NGOs, were registered with the authorities and documented by the United Nations Humanitarian Information Center (UNHIC). Multilateral agencies like Asian Development Bank (ADB) and the World Bank, through the Multi-Donor Fund (MDF), which the World Bank coordinates, became operational by May 2005, and have since then increased and consolidated their contributions. In May 2005, the initial disagreement among the central government line ministries and BAPPENAS, together with the multiplicity of actors led to the establishment of BRR as a high-powered implementation oversight agency (see appendix 2).

The role of the community in the initial Master Plan

Concerning the stake of community participation in the initial Master plan one of the most distinguishable features of reconstruction in Aceh and Nias has been the way in which communities had come together to determine their needs and priorities, and to decide on leadership of the recovery (UN-Habitat, 2007). This has not been easy, as the earthquake and tsunami had destroyed people, homes and infrastructure, but also community structures, and killed countless religious and community leaders, social workers, teachers, and civil society representatives. After the disaster, many communities were divided into tented camps, host communities and barracks, which contributed to an erosion of community cohesion. Just when it was most urgently needed, the capacity of communities to come together, comfort each other, and start the rebuilding of lives was badly battered.

Despite the urge of the situation the sense of community the people in Banda Aceh showed, had been a source of strength in the emergency response and after. Aceh in general, has a rich tradition of associations, ranging from faith-related activities and community-based organizations (e.g., savings clubs, village development associations, and funeral societies) to semi-local government structures, based on elected neighborhood and community representatives. Relief, reconstruction and rehabilitation agencies quickly found some community leaders and structures they could work with, and where leaders had been killed, new informal ones swiftly emerged, said Edy Husnizal who comes from Banda Aceh and was working from 2005 until 2010 for certain community development programs for the International Organization for Migration (IOM) and UN-Habitat. While many government units were in disarray, community leaders helped with information gathering, reuniting separated families, and spreading information about available help. They also gave, in most of the cases, a coherent message of needs to the many organizations that arrived to assist with recovery and reconstruction.
Critics about the Master Plan in t=1

Short after the first actions were planned the central government seemed to understand the need for more effective coordination with local governments and NGO’s as well as for a more decentralised approach to the reconstruction effort. To many actors had come to the area and that resulted in a big chaos in the first months. From March 2005 onwards, BAPPENAS conducted intensive consultations with community, religious political leaders in the affected areas as well as with NGO’s and donors (World Bank, 2005). There were possible, Syriah Kuala University in Banda Aceh was given assistance to organise input from local communities into the consultation process while central and local government line agencies also provided expertise. Donors were also encouraged to contribute suggestions. The Master Plan for the city of Banda Aceh that then resulted was quite comprehensive though the central government recognised that no one plan could address every issue likely to arise in the rehabilitation process.

Nevertheless, despite the extensive consultations, many local communities and NGO’s reacted negatively to that Master Plan. Many local communities felt that their aspirations had not been properly reflected. In response, as a conciliatory gesture only a couple of days after his inauguration in April 2005, the new Head of the BRR, Dr. Kuntoro, agreed that many aspects had not been adequately covered in the Master Plan. He indicated that the BRR would not follow the plan to the letter and that rather, it would be used as a reference document in a flexible way (Kompas, 3 May 2005). The local Head of the BRR in Nias also agreed that the Master Plan was not necessarily a suitable strategy for redevelopment in Nias (Kompas, 19 August 2005). It was therefore soon agreed that an evolutionary approach would be adopted and that there would not be any single rigid “blueprint approach” that would guide the process of reconstruction (Indrawati, 2005; World Bank, 2005). The initial strategy was then adjusted and deliberated customer strategy, as also described by Drabek, was used. For example, under the new approach communities were to be provided with opportunities to participate in decision-making about where, how, and by whom houses and other buildings were to be reconstructed. The central government would concentrate on the provision of principal infrastructure facilities such as main roads, electricity and water sanitation structures. Earlier plans that had outlined regulations for tough zoning, mandatory setbacks from the sea, relocation of local markets, and so on were set aside. Leaders in Jakarta committed themselves to ensuring that local people in Aceh and Nias were involved in the decision-making processes about such matters (Sen and Steer, 2005). In this way, disagreements between the central government on the one hand and local governments and communities on the other were supposed to be kept to a minimum. Since the magnitude of the disaster and the response to it where unprecedented the aim was that if the reconstruction process in Aceh turns out to be successful over the long-term there is a strong likelihood that this pattern of strong collaboration between stakeholders will be adopted as the blueprint for regional development in other parts of Indonesia and other disaster areas.
Issues occurred in $t=1$

It goes without saying that such large development action do not go without having issues occurring and challenges. Hereafter a description of both is provided. The issues of land use, zoning, and land rights in the wake of the disasters were complex and sensitive. The Master Plan supposedly gave special attention to these issues and offered draft plans for how to use space in affected districts (kabupaten/kota). Still many issues occurred. Local governments were invited to build on the drafts as they develop detailed spatial plans in close consultation with communities. But this was not always the case. Especially in heavily damaged communities new “leaders” were taking decisions without any consultation of the survivors of that particular area. Furthermore some communities were completely swept away; there the higher positioned authority had to take decisions with regards to that area. This did not have the desired result since people where not always satisfied. Furthermore these higher rank authorities did not have adequate knowledge of the area characteristics and therefore made assumptions. The primary aim of the process was to ensure that as areas in and settlements in Banda Aceh were rebuilt, living conditions were improved and lives and property were safeguarded in the event of future disasters. This was at least the initial idea. Though many people wanted just to return to their old environment and start their lives again from there. This wasn’t allowed in the first period in coastal areas. The government had implemented a no building zone in order to safeguard the population of the city from future catastrophic events. This plan found a lot of resistance from local’s who wanted to return back “home”. Soon after the plan was withdrawn, as described previously. Below some of the general policies and strategies that had to guide the spatial planning procedures are described together with the major problems that occurred.

<table>
<thead>
<tr>
<th>Policies &amp; strategies</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Give residents freedom of choice in deciding whether to return to their place of origin or to move to another location.</td>
<td>Herewith people felt free to go to their previous living environments. This was decided during the first community meetings. Not every community member wanted to return back to his old living environment due to fear for future catastrophic events.</td>
</tr>
<tr>
<td>2 In the event that land: (a) has been destroyed or flooded, (b) is so polluted as to be unfit for settlement, or (c) is needed to safeguard the entire community from future disasters (such as escape routes or buffer zones), the government would provide aid or fair compensation to the owner. In circumstances (a) or (b), each family would receive 200 square meters of land with a core house of 36 square meters at a location chosen by the government. In the case of (c), compensation would be governed by relevant laws and regulations.</td>
<td>Although such measurement were taken into consideration the application of them was not always granted. Furthermore corruption was a major issue that time. People from different places came to register in order to benefit from the enormous redevelopment actions that were planned. Furthermore since much power was given to community leader friction often occurred among community members. Another important issue was the disbelief of the communities towards the government agencies.</td>
</tr>
<tr>
<td>3 Spatial plans would honor religious and cultural values and activities while safeguarding lives and property.</td>
<td>Despite that some beneficiaries were refusing help from people and organizations of other religions. It took a long time before they accepted the help of those, even in such situation. It required many consultations with the local leaders and NGO’s to convinced the local communities that intentions were in their favor.</td>
</tr>
<tr>
<td>4 Spatial planning should combine top-down and bottom-up approaches. i.e., local governments would take the lead in planning city and regional structures, with communities playing a prominent role in planning settlement-scale and sub-city-scale development.</td>
<td>But, due to capacity shortage major problems occurred. There was little capacity and knowledge, which resulted in un-organized actions and dissatisfaction of the beneficiaries.</td>
</tr>
<tr>
<td>5 To ensure that citizens’ civil rights were protected, the development of spatial plans should begin with the collection of physical and legal data, including reconstruction of property boundaries.</td>
<td>The problem was that many people that survived had left the city and went to relatives in other cities. Furthermore local people that where living in other areas of Indonesia came back to Banda Aceh in order to register and receive benefits. People who had offered themselves to collect such data did not receive training about those</td>
</tr>
</tbody>
</table>
4.4.3 Challenges in T=1

As the city of Banda Aceh became the epicenter of relief and reconstruction efforts for the whole province of Aceh and Nias, the city was therefore confronted with many challenges. In some occasions challenges where triggering or affecting other challenges, making the situation even harder and complex to deal with. Apart from the practical challenges such as, where to house all the disaster responders, and were to safely store goods coming in, the most significant challenges Banda Aceh had to deal with were: 1) Political situation, 2) coordination, 3) collaboration & communication, 4) Mismatches in demand and supply and, 5) Interagency competition and 6) community participation. Those challenges have derived from the literature review but also from the interviews with representatives of the different stakeholder groups. The interviewees where questioned about the challenges they faced in the PDUR process. A list of the interviewed people can be found in the appendix (see appendix 5). Below follows an explanation of each challenge, supported by literature review and interviews. Thereafter by analyzing we can position them in the matrix of Influence and stake together with an interrelationship graph at the end and their position in the ladder is given.

Each matrix will form the basis for the overview matrix, provided at the end of t=1. Thereafter the graph is presented which corresponds to the ladder of participation ladder.

1) The Political situation challenge

In the pre-disaster situation, the province of Aceh had been in conflict with the central government of Indonesia. The political situation was under tremendous stress and very fragile, because of the “The Free Aceh movement” (GAM), which was a separatist movement, who was seeking independence for the Aceh region of Sumatra from Indonesia the last 35 years. The GAM was fighting with the Indonesian government forces in the Aceh insurgency from 1976 until the beginning of 2005. In total 15,000 lives are estimated to have being lost (Collier, et al., 2005). The organization surrendered its separatist intentions and dissolved its armed wing, following the 2005 peace agreement with the Indonesian Government (Aspinall, 2005). The GAM then declared a ceasefire of hostilities to allow for aid to reach within the disputed area. In turn, the Indonesian government temporarily removed restrictions of northern Sumatra to allow for rescue efforts in that area.

The community was isolated from the rest of the world because the central government had prohibited visits to that region. It goes without saying that this had a major influence on the daily live of the inhabitants in Aceh, which also created an unbalanced relation between central government, regional government and communities. Based on the description of the
coordination challenge, supported by the interview outcomes, the following matrix has been drawn.

Table 3. Influence & stake matrix for the Challenge of the Political Situation in t=1

<table>
<thead>
<tr>
<th>Low influence</th>
<th>High influence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low stake</strong></td>
<td><strong>High influence</strong></td>
</tr>
<tr>
<td>Least priority stakeholder group</td>
<td>Useful for decision and opinion formulation, brokering</td>
</tr>
<tr>
<td>• Local Corporation &amp; business</td>
<td>• Religious groups</td>
</tr>
<tr>
<td>• Local community</td>
<td></td>
</tr>
<tr>
<td>• NGOs</td>
<td></td>
</tr>
<tr>
<td><strong>High stake</strong></td>
<td>Most critical stakeholder group</td>
</tr>
<tr>
<td>Important stakeholder group perhaps in need of empowerment</td>
<td>• Central government</td>
</tr>
</tbody>
</table>

The **community members** (interviewees no. 18-21, appendix 6) when asked about the political situation, they answered that they did not participated in any form of contribution to it, since their priorities at that moment were to re-establish their lives. For someone to admit that he was a member of the GAM, after the tsunami was very hard and rare. People were afraid to be stigmatized and be left with out benefits. They did say that some religious leaders had a strategic role prior the disaster, in supporting the GAM movement and spreading messages, yet they also did not openly admitted it. The faith in the politicians was absence the Keuckik said, therefore trust to believe them was very little and therefore people were afraid to trust government official the first months after the disaster.

The **government representatives**, who were interviewed (interviewees no. 1-3 appendix 6), were very careful in their expressions about the situation. The government was fighting this situation for many years, because Aceh is a very resourceful area in a strategic position for the country. It is estimated that a few kilometers outside Banda Aceh large oil and gas resources are waiting to be exploited. Only after the disaster occurred, both sides manage to find consensus and ceasefire (Kelman, 2007). Yet the government needed to make efforts and win the trust of the local people, said Ferry Suferila who worked for Charitas Germany, but was involved in the local government structures prior the event (interviewee no. 9).

With regards to the **NGOs**, only the American Red Cross and some other local NGOS were present in the area prior to the disaster. Their activities were mainly in the health sector and therefore they did not have any role or influence in this particular challenge. Mr. Gressando (interviewee no. 4) also confirmed this in his interview. He worked for the American Red Cross.
2) The challenge to Coordinate

One the major challenges, if not the most important one was coordination. The magnitude of the disaster in combination with the period it occurred (26 December 2004) resulted in many organizations offering their help together with numerous nations that were offering their support and assistance to the government of Indonesia. After the disaster, it was estimated that approximately 600 organizations it total (NGOs, Donors, UNbodies, etc.) had offered their help until the end of the redevelopment actions in 2010, together with 133 nations providing assistance and funds for the whole region of Aceh (World Bank, 2005; Masurafah et al., 2008). Since the response was so high the coordination operation aiming to streamline the support efforts was immensely complex and difficult. Almost impossible some argued (Masyrafah, 2008). The government of Indonesia requested the support of the United Nations, which responded immediately, in order to start the emergency operations in the area. The government was under tremendous stress in their attempt to coordinate all actions and requests aiming to assist the survivors of the disaster. The UN Emergency Relief Coordination was in control of the overall coordination in the Asian tsunami affected countries and assisted in close collaboration with the government of Indonesia the responses of donors in the affected province of Aceh and Nias.

As soon as access to the province was opened on the evening of December 28, 2004, international non-government organizations and foreign government relief teams streamed in, together with thousands of volunteers from the provincial government, the central government, relief organizations, and communities from elsewhere in Indonesia that wanted to help. During the emergency response, 16,000 foreign military personnel from various countries were deployed. It has been argued that the relief phase was effective in ensuring that immediate survival needs were met through a mixture of local assistance in the immediate aftermath and international assistance in the first weeks after the disaster (Masysaraf et al., 2008; Clinton, 2006). However, these relief responses were generally not based on joint needs assessments and were not well coordinated. This was even admitted by the national government through their responsible agency (BRR, 2009). This led to an excess of some interventions, such as medical teams, together with shortages in less accessible areas or less popular sectors, such as water supply (Goyet and Morinière, 2006 in Masryaçon et al., 2008). For that reason the Indonesian government initiated an organization, under presidential act with ministerial power and authority, the Agency for Reconstruction and Rehabilitation (BRR). It had the task and purpose to coordinate the actions that would follow. The BRR (see appendix 2) was given the task to be the overall coordination mechanism for all actions in the affected areas of Aceh and Nias.

The recovery programme in Aceh and Nias is regarded as one of the largest humanitarian programmes in history (Brata, et al., 2013). The great and continuously rising number of aid agencies in the first phase after the disaster, caused also difficulties in providing adequate information, coordination and planning for effective development assistance and therefore the Coordination Framework Aceh and Nias (CFAN) was initiated. Therefore the CFAN is elaborated hereafter.
The coordination framework in t=1

In Aceh, three lead bodies provided the broad coordination framework for the reconstruction program, as depicted in figure 4.19. First, the Agency for Reconstruction and Rehabilitation (BRR) became the central body for government activity. Second, a Multi Donor Fund (see appendix 3) was created to enable bilateral and multilateral donors to coordinate funds. The MDF also acted as a forum to bring together funding agencies (bi- and multilateral agencies, as well as key NGOs with significant funding of their own) to allow open dialogue. Third, the United Nations created the United Nations Office of the Recovery Coordinator (UNORC) primarily to coordinate United Nations agencies and provide a single access point for BRR to the United Nations system. One could argue that the community representation misses in this coordination framework, but keeping in mind the devastation the tsunami brought it is justifiable why they did not take part in this framework.

Historically, NGO’s have relied on traditional donors and United Nations agencies for funding and had therefore not required such direct coordination amongst them. However, with many NGOs raising their own funds, there lacked a clear mechanism for coordinating their NGO activity. The very fact that NGOs did not need to seek funds from traditional sources had created a disincentive to coordinate, as many NGOs simply developed programs that were relevant to their own interests, often without regard to the city Master Plan that was supposed to be the foundation of actions. This issue was addressed when BRR required all NGOs to register and seek approval for all their activities. In addition, the UNORC informally expanded its role to attempt to bring together NGOs at an Inter-Agency Steering Committee (IASC) in order to open dialogue, share information and minimize the likelihood of duplication of projects. In the matrix below the influence and stake in the coordination challenge is depicted. There after it is clarified.
The community was very clear in their opinion about the coordination. The Keuckik of the village literally said that it was a complete chaos. As a leader of a village that survived the tsunami, he was requested to gather his inhabitants and conduct small damage assessments. Yet the method of how to properly do that and how to report such data was not known neither thoroughly gathered. When questioned about the first months after he admitted that the first aid was delivered shortly after the tsunami, but the months that would follow were the worst in his life. Unable to collect his villagers his did not know how many people had survived. According to the keuckik, the first five months they were living in barracks close to the airport of Banda Aceh trying to realize what happened and trying to find relatives and friends. It took them two months to understand the objective of the new plans UN-Habitat was proposing, and another four months, when group formations were called with the aim to produce ideas and suggestions for the redevelopment of their village. He was responsible for the coordination of the villages meetings, but after having lost completely everything he was unable to reach all the villagers and consult them about their needs. They were spread around the city in different areas. Furthermore, the BRR was complaining to the village head and UN-Habitat about the slow process they were booking. Yet the community driven approach of UN-Habitat had chosen, required many community consultations in an area where no data, or land use plans were available nor existed. The friction between the community the BRR and UN-Habitat was high at that moment. For that reason UN-Habitat decided to start building 44 houses so that they could show the BRR that progress was being booked.

Although the government representatives that were interviewed (interviewees no. 1-3) about the coordination challenge during t=1, admitted that the coordination did not run smoothly the first months after the disaster, they were somehow positive about the way things were going. Doubtless mistakes were made, said Emir Riza (interviewee no. 2) who was deputy of Economics at the BRR, but it was impossible to deal with such a large disaster. Even the UN was confronted with this situation and therefore initiated the UNORC to coordinate its bodies. We were all surprised with the magnitude of the disaster. The humanity had never experienced such a disaster before, he said.

Table 4. Influence and stake matrix in t=1 for the coordination challenge.

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<tr>
<th>Low</th>
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<td>Low stake</td>
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<td>Least priority stakeholder group</td>
<td>• Local Corporation &amp; business</td>
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<td>• Local Organizations</td>
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<tr>
<td>High stake</td>
<td>Important stakeholder group perhaps in need of empowerment</td>
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As argued before the NGOs that came into the city to provide help had traditionally relied on funds from UN-Bodies and other multilateral organizations. Due to the scale and date of the disaster, they manage to collect far larger funds than they ever did in the past. Many NGOs simply developed programs that were relevant to their own interests, often without regard to the city Master Plan that was supposed to be the foundation of actions. The BRR had then required all NGOs to register and seek approval for all their activities, a very time consuming process said Ferry Suferila who worked for both Catholic Relief services and the German Charitas, and therefore some tried to avoid it by bribing the BRR officials (interviewee no. 11).

3) The challenge of Collaboration and communication

As mentioned before the amount of organizations willing to provide assistance was so high that in was impossible to coordinate effectively the emergency response actions. This led to difficulties in collaboration and inadequate information about the actual situation and the needs in Aceh. Banda Aceh was fortunate, in this unfortunate moment, to be the center of all redevelopment actions. Therefore the assessment of needs was conducted faster in comparison to other areas. Yet even then, communication among the aid agencies was stagnating due to a lack of a central mean where they could get and deliver information easily. Furthermore due to this gap in coordination the some NGOs started initiating projects without communicating it to the BRR who was supposed to have the lead in the redevelopment actions. The community could not always collaborate with the BRR due a lack of trust to the BRR, which was seen as a governmental body. In the matrix bellow the position of the stakeholders depicts the previously points mentioned in this challenge. Thereafter arguments are provided with regards to this challenge. Those have derive from the interviews.

Table 5. Influence and stake matrix in t=1 for the collaboration and communication challenge

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<th>Low influence</th>
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<td><strong>Low stake</strong></td>
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<td>Least priority stakeholder group</td>
<td>Useful for decision and opinion formulation, brokering</td>
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<td>• Local Corporation &amp; business</td>
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<td>• Local Organizations</td>
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<td><strong>High stake</strong></td>
<td>Most critical stakeholder group</td>
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<td>Important stakeholder group perhaps in need of empowerment</td>
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<td>• Multilateral organizations</td>
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The local community said they were frustrated to see that elsewhere progress was booked and houses were build and they were continuously requested to attend consultation meetings in order to come up with plan that would support the design of their village, said the Keuckik and the other
villages when interviewed (Interviewee no. 18, 21 and 8). The would have preferred less consultations and faster results.

The government represented by the BRR, was aware of the difficulties to streamline communication and implemented a mandatory form for aid agencies that wanted to start a project. Other issues that occurred, such as land ownership, often disrupted the collaboration between BRR and NGOs. Land titles had been lost and people had to prove that the land was belonging to them by presenting two witnesses that could confirm that the land was belonging to that person said the Keuckik and the Junia Gressando from UN-Habitat. Due to the fact that many people had died, it has hard to identify all land owners and some NGOs started building in land that later on seemed to belong to someone else. Landownership issues were a huger problem in areas were leaders had died.

4) The challenge of mismatches between demand and supply

All these previously mentioned challenges triggered also an other challenge, namely a mismatch between demand and supply. Aid agencies were criticized for their slow speed and their failure to fulfill commitments (UN-Habitat, 2007). Agencies were not adequately able to assess their ability to deliver since other factors were causing delays (Masyrafah, 2008; World Bank, 2005). Communities were requested to call village meetings in order to make a list of demands and translated them, with the support of the designated agency and the supervision of the BRR, into plans. Those lists were not always translated into the plans, and as a result frustrations went high Julian Gressando and Bima Indra from UNDP argued (Interviewee no. 4 a& 5). Such consultations were held in some cases, more than 3 times in order to finalized the actual needs of one specific topic. The Keuckik and the other local leaders had to sign it and hang it in the community meeting place in order to minimize misunderstandings and allow others to see it (Da Silva, 2010; interviewee no.18). In the matrix below we see that in this challenge stakeholders are positioned in all quadrants. They either have high influence and stake in the challenge or, very low. This can be clarified with the importance of the redevelopment actions. The local community had a high stake since it was the receiver of the actions and therefore their demands were heard but not always fully translated into the actual plans. Governmental bodies and NGOs had both. Although the consulted their final decision did not always included those.
Table 6. Influence and stake matrix in t=1 for the mismatches challenge

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<th>Low influence</th>
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<td><strong>Low stake</strong></td>
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<td>Least priority stakeholder group</td>
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<td>• NGOs</td>
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5) The Interagency competition challenge

With such a large number of actors, coordination was a major challenge as has been said repeatedly in the early stage or the PDUR in Banda Aceh. Another major challenge during the first phase was when many of those actors in housing, battled over claims to housing development areas. They wanted to be in the epicenter of the actions, which was Banda Aceh. The city was readily accessible and resources were easier to mobilize. Furthermore the international media was stationed there, and that particular fact was able to give them some publicity, which many sought. (Masyrafah et al., 2008; Da Silva, 2010). The government tried through the BRR, to eliminate such competition, but the case was that some NGOs had already started projects in certain areas and wanted to finalize them because they had already informed their donors, which required to see quick results. This was not only argued but most of the interviewees but also from the Disaster Emergency Committee (DEC) in their report about funding (Da Silva, 2010, p.33). In the matrix below both NGOs and government are position in the quadrant with the higher stake and influence. Communities and local organizations had a high stake as the receivers and users of the projects but had little influence.

Table 7. Influence and stake matrix in t=1 for the interagency competition challenge

<table>
<thead>
<tr>
<th>Low influence</th>
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<td><strong>Low stake</strong></td>
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<tr>
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<td>• Local Organizations</td>
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6) The challenge of Community Participation

However, as mentioned briefly before and can be understood by the immense response and disruption, community participation was not an easy task. It was confronted with several challenges apart. The most important ones being 1) time constrain, 2) the condition of the community, 3) the fact that this community participation principle was not yet institutionalized, 4) the lack of knowledge and workforce (capacity), 5) leadership issues among community members and 6) coordination and communication of the planned actions and finally 7) the lack of expertise were some of the major challenges in the aftermath of the disaster.

In literature it is often argued that effective community participation takes time, and necessitates continuous facilitation. Many of the agencies and NGOs, which attempted to guide these community participation processes, had spread their activities over a wide territory, and could not devote as much effort to continuously nurture these community groups (UN-Habitat, 2007; Da Silva, 2010; Masyrafah, 2008). Experience demonstrates that people were still too preoccupied with their trauma of personal losses such as, their family members and their personal belongings and shelters. Lengthy and frequent community planning meetings and decisions for the public good and community affairs obviously had to take second rank of order, in the first months after the disaster.

Julian Gressendo who worked for UN-Habitat as a senior project officer and later for the American Red Cross, said in his interview when questioned: what was the stake of involvement of the community in the initial master plan formation? “Despite the good intentions of the community-based development approach, the reality of many dispersed and fractured communities, together with their more important livelihood concerns had in fact made it, rather difficult to implement the community-based development approach optimally.” Here out it becomes clear that community participation did not always have the highest priority in the relief actions. This is the first sign that community participation should not and cannot be very high in the aftermath of a disaster in a developing country such as Indonesia.

Furthermore leadership issues between old and new village elites were added to the list of complications. While stressing the role of community participation in rebuilding affected areas, the Master Plan and its initiators acknowledged that it could be difficult to put the principle into practice. This was the case not simply because the disaster had claimed many lives and dislocated communities, but also because the concept had not yet been successfully institutionalized in the development process throughout Indonesia (Sofhani, 2005). Furthermore for the first 5 months, people were housed temporarily in refuge camps, which made the coordination and consultation about specific actions extremely difficult since people had to come from different refugee camps towards a central location to discuss upon further steps. The infrastructure was only basic back then until the end of the first 6 months, when the debris from the roads and reconstruction of them had started. Furthermore most have-nots did no longer had any transportation mean. The Keuckik, of
Lampaseh Aceh when questioned about the condition of his community said the following: “for most of the people he knew, it took at least 2 months to realize and process what had happen to them self’s and their living environment.” The regional coordinator of the area Edy Husnizal, who worked, among others, for the IOM, also confirmed this argument. It was impossible to realize and comprehend the situation, let alone join consultations. (Interviewees no. 6 & 18).

The months after, community participants were defined both as private non-profit associations, including religious and social institutions based on customary law, and as private for-profit associations. Under the oversight of the new Rehabilitation and Reconstruction Agency, local governments had to facilitate the participation of the private sector and NGOs in the rehabilitation and reconstruction process. The problem was that such knowledge had to be taught firstly to the local governments and that required time and enough people that were able to teach. The capacity loss caused delays in actions. Furthermore the communities were requested to participate in several actions. But what was often the case is that the community members had limited to zero knowledge to conduct some of these actions. An example was given by the Keuckik when questioned about his involvement in the formation of his village redevelopment plan. He said the following:

“First I called the survivors of my village to discuss about the future plans. We were supported by the BRR and later by the UN-Habitat staff. The organization was rather chaotic. People were full of disbelief, due to the past experience and perception they had about the government. It took four months for the people to understand the objective the BRR had about reconstructing our Gampong. Although we were given the freedom to decide and help design our Gampong the data about the actual situation was still missing. We where asked to collect the data, but we did not know how. We did not have the required knowledge. Therefore friction between and among my community members the BRR and UN-habitat who was responsible for the construction of the houses, occurred. The BRR was eager to see quick results which we and UN-Habitat were unable to deliver...”

Fig 4.21 Temporary community center located next to the tent camps
We can conclude that community entities had a high level of influence and stake in the community participation challenge, but this did not ensure that their views were not always translated into plans and they were not always heard.

Table 8. Influence and stake matrix in t=1 for the community participation challenge

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<thead>
<tr>
<th></th>
<th>Low influence</th>
<th>High influence</th>
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<td><strong>Low stake</strong></td>
<td>Least priority stakeholder group</td>
<td>Useful for decision and opinion formulation, brokering</td>
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<tr>
<td><strong>High stake</strong></td>
<td>Important stakeholder group perhaps in need of empowerment</td>
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<td>• Local Corporation &amp; business</td>
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4.4.5 Analysis of the challenges and the stakeholders interrelationships in t=1

Taking all the above into account we can proceed to the analysis of the stakeholders and their characteristics as described in the research framework in the previous chapter. First the stakeholder mapping is provided for t=1. In this table we can identify the characteristics such as their influence, interest and capacity of the different stakeholders in t=1. Secondly the general stake-influence matrix is accordingly drawn for t=1 and as third the graph is given, which is based on the challenges matrixes. An overview of the challenges can be find in the appendix number 7. The graph corresponds to the ladder of participation, which is based on Arnsteins model. In the last part the conclusions are provided with regards to the analysis in t=1. Together with a figure which illustrates the participation of the community in the different levels.

Table 9: Stakeholders mapping & analysis in T=1

<table>
<thead>
<tr>
<th>WHO</th>
<th>WH Y</th>
<th>T= 1</th>
<th>Influence</th>
<th>Interest</th>
<th>Capacity</th>
<th>Implementation instruments</th>
<th>Affected</th>
<th>Funds</th>
<th>Law</th>
<th>Property</th>
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<tbody>
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<td>Financial Institutions</td>
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<td>NGOs</td>
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<tr>
<td>Religious groups</td>
<td></td>
<td>3</td>
<td>1</td>
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<tr>
<td>Local organizations</td>
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<td>2</td>
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<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
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</tbody>
</table>

From the stakeholders mapping drawn for T=1 and the matrixes designed for the different challenges we can fill in the general matrix below, which resembles the overall stake and influence of the different stakeholders in t=1.

<table>
<thead>
<tr>
<th>Low influence</th>
<th>High influence</th>
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<tbody>
<tr>
<td><strong>Low stake</strong></td>
<td><strong>High stake</strong></td>
</tr>
<tr>
<td>Least priority stakeholder group</td>
<td>Important stakeholder group perhaps in need of</td>
</tr>
<tr>
<td>• Local Corporation &amp; business</td>
<td>Most critical stakeholder group</td>
</tr>
<tr>
<td>Usefull for decision and opinion formulation, brokering</td>
<td></td>
</tr>
<tr>
<td>• Financial Institutions</td>
<td></td>
</tr>
<tr>
<td>• Religious groups</td>
<td></td>
</tr>
<tr>
<td>• NGOs</td>
<td></td>
</tr>
</tbody>
</table>
From the stakeholders mapping above we can conclude that the **central government**, represented by the BRR, has the highest score. This is not strange since they were appointed as a super ministry to coordinate and facilitate the redevelopment actions, regardless their performance. They were able to mobilize large sums of people from other ministries and departments and had a high interest to start the whole procedure as soon and as good as possible. **Multilateral organizations** had a medium to high influence since they were requested to participate in the coordination framework and this can be drawn from their influence and interest score. The **local community** had a low influence at that time, since the only wanted to survive and start rehabilitating their lives.

Having the characteristics of the stakeholders divined, and by positioning them from the different matrixes of the challenges in an overview matrix we can now proceed to the next step, which is the graph of challenges and rungs in the ladder of participation. In the Y-axes, the numbers of the rungs are given, which correspond to the ladder of participation model. In the X-axes the challenges that played a role in that particular time moment (T=1) are depicted.

**Graph xxx, Stakeholders characteristics corresponding to the ladder of Arnstein.**
Conclusions from the analysis in t=1

By analyzing the characteristics of the stakeholders that participated in T=1 we draw the stake and influence matrix, thence we made the graph. By using the outcomes of the stakeholder mapping, we positioned in the quadrants the most important stakeholder groups in this particular time moment of the PDUR. Herewith we can draw additional conclusions. In the illustration below we can see on which scale the community participated on which scale, and make herewith additional conclusions. Hereafter, the conclusion for each of the three stakeholder groups is provided.
Public stakeholders

With regards to the public stakeholders, we can summarize that the central government had the capacity on the high administrative levels but on lower levels they did not. Furthermore, at lower administrative levels the government suffered huge capacity losses due to the fact that many of the servants were among the people who died. Additionally they also had the influence, but the magnitude of the disaster and everything that accompanied it, in combination with the large range of respondents to the disaster, made it an almost an impossible task to deal with and coordinate effectively. If the government of Indonesia, being a disaster prone country, had a comprehensive plan that would had formed the basis of the coordination efforts, most probably the challenge of coordinating such a huge amount of aid agencies and organizations would have been smaller, as would have been its obstacles.

With regards to multilateral organizations, they were requested to streamline the actions together with the BRR and manage the funds of a large part of the responders and had to ensure that operations would start as soon as possible. As discussed before, that created several challenges over the redevelopment process in T=1. The fact that they operating on a high administrative level in the first year, made them miscalculate the situation on the lower local levels. Perhaps an representation of those organization in various affected area could had given a better first estimation of the situation.

With regards to participation of the community by the government agencies we could say that it corresponds to rung 4 consultation of the ladder of participation model for most of the scales (National, regional and district). The stakeholders opinions, and views, thus the community’s, are sought through various means, but final decisions are made by those doing the consultation, hence the government. On a city level communities are just informed about the actions that are going to take place and they do not had the opportunity to contribute themselves.

Private stakeholders

Some NGOs reacted and started taking initiatives in the beginning when coordination was poor, without consulting the central coordination mechanism BRR. This resulted in duplication of projects and in some cases even delays in responses and mismatches between what was needed and what was delivered. Some NGOs wanted to produce quick results and compromised therefore, in the quality and the assessment of actual needs of their projects. In terms of community participation in the different challenges, there where they had a stake, they tried to involve the community, but not always with success. They often just informed them and took the decisions themselves. Depending on the impact of the project they increased of decreased the consultations with the communities. They often just informed them and took the decision.
Civic societies

Concerning the **local community**, what can be stated is that in the first year after the tsunami most of them were still in shock, trying to process their losses, realize, and manage to survive and rebuild gradually their lives. Their level of participation was around the third rung. They were informed about the actions conducted by the various stakeholders, but they were not offered the opportunity to contribute themselves into those. Communication about the different challenges was often one way. Their views were recorder but due to the other challenges, those doing the consultations took most often the decisions. Living in the first months in tents and barracks outside their village or at relatives, they were not always involved in the meetings concerning the redevelopment of their village, the keuckik of the village argued (interviewee no. 18).

What can derived from the graph is that community had the interest and stake required for the formation of the redevelopment actions of their village, but other constrains did not allow them to participate at a desired level. So the average amount of participation of the community in \( t=1 \) corresponds to the 3 rung, “Informing” as said before. Rungs 3 and 4 progress to levels of “tokenism”, as described in the theory chapter. In those rungs the have-nots, in this case the community, are allowed to hear what is going to be done, and they are allowed to have a voice. When power holders proffer them as the total extent of participation, the community may indeed hear and be heard. But under these disaster conditions they lack the power to insure that their views will be heeded by the powerful.

Although some may argue that the level of participation should be high, in all levels of the redevelopment actions in \( t=1 \), it is not desirable to have them on a higher rung. Their participation in the decision making process of crucial projects, with regional impacts should be limited. An example for such situation was the re-enforcement of the dunes along the coast of Banda Aceh. It was apparent to do so for the provincial council since the city would be better protected in the occasion of future disasters. The fact that lower ranked administrative bodies, such as the district heads and coastal village leaders participated in the consultations, caused delays and in some cases frustrations among the stakeholders. Therefrom we can conclude that in the immediate post disaster situation the level of participation should be related to the impact the project – measurement may have.
4.5 T=2 Post disaster situation 4 years after

4.5.1 Banda Aceh 4 years after the tsunami
The city of Banda Aceh had slowly and gradually starting to return to function early in 2006. Markets in the city center were open again and everybody in the city was somehow related directly or indirectly to one of the numerous redevelopment projects. The city, being the capital of the region, had become the center of coordination and communication of the tremendous redevelopment actions. Detailed plans have now been developed for each sub-district and areas in the city are designated to NGO’s and organizations, as can be seen in picture xxxx that have come to support the affected communities. The affected communities are placed in shelter camps and barracks and some of them have already received semi-permanent houses.

![Banda Aceh Map]

Evidence from literature showed that most of the housing operations started approximately a year after the tsunami (Steinberg, 2007, p.158). In the picture below we can see the amounts of houses that were constructed in 2006 and 2007. The total number of houses that was needed in the city was estimated at 38,228, according to the BRR assessment (BRR, 2009). But as will be described later on, this number was final only until the year 2008, when the last assessment were completed. The
housing program came to an end by early 2009. But projects related to infrastructure during that year.

![Fig. 4.25. Housing reconstruction in Banda Aceh, Source BRR & RAN database.](image)

The spatial structure that was designed for the city of Banda Aceh was predominantly based on the old structure the city had. The coastlines that were affected or wiped away were reconstructed and reinforced. The harbor of Ulee Lheee has been restored shortly after, due to the vital importance of it to the city. New broader roads were connecting Banda Aceh city center with the harbor and the airport and a network of infrastructure was had to ensure the city was connected with its surrounding districts.

In terms of urban structure newly build business centers, social services, and densely populated urban settlements were now best located in tsunami-proof zones in the south of the city. In the part of the city that was not hit by the tsunami, the highly interconnected roads have become streets with a lot of commercial and social activity. They house among other coffee shacks and telephone shops. In the part of the city that was destroyed by the tsunami, these highly interconnected roads were less vibrant. Instead of coffee and telephone shops, these roads have nowadays reconstruction housing built along both sides of them (Urban Emergencies, 2009).

![Fig. 4.26 Urban changes in the city of Banda Aceh, by author](image)
The Meuraxa district in t=2

Since this district was almost completely destroyed, major redevelopment actions were planned for all sectors. After the damage assessments had been completed a total of 5.634 projects had been planned for the Meuraxa district varying from housing, water drainage systems, infrastructure, community development, capacity trainings, basics services, schools, hospitals, coastal reinforcements etc.. The projects varied from housing, water drainage systems, infrastructural measurements, community development projects, capacity trainings basic services restoration, schools, hospitals, emergency and evacuation centers and coastal reinforcements to name some. As mentioned before it was estimated that 60% of the total inhabitants of Meuraxa had died. UN-Habitat was the facilitator in the housing reconstruction. It total five organizations build the majority of the houses in Meuraxa district. Those were JUB/Uplink, the German development Bank (KFW), Oxfam, UN-habitat and World Vision. Large parts of the districts that first served, as paddies for shrimps and fish farms but also for salt farming had no longer existed and it was decided not to rebuild them. The picture below illustrates the heavy redevelopments that were taking place in Meuraxa.
The Lampaseh Aceh village in t=2

The village reconstruction program that was initiated for the reconstruction of the Lampaseh Aceh village was part of the Sheikh Khalifa City housing complex. The project was named after the Sheikh of the United Arabic Emirates (UAE). The “city” consisted at the end of 740 housing units, and was part of a broader humanitarian program, which also included 25 general medical clinics and 25 children and mother care clinics. The Sheikh Khalifa housing city also included the villages of Merduati and Peulanggahan, which are situated on the east side of the Lampaseh Aceh village. The housing project for this specific village was undertaken by funds of the United Arabic Emirates through the UAE Red Crescent Society (RCS) and was executed by UN-HABitat. The housing project had cost a total amount of US$2.3 million dollars. The UAE-RCS was initially planned to build 1,033 units, but the number was substantially reduced because of the increase of the building materials price, which was one the major challenges in general (UNHSP, 2006). Furthermore a local organization called Elsaka had also planned to construct 52 houses in the village.

Fig. 4.28 Lampaseh Aceh Village in 2008

Fig. 4.29 House in Lampaseh Aceh village
In the Lampaseh village the UN-Habitat was responsible for the UAE funded housing program, to carry out the construction of the houses. UN-Habitat used a community driven approach as said before, and started constructing only a year after the tsunami occurred. After many consultations with the local leaders and governments, meaning the municipality and the local administrative bodies such as mukim and keuckik together with the community, the redevelopment design plan was ready for the village. To support and to ensure the satisfaction of all stakeholders the UN-Habitat together with the BRR called a general forum were all stakeholders had to share this knowledge and experience so far. This resulted in a common ground for the actions to be undertaken in each particular area, including Lampaseh Aceh. This process did not evolved without issues. UN-Habitat had to confront many challenges.

After the first year, in which UN-Habitat has conducted all those consultations and programs in order to ensure the designed plan was meeting the demands and requirements of the local people, the time had finally arrived for the actual construction of the houses. The keuckik was responsible to inform his community about the available funds and programs for the community. Once the community had decided their preferred type of house and agreed on the conditions of their participation, the selected beneficiaries formed clusters of between seven to 13 families. The keuckik was requested to sign the plans, which were kept in the community center of the village. Herewith each resident of the village could see what was agreed upon.
Figure 4.31. Village plan of Gampong Pande signed by the Keuckik, (source: Steinberg, 2007)

A financial contribution of Rp 42 million (around 3.600$) for each family to build their house was provided by UN-Habitat to each cluster. Each cluster had to open a bank account in the names of the head, the secretary, and the treasurer, who were selected by the cluster members. The financial contribution was then deposited by UN-Habitat into the account of the cluster. The instalments of 20%, 45%, 20%, and 15% respectively were linked to the progress of the housing construction. A cross check by the agency and the local implementing committee was carried out, during several phases of the construction process, in order to monitor the progress and diminish possible problems. This was sometimes a reason for frustration among members of clusters. Some of them requested larger amounts of money in earlier stages. Furthermore logistics in the overall operation were centrally managed and according to the keuckik and some other local inhabitants that should have be organized locally, in order to avoid bureaucracy and have faster results (interviewee no. 18).

The village of Lampaseh Aceh had to face many challenges; a large part of the land had been lost and turned into see (see figure 4.28). The gampong used to be, for a large part, self-sustained but due to the disaster and the new redevelopment plans, the village now relied on resources coming from the
municipal authorities. The new village plan did provide though the most of the houses with land for cultivation. Furthermore around the Lampaseh village several agencies had build houses, which were not always homogenous. For instance the Islamic relief houses provided houses that were 52 square meters; significantly bigger in comparison to the most houses that were 36 square meters. This caused frictions amongst the local leaders who argued that this was not fair. This was due to miscommunication between Islamic Relief and the BRR. Since they had already started the construction they were allowed to complete them. Additionally in some cases agencies designed houses in the surrounding areas just outside the village without a kitchen. People were not consulted which resulted in dissatisfied people who rejected those houses and tried to get one in the Lampaseh village. The local inhabitants did not allow that.

4.5.2 Adjusting the Banda Aceh Master Plan t=2

Despite the aims and objectives of the initial Master plan, the magnitude of the disaster, the stress situation and other issues that occurred resulted often in unorganized and unregulated actions by many actors. Since it was generally accepted that the initial master plan was not designed to be a finished blueprint, and due to the fact that the BRR turned out to be unable to cope with the coordination of all actions and programs, many adjustments where made after the formation of the initial master plan. As new data and assessments outcomes were coming in from different agencies, the initial City Master plan that was based on the best available data and analysis, was not longer accurate. It was therefore revieced. As Christoplos argued The Master Plan for Banda Aceh started to become less relevant as the full details of needs transpired and developed over time (Christoplos, I.
Consequently, the plans were revised together with the overall provincial master plan in early 2008 after re-evaluating the needs of the beneficiaries, examining the progress of BRR, and after considering the longer-term development needs in association with the provincial authorities and the local government structures. The new provincial master plan, which incorporated the city master plan of Banda Aceh, was now called Aceh Recovery Framework (ARF). In short, the reconstruction plan for Banda Aceh and in particular the Meuraxa district promoted:

<table>
<thead>
<tr>
<th>Principle</th>
<th>Objective</th>
<th>Actors</th>
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<tbody>
<tr>
<td>• Locally and culturally appropriate solutions</td>
<td>It ensured that the BRR was consulted by the local leaders, from the different administrative levels. (district, sub district, village and mukim's)</td>
<td>UN-Habitat organized forums and broadcasted information from local media (radio, newspapers)</td>
</tr>
<tr>
<td>• Community participation and broad stakeholder input</td>
<td>Ensure that communities are consulted and or involved during formulation and implementation of the different programs at various stages</td>
<td>UN-Habitat in collaboration with Keuckik</td>
</tr>
<tr>
<td>• Holistic and integrated approaches</td>
<td>Ensured all parties had made their objectives clear and participated in the right decision making process</td>
<td>Different stakeholders representing different groups were present</td>
</tr>
<tr>
<td>• Transparency</td>
<td>Ensured that beneficiaries are benefited at an optimum level and corruption incidents are excluded. Procedures were kept simple and clear.</td>
<td>Local leaders had to ensure no corruption was present by any community member</td>
</tr>
<tr>
<td>• Accountability</td>
<td>Ensured that all stakeholders know their obligations and tasks after they had become stakeholders.</td>
<td>UN-Habitat distributed flyers with the obligations and responsibilities in the villages and in community centres</td>
</tr>
<tr>
<td>• Effectiveness</td>
<td>Ensured that delivery is according to the time schedule, and includes all objectives and policies of all stakeholders</td>
<td>Community was getting grands only after certain standards were met</td>
</tr>
</tbody>
</table>

Detailed work plans where developed, implemented, monitored, and evaluated, community aspirations where expected to continue to inform the process of rebuilding the city by their participation.

**Actors and issues in t=2**

It was estimated that approximately 200 international NGO’s have been active in Banda Aceh (BRR, 2009). Many of the NGOs have expanded their initial commitment from emergency aid to reconstruction, as they met an unprecedented flow of grant funds from the public or their governments back home. While being ideal partners in response to an emergency, the reconstruction work has been very taxing for them, and many have engaged in activities like reconstruction of housing and habitat-related infrastructure, which was not their traditional area of specialization (like Red Cross, Oxfam, Care, German Agro Aid, Muslim Aid, and many others). As funds were available and housing was the biggest and most obvious basic need of the people, they felt obliged to engage in this sector. Some of these NGOs had proven their adaptability to such tasks as stated by Steinberg, but many have failed to come up with quality housing, in terms of good and permanent construction materials, earthquake-resistance, complementary services of water, sanitation, roads, etc. Some developments had reached such a degree of bad construction that some of these NGO-produced units were not accepted by the communities, and have remained empty or had to be destroyed. NGO ‘safe the children’ had to demolish 300 units due to low quality (Steingberg, 2007, p.157). Beneficiaries
demanded then betterment of these structures (Steinberg, 2007). This was also the case in Lampaseh Aceh were for instance no kitchen was build in some houses, such as the house of the Keuckik. Promises were made to solve these issues but at the end promises were not always fulfilled (interview with the Keuckik).

In general NGOs, such as UN-HABITAT, Muslim Aid, German Agro Aid, CordAid, were acting as contractors on behalf of ADB the MDF and the BRR. They were responsible to hire and designated small scale projects to community members that have now become contractors.

Despite its initial intention of not wanting to get involved in the procurement of works, since late 2005, BRR had also assumed the role of an implementing agency, and has contracted housing reconstruction works through local contractors. Although intended to be a “super ministry” the BRR had turned into a “privileged” agency that constructed also houses among others. The government’s confidence in BRR was underlined by the fact that BRR was authorized thus privileged in 2006, to apply the direct selection method of contractors, which could be contracted from among a group of previous pre-qualified contractors. During the interviews in Banda Aceh some interviewees argued that relatives and friends of BRR officials were benefited by this authorization. There was one particular case where a contractor was paid to plant trees along the coast of Lampaseh Aceh, he planted the wrong tress and a consequence they died and he got tasked and paid again to plant other trees twice (interviewee no. 22). When this case was discussed with the head of planning and water resources of the BRR, she laughed and thereafter denied it. Furthermore, the first BRR-funded projects constructed show quality flaws, weaknesses in supervision, thus corruption and self-enrichment incidents were recorded and after all they had a low level of community involvement. The BRR had its own unique way to contract and execute projects. Their officials often assumed to know the area and therefore they conducted less consultations and assessments with communities in comparison to other providers. Having that said it is pertinent to continue with the community involvement in the further elaboration of the redevelopment actions.

The role of the community in t-2

From village to provincial levels, Development Councils (DCs) were established with representatives from the public and private sectors and the NGOs. This particular structure allowed horizontal and vertical coordination in the rehabilitation and reconstruction process. DCs were soon legalized in a regulation (qanun) by the Regional People’s Legislative Assembly. At the village level, DCs could take the form of existing customary or community institutions as described in previous parts. Representatives were to be elected by the community from the community, or designated in collaboration with the higher ranked authority. The responsibility of the DCs was to conduct planning exercises (identification of issues, potentials, threats, and opportunities), develop action plans, and monitor and evaluate their implementation and communicate to the BRR and or other implementing agency. Some of the key initial tasks included re-establishing customary and community institutions
through social mapping, reissuing identity cards, collecting physical and legal data on land and other property, and developing detailed spatial plans. The primary mandate of communities and NGOs was, in the first stage, small-scale activities. However, local governments and the private sector had to involve communities in decisions concerning large- and medium-scale activities. DCs were operating with financial allocations that they controlled. At the village level, for example, DCs received direct block grants after submitting budgeted action plans. Monitoring of those budgets was often lacking and friction between community members due to corruption incidents, often occurred.

4.5.3 Challenges in T=2

After the first crucial year, wherein emergency actions were completed after a half-year and consultations where conducted in order to translate the needs and formulate therewith the new plans, the next fours years were predominantly full of reconstruction in the various sectors, and conducted by a broad number of stakeholders. The T=2 phase had proceeded to the implementation and execution of the initiated plans. Its goes with out saying that in the peak of the redevelopment actions many challenges occurred, varying in scale and depending on the stakeholders involved. The most important ones were: 1) Coordination, 2) Community participation, 3) Mismatches between the demand and supply, 4) Funding gaps, 5) Corruption. The description below provided a better understanding of the dynamics in those challenges.

1) Coordination challenges in T=2;

Given the scale of the reconstruction that was going on in Banda Aceh, coordination of it was of outmost importance. A range of coordination mechanisms were established each with different aims and successes. Whilst there has been remarkable progress in coordinating and implementing over 2,000 projects across all sectors in just three years, there is some evidence of poor coordination leading to gaps, duplication, inefficiencies, and ultimately a weak correlation between needs and recovery programs (BRR and the International Partners, 2005b; World Bank, 2010). There have been many examples of competition between agencies, “poaching” of operational territory and an unwillingness to share plans and studies. For example, some agencies wanted to conduct projects in popular to media areas in order to attract their attention. This wasn’t only the case in T=2 but also in T=1 such examples have seen the light. Most donors had though a cooperative spirit but were so busy with their direct work that they had little time to inform others about their programs, much less about the lessons learned during them (BRR and the International Partners 2005b). This had as a result that other agencies did the same mistakes. Such incidents could have been avoid if information was shared. The lack of coordination was mainly due to the urge agencies fell to produce and show their donors that their money was turned into projects.

The BRR was the main body that was responsible to monitor the actions and report the outcomes to the president. The coordination framework for each housing program was different. The only
stakeholders that were involved in most operations regarding the housing program were the BRR, the UN-Habitat and the MDF who coordinated most of the funds of NGOs.

As said before, by the end of 2005, BRR was empowered by a cabinet decision to become an implementing agency and a kind of “super ministry”, completely taking over all rehabilitation and reconstruction activities from all the line ministries that had been active in Aceh and Nias. However, the complexities of the tasks and the dynamics of the situation, with some 120 NGOs contributing to housing construction in the field, and the increasingly overlapping operations of dozens of external agencies, could not be overseen easily by BRR itself. The overload of responsibilities in the hands of BRR, aggravated the lack of coordination and confusion among the bilateral, multilateral agencies and NGO. Therefore, BRR was practically giving a free hand to all NGOs. They went from overall coordinator and facilitator to implementing agency. But their intention to profile themselves eventually led to a turf war among the donor agencies in the field, and this has certainly not strengthened the reconstruction as such, or facilitated genuine community participation (BRR, 2009).

Furthermore as many actions were coming to an end in 2008-2009 many NGOs that had previously employed numerous local people to work in the various projects, did not had development a proper exit strategy. Suddenly people were left unemployed causing an long term problem, which would had been faced anyhow. Looking at the scale of the redevelopment actions it was apparent that such an issue would occur, said Ferry Suferila who worked for various NGOS and organizations. The very fact that a large part of the population had an occupation as a farmer or fishermen, prior the tsunami, and had now been working as masonry or contractor, because his land was destroyed or build, was apparent to cause problems in the long term.

In the matrix below we position the stakeholder according to their role and their characteristics in t=2.
Table 11. Influence and stake matrix in t=2 for the coordination challenge

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<tr>
<th>Low influence</th>
<th>High influence</th>
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<tbody>
<tr>
<td><strong>Low stake</strong></td>
<td><strong>Useful for decision and opinion formulation, brokering</strong></td>
</tr>
</tbody>
</table>
| Least priority stakeholder group | • Religious groups  
• Local community |
| • Local Corporation & business  
• Multilateral organizations | |
| **High stake** | **Most critical stakeholder group** |
| Important stakeholder group perhaps in need of empowerment | • NGOs |
| • Central government  
• Local Organizations | |

In the Influence and stake matrix draw below we see that the dynamics have changed. The government is no longer the biggest power but rather a facilitator. BRR has shifted its core activities
and the large housing reconstruction agencies are more in charge of the housing development programs. Community participation has increased significantly yet with issues occurring in different moments and challenges. With regards to the coordination the housing construction agencies had the highest stake and influence, whereas the community had an active role as a shaper of opinions, ideas and outcomes but UN-Habitat the facilitator had the final decision in crucial parts, such as housing. Multilateral organizations only kept an eye on the progress of the developments and were not included in such small-scale developments. Their focus had shifted towards coordination of capacity trainings in various sectors.

2) Challenges of community participation in t=2

In the years that followed, the community was confronted with several challenges. Again time, communication, funds distribution, corruption, coordination and fairness were among the biggest challenges. Communities were participating in various projects varying in urban scale, as mentioned in the previous part about the DCs. Many NGOs requested the communities to participate in many consultations about various topics. Some donors kept on insisting on a full cycle of community consultations, covering project identification to detailed action plans, as under ‘non-emergency’ circumstances, but some communities have started to show their frustration and no interest in further community consultations, and they have rejected the idea of providing cheap or cost-free labor for community projects, as Bima Indra said when questioned about the community participation process in t=2 (interviewee no.5). There have been cases of communities that have demanded an end to time consuming consultations, and, instead, provide immediate housing for them. This was also the case with the Lampaseh Aceh village, the Keuckik mentioned that his villagers did no longer wanted to participate to those daily meetings because it felt like no progress was being booked. There was a stronger will to participate in projects that had a direct impact to the people that in projects that were implemented on a larger scale. This financing demand from the community had caused funding gaps, since the agencies hadn’t calculated such expenses in advance. Furthermore the fact that some NGOs had soon completed their first houses and people were able to reside them, had caused frustrations among other villages were progress was slower. They demanded the process of housing to speed up. Furthermore as has been mentioned before some NGOs such as “Islamic Relief”, had provided larger houses (50 m²) to the beneficiaries, which was significantly bigger that the proposed average of 36 m² provided by most NGOs. People felt that this was unfair and required larger houses. Some even tried to register at that NGO to get such a house.

Despite the challenges that the community had faced, in Meuraxa in 2006, UN-HABITAT had entered into a partnership with local government institutions and nongovernmental organizations to achieve a spatial plan for the most heavily destroyed urban sub-district, of Banda Aceh. Several measurements were taken to inform the community and make sure they do not miss out important developments in
their area. The level of participation intended by the organization was high. A community radio program and a community forum were organized during the planning exercise. Newsletters were published to facilitate the dissemination of information. A community center was constructed for the standing forum, to accommodate the planning team and to house and conserve spatial planning information for a longer period. Making use of the standing forum, UN-Habitat spatial planning exercise applied a strong participatory approach, which was not very popular after a certain time. It was a time consuming undertaking in order to sort out neighborhood issues and build linkages with the planners of the city administration and the infrastructure engineers of BRR. Additionally the BRR was suffering from image los, due to the fact that the houses they constructed were showing poor qualities. UN-Habitat aimed not to rush the completion of legal land use plans. Instead it facilitated consensus building on such issues as the basic spatial structure, infrastructure reticulation and general visions and scenarios – elements and levels where the participation of the survivors proved to be possible. In the years before the Tsunami, strong divisions between the city planners and stakeholders groups had come to the fore. The community planning in Meuraxa proved an opportunity for conflict management based on the development of common visions, goals, and a forward-looking focus. Although the participation varied in the different urban levels it provided an institutional contribution, even though it covered only one sub-district and thus only gave a hint how to connect and empower local planning with district level decision-making in challenging times.

In the matrix below we see that the stakeholders with the highest stake and influence remain the NGOs who were responsible for the housing provision. Communities, did had a significant influence and stake yet what derived from the literature and from the interviews, elaborated hereafter, is that they were not always satisfied with the way they contributed.

Table 12. Influence and stake matrix in t=2 for the Community participation challenge

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<td>• Religious groups</td>
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<tr>
<td>• Multilateral organizations</td>
<td>• Central government</td>
<td>• Municipality</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High stake</th>
<th>Most critical stakeholder group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Important stakeholder group perhaps in need of empowerment</td>
<td>• NGOs</td>
</tr>
<tr>
<td>• Local Organizations</td>
<td>• Local community</td>
</tr>
</tbody>
</table>

If it is to mention the most significant constrains in community participation in t=2, the interviewees from the community said, that the fact that many donor promises had not been materialized or had
been delayed, caused a collaboration and mutual trust problem between communities and agencies. They no longer believed, after several occasions had shown the light, the promises of the implementing agencies, and therefore refused to participate in some additional consultations (Interview with no. 18-21). Significant was the story shared by the Keuckik, when questioned alone for a second time without the presence of the other formal representatives of UN-Habitat and other organizations. issue was that his house was build without a kitchen. In a society were food is playing an important role that was a major frustration factor for him. The implementing agency UN-Habitat constructed a small kitchen after many complaints, hereafter the Keuckik replaced it by build a rather spacious one (as big as the whole house he received), as shown in the picture 4.33 below.

![Fig. 4.33. Kitchen in the House of the Keuckik, by author](image)

Such cases had also been reported frequently in the local press, that many donor promises have not materialized or have been delayed. Hence, in some communities, “... hope gives way to outrage as agencies fail to deliver aid.” Such experiences of frustration did certainly not provide a good ground for empowerment of communities. The occasional cases of corruption and price manipulations, described further on, only help to add a more sober perception of realities said Steinberg in his paper about housing reconstruction in Banda Aceh.

In becomes clear that the community was involved in various projects on different levels. Ranging from small-scale projects coordinated by the NGOs up to district, city, and provincial levels. The level of participation therefore fluctuated according to the scale of the project. On a regional scale the level could be compared to the 3rd rung of the ladder model. Opinions and views were sought but decisions remained at those doing the consultations. Communities did not always had the opportunity to contribute. At a district level people were contracted through partnerships and they
had been directly involved in the decision making process and received grand blocks through DCs, but again they did not have the final decision and therefore they can be positioned at rung 5. On a village and project scale they were contracted through a partnership to construct their houses, which can be compared to rung 6.

3) The challenge of mismatches between demand and supply

A year after the tsunami parts of the affected populations was given temporary shelters. Large sums of money were spent in the construction of such semi permanent houses. Funds were available and had to be spent. But there was a debate about the necessity of temporary housing versus the drive for early construction of permanent housing (Steinberg, 2007). Agencies were spending considerable resources in these temporary forms of accommodation, while people still had to move in with relatives or rented accommodation. Many of those houses weren’t even built on land of the tsunami victims (World Bank, 2006). It had been argued by the academics interviewed at the Bandung Institute of Technology (ITB), that these resources could have been used for more permanent or incrementally upgradable solutions (interviewees no. 13-16).

Furthermore in the aftermath of the first assessments, and having many NGOs willing to deliver quick results due to donor pressure, mismatches between what was actually needed and what was then supplied, occurred. While NGOs are ideal partners in emergency response, the reconstruction work had been very taxing for them, as elaborated before. They were operating in an area they were not specialized in, but again funds were available, houses were the most obvious needs and the engaged therefore in this sector. This resulted in bad quality of houses and local communities refused to accept them. Additionally as most of the agencies were somehow obsessed with their commitment in the construction of houses, Teti Argo from ITB argued. This had as a result, that many organizations had not made adequate provision for housing related basic infrastructure. Their planning did not always incorporate that. When this was realized housing budgets had to be restructured, in order to include these infrastructure services, and funding gaps were monitored (Masyrafah et al., 2008; BRR-Finance, 2009). Hence there was a clear mismatch between the actual needs and the deliverables of the agencies. Although most of the reconstruction agencies tried to meet the demands of the community, sometimes those were unrealistic. Such as in the case were local bricks were desired by the community, to be used, in order to support the local economy. Those bricks were of poor quality and therefore not chosen by many housing providers (Da Silva, 2010; Interview with Mr. Syamsidik from TDMRC no. 12).

In the matrix below the dynamics in this challenge are depicted. The local community had a high influence in this challenge, being the beneficiary for which most actions were taken. It could give opinions and be heard yet the decision was take by those in charge of the projects. The central
government together with the NGOs had the highest stake and influence in this challenges since they were controlling the redevelopment projects their formations, and the funds they required.

Table 13. Influence and stake matrix in t=2 for the challenge of mismatches between demands & supplies

<table>
<thead>
<tr>
<th>Low influence</th>
<th>High influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low stake</td>
<td></td>
</tr>
<tr>
<td>Least priority stakeholder group</td>
<td>Useful for decision and opinion formulation, brokering</td>
</tr>
<tr>
<td>• Religious groups</td>
<td>• Municipality</td>
</tr>
<tr>
<td>• Multi bilateral organizations</td>
<td></td>
</tr>
<tr>
<td>• Local Corporation &amp; business</td>
<td></td>
</tr>
<tr>
<td>• Local community</td>
<td></td>
</tr>
<tr>
<td>High stake</td>
<td></td>
</tr>
<tr>
<td>Important stakeholder group perhaps in need of empowerment</td>
<td>Most critical stakeholder group</td>
</tr>
<tr>
<td>• NGOs</td>
<td>• Central government</td>
</tr>
</tbody>
</table>

4) The challenge of funding gaps

In the Banda Aceh case there have been several funding gaps recorded on different levels and caused by different issues. Starting at higher administrative levels of the governments and multilateral organizations, until down to a project level where villagers were granted with funds blocks for specific projects. In the part that follows a top down explanations is chosen. Thus starting from high administrative bodies and continuous down until the local community levels.

Regarding funding gaps, there have been numerous reports and studies conducted about the effectives ways of funds disbursements, aiming to develop mechanisms that will contribute on effective funds channels. In the Banda Aceh case there were different funding channels, which accordingly had different strengths and weaknesses. It has been argued in various reports that in this specific case, which was very broad and diverse it was very useful to have a range of such channels that could leverage and address any particular need. The BRR was able to draw funds from:

- The government on-treasury funds: were BRR had direct control on, but was constraint by the rules and regulations surrounding them
- The Multi Donor Fund (see appendix 3): these funds were often directed to fill identified needs and gaps without pressure from Donors to disburse in a particular sector.
- Multi-lateral funds: The Asian Development Bank (ADB)
- Bilateral Funding: the success of bilateral programs depended largely on the relationship between the bilateral partner and the government of Indonesia.
• **Non-traditional donors:** such as donations from countries. Although the Indonesian government welcomed their money, the transaction costs were large in terms of BRR time and resources which were required for the high level visits of those donors. This was also the case with the Sheikh Khalifa city, when high officials visited the project.

• **NGOs funds:** Through the concept note process, the BRR had to approve and guide the programming funds from NGOs. After the change of the BRR mandate, NGOs projects were rarely rejected and they were generally left to do as they want.

• **Aceh-Nias Trust Fund (ANTF):** which was a facility established and controlled by the BRR to pool and allocate the grants and contributions from various donor countries, government affiliates, private institutions, corporations and individuals. The fact that there was not steering committee as in the MDF, caused some incidents of corruption, described later on.

Despite the argues about the effectiveness of such large range of fund channels it seems disputable whether less channels would had provide a better overview and an easier coordination of them. When looking deeper into the roles of those funds one could also argue that the coordination of all those would have required also a large sums of funds and resources that could have been used in benefit of the ones most affected, the community.

Many NGOs where confronted with increasing cost of materials and had to adjust their commitment of promised houses. Raw materials were scarce on an early stage, and transportation costs increased due to fuel inflations, with a result that the unit price per house increased significantly. During the interview with Adhit who worked for the housing reconstruction program provided by World Vision in one of the villages in Meuraxa, he said that although the government had calculated a budget of 30 million rupiahs per unit due to those increases it was adjusted up to 60 million in some cases (interviewee no. 10). NGOs had to choose either to decrease the number of houses they were going to deliver or increase their committed funds. This created, logically, a shortfall in the planned reconstruction of housing units.

Apart from the increasing prices another factor that caused large funding gaps was the continuous change of housing targets after the first year of reconstruction (2006). The number of house required was adjusted continuously until June 2008 as shown in figure 4.34. This was mainly because, as stated before, new assessments were coming in, chancing the actual needs. But also because of houses being thought to be repairable and actually needed to be fully replaced (BRR-housing, 2009; Masyrafah et al., 2008; intervieweeew no. 6, 10).
In general what can be argued about funding gaps in such large-scale developments, is that it is unlikely to completely disappear in the occasion of the next disaster. But there can be measures that will diminish the effects and scale of such funding gaps. On a large scale it can be argued that less funding channels could be beneficial in terms of coordination and overview of actions. On a scale were smaller NGOs operate with funds from small donors it could be argued that since they have limited development experience they could achieve a greater impact by contributing their funds through multilateral channels, or alternatively through multi-donor funding schemes. In terms of community projects their clear explanation of their role and the commitment could also diminish funding gaps occurring from unrealistic demands as described previously.

In the matrix below the dynamics of this challenges are depicted. It goes without saying that the stakes and influences differ according to the scale of the stakeholders. Yet, it can be argued that the community had a lower influence in causing funding gaps.

Table 14. Influence and stake matrix in t=2 for the funding gaps challenge

<table>
<thead>
<tr>
<th></th>
<th>Low influence</th>
<th>High influence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low stake</strong></td>
<td>Least priority stakeholder group</td>
<td>Useful for decision and opinion formulation, brokering</td>
</tr>
<tr>
<td></td>
<td>• Religious groups</td>
<td>• Municipality</td>
</tr>
<tr>
<td><strong>High stake</strong></td>
<td>Important stakeholder group perhaps in need of empowerment</td>
<td>Most critical stakeholder group</td>
</tr>
<tr>
<td></td>
<td>• Local community</td>
<td>• NGOs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Central government</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Local Corporation &amp; business</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Multilateral organizations</td>
</tr>
</tbody>
</table>

*Figure 4.34. Increasing housing targets. Source: Masyrafah et al., 2008*
5) The challenge of corruption in t=2

With such large sums of money being circulated in various projects by numerous stakeholders, it is apparent that corruption incidents would have appeared. Especially if the country, such as Indonesia is, has a long tradition in corrupt behaviour. Corruption is often a particular problem in disaster-prone and conflict-affected countries. This case study meets both criteria. Transparency International’s Corruption Perceptions Index (CPI), for example, puts Haiti at the bottom of the list, at 145. The Democratic Republic of Congo (DRC) is 133rd and Iraq 129th. Among the tsunami affected countries, Indonesia sits with the DRC at 133rd. Clearly, corruption is a pre-existing problem in many of the countries that have received international relief aid. Corruption in Indonesia is and was widespread, and that can be red in various reports (James, 2006; Walker, 2005; World Bank, Wisner et al., 2012).

The economies of disaster-prone regions, particularly those caught up in conflict such as Aceh, greatly increase the potential for corruption. Civil wars, such as in Indonesia’s Aceh province, facilitate links between personal power, family, tribal and religious affiliation and the exploitation of natural resources, local populations and external international resources, to fuel both personal gain and war objectives, says Walker (Walker, 2005). In environments where the salaries of government officials and of soldiers often go unpaid, personal survival may depend upon graft and exploitation.

In the case of Banda Aceh several incidents of corruption have been the light. Corruption had often occurred in different levels varying from, community members subscribing for more that one housing units, up to BRR officials giving projects to contractors that had a corrupt track record in the past, or were relatives and friends. In Lampaseh Aceh the there was one person who received two houses and the internal structures of the village arranged a solution, by forcing the person to sub rent the house for 10 years and provide the money earned by it, to the community. Furthermore also NGOs were founded to handle corruptly. Such cases are not only argued in reports but also by the former BRR officials that were interviewed; as from NGO workers such as Ferry Suferila (BRR-Housing, 2009; IEG World Bank, 2011; interviewees no. 1-3 and 9). Some used as an excuse the need to rebuild rapidly and herewith exclude the community from consultations and by-pass former tender procedures. This was also the case in the Lampaseh Aceh village. The BRR was in collaboration with the UNDP planning to build a dune in the northern part of the area, as a mean of future protection for the inhabitants of the village. The contractors that were hired by UNDP were caught bribing BRR officials to speed up the permits processes (ICDMS, 2006). Apart from such handlings, it is generally argued that trading in a country your not native at, makes it easier to become a victim of corruption, argues Walker (Walker, 2005). This was often the case in small NGO that bought at local markets their materials.

In general what derives from the literature and the interviews is that it is impossible to have full transparency in large post disaster operations that last several years. Large projects may have hundreds of interactions between trades that can provide opportunities for corrupt behavior argue James (James, 2006). Such occasions may also appear in smaller scale projects such as in the DCs,
described previously in challenge 2 of t=2. The challenge of dealing with corruption is rather, how to manage the funds and actions in such way that corruption incidents will be minimized or quickly identified. No organization should be given full freedom to deal with redevelopment actions, since corruption incidents are more likely to occur. Furthermore, especially in housing developments projects in the Banda Aceh case, the internal structures of the villages, gave little space for corruption. When those did occurred, they were treated and solve internally.

Table 15. Influence and stake matrix in t=2 for the challenge corruption.

<table>
<thead>
<tr>
<th>Low influence</th>
<th>High influence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low stake</strong></td>
<td><strong>Useful for decision and opinion formulation, brokering</strong></td>
</tr>
</tbody>
</table>
| Least priority stakeholder group | • Municipality  
| • Religious groups | • Multilateral organizations  
| | • Local community |
| **High stake** | **Most critical stakeholder group** |
| Important stakeholder group perhaps in need of empowerment | • NGOs  
| | • Central government  
| | • Local Corporation & business  
| | • Financial institutions |

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Fig. 4.35 Women helping to build their house. Source: Un-Habitat, Anchoring homes
4.5.4. Analysis of the challenges and the stakeholders interrelationships in t=2

Taking all the above challenges into account we can proceed to the analysis of the stakeholders and their characteristics as described in the research framework of this thesis. First the stakeholder mapping is provided for t=2. In this table we can identify the characteristics such as their influence, interest and capacity of the different stakeholders in t=2. Herewith the comparison between the investigated ‘T’ moments is enabled. Secondly the general stake-influence matrix is accordingly drawn for t=2 and then as third, the graph is given, which is based on the challenges matrixes. An overview of the challenges for t=2 can be find in the appendix number 7. The graph corresponds to the ladder of participation on the Y-axes, which is based on Arnsteins model. In the last part the conclusions are given with regards to the analysis in t=2, together with the alignment of community participation level in the different scales of the projects.

Table 16: Stakeholders mapping & analysis in T=2

<table>
<thead>
<tr>
<th>WHO</th>
<th>Influence</th>
<th>Interest</th>
<th>Capacity</th>
<th>Implementation instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>T= 2</td>
<td></td>
<td></td>
<td></td>
<td>Funds</td>
</tr>
<tr>
<td>Public</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central government</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Provincial council</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Municipality</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Multilateral Org.</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local business</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Financial institutions</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>NGOs</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Civic societies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local community</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Religious groups</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Local organizations</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

From the stakeholders mapping drawn for T=2 we can say that the central government, had high interest and influence in the overall period of T=2. They BRR was no longer the super ministry in intended to be, but retained a powerful stakeholder that was still coordinating certain aspects of the redevelopment efforts and funding channels. Simultaneously due to its high administrative power it also had most often a high stake in the challenges that occurred. Lower administrative bodies that had suffered from capacity loss had a les prominent role in the challenges. With regards to the Multilateral organizations we can say that the had, as providers of large funds and capacities also a large influence in the decision making processes, and although they had a mandate to tackle challenges were possible, they were unable to completely avoid them. Local community had gained strength, and their voice was heard by others, since their interest in these actions was high. The
matrix below is comprised by the different matrixes of the challenges in t=2, resembles the overall stake and influence of the different stakeholders in t=2.

Table 17. Influence and stake overview matrix in t=2.

<table>
<thead>
<tr>
<th>Low stake</th>
<th>Low influence</th>
<th>High influence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low stake</strong></td>
<td>Least priority stakeholder group</td>
<td>Useful for decision and opinion formulation, brokering</td>
</tr>
<tr>
<td></td>
<td>• Local Corporation &amp; business</td>
<td>• Financial Institutions</td>
</tr>
<tr>
<td></td>
<td>• Multilateral organizations</td>
<td>• Religious groups</td>
</tr>
<tr>
<td></td>
<td>• Provincial departments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Municipal bodies</td>
<td></td>
</tr>
<tr>
<td><strong>High stake</strong></td>
<td>Important stakeholder group perhaps in need of empowerment</td>
<td>Most critical stakeholder group</td>
</tr>
<tr>
<td></td>
<td>• Central government</td>
<td>• Local community</td>
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<tr>
<td></td>
<td></td>
<td>• Local Organizations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• NGOS</td>
</tr>
</tbody>
</table>

Having positioned the stakeholders in the matrixes of the challenges that occurred in t=2 and accordingly place them in an overview matrix for t=2, we can proceed to the next step being the graph of challenges and participation, that resembles the challenges correlation with the ladder model.

Graph 3; Stakeholders characteristics corresponding to the ladder of participation
Conclusion of the analysis in $t=2$

From the analysis of the characteristics of the stakeholders in $t=2$, we draw the overview matrix for $t=2$. Thereafter we made the graph from which the level of participation becomes apparent. Since the levels of participation changes according to the scale of the project, an additional graph will be provided wherein a more accurate community participation level can be depicted according to the scales wherein the projects had taken place. The scales are again divided into: national, regional, city, district, village, and project. Connections are made between the scales and the ladder. Herewith, sharper conclusions can be draw in the concluding part of this chapter, with regards to the levels of participation in the different scales. Additionally, arguments can be given whether those levels are desirable, favorable or deferrable in terms of participation in the complex arena of the PDUR process. Thereafter conclusions are given with respect to the three different stakeholder groups in $T=2$. 

![Diagram](image-url)
Public stakeholders

With regards to the public stakeholders, meaning predominately the BRR in T=2, we can summarize that they had gained capacity at this time, in comparison to T=1 on all levels yet their involvement on the lower levels was often confronted by several challenges are described before. Additionally their influence had increase, but due to their shift in core activities, they no longer had the upper power in the decisions. Their coordination failed to manage all activities and the fact that some of the government officials were blamed to be corrupt was not in benefit of the overall redevelopment. Despite all difficulties and blames they faced, it must be stated that without such a central mechanism the coordination would have been even more challenging, and bureaucratic procedures among the different governmental bodies would most probably have last longer.

Civic societies

Concerning the communities, they were participating in different levels depending on the nature and scale of the projects. Although their capacity did not increase, their stake in the redevelopment project did considerably. As did their influence, but as others took the final decisions, it remained moderated. With regards to their participation in the different scales, in projects affecting a broader city level, we can say that the community was involved as a labor and they had no or little participation role in the decision making table. On a district level, people were heard and their opinions were taken into account yet the facilitators retained the power to decide. On a village level they had an active role as shapers of opinions, ideas and outcomes of the consultations, but the final decision were taken by the facilitator. Which in the Lampaseh Aceh case was UN-Habitat.

Despite the fact that during the interviews conducted, community members were not really satisfied with their overall participation on a district level due to the issues that occurred and the corruption that was identified, it remain disputable if the level of participation should be higher. Unless a clear, transparent and accessible by most, mechanism is introduced, communities should only share opinions and ideas.

Private sector

What becomes apparent in such large disaster redevelopments is that NGOs, if present in such large amount as in Banda Aceh, have a significant high power and influence. Their commitments in the case of Banda Aceh were not always well though, since we could argue that funding gaps could have been calculated in advance. Furthermore that regardless the pressure of donors to produce quick results, if the circumstances require a more long-term planning before the actual construction of, in our case, houses NGOs should proceed with doing so. By providing adequate information about the situation such constrains can be surpassed. It is important to mention that despite the accusations that have
seen the light in the Banda Aceh case about NGOs, without their contribution reconstruction of Banda Aceh would have taken much longer and with doubtful results.

Fig. 4.36 Reconstruction process, Banda Aceh. Source: UN-Habitat, Anchoring homes
4.6 T= 3  Banda Aceh in 2013

4.6.1 Banda Aceh in 2013

The first thing that draws the attention during the ride from the Banda Aceh airport to the hotel was that the city was functioning. The city of Banda Aceh has fully recovered from the devastating disaster event at the end of 2004. Though the scarfs from the catastrophic tsunami are still visible. From the various memorials and the disaster ruins that have been transformed into touristic attractions and are scattered among the newly build houses, up to one of the mass grave in Ulee Lheue were 46,000 bodies have been buried there. All reminders, giving a glance of the devastation that destroyed the city. In general, live has returned to normalcy and the city center of Banda Aceh is again bustling from activity. Full of coffee houses, food stalls and crowded markets that bear no resemblance to the scenes of devastation that shocked the world back in 2004.

![Banda Aceh in 2013](image)

*Fig.4.37 Banda Aceh in 2013. Source: UN-Habitat, Anchoring homes*

Today, in the provincial capital of Aceh many new buildings including the posh city hall, hotels and shopping centers have emerged. The city has since 2009, the four storey Aceh tsunami Museum which serves as a symbolic reminder of the disaster, and its roof is resembling a high wave. Since the tsunami, more than 130,000 houses, 250 kilometers of roads and 18 new hospitals including other infrastructure have been built in Aceh. More than 80,000 hectares of agricultural land has been rehabilitated or cleared for use and approximately 15,000 hectares of fishponds have been created.
(BRR, 2009; World Bank, 2008; Da Silva, 2010). Out of the thousands of people that received a permanent new home only 20 families still live in barracks in the area of Ulee Lheue near the harbour. They did not get permanent housing due to land ownership conflicts. Other proclaimed their houses. The population of Banda Aceh today counts according to the last census of 2012 is 223,446. The population occupation is mainly related to agriculture, fishing, small-scale business and administration services.

**Spatial structure in t=2013**

With regards to the spatial structure it goes without saying that the city is now, almost 10 years after the catastrophic event, fully functional. Although the pre-disaster situation of the city is only known through literature and some maps, the current situation seems more organized and structured. There are little doubts that this is thank to the enormous amounts of funds that were available for the city of Banda Aceh.

Three stores buildings characterize the city center of Banda Aceh and shops are positioned at the ground floor. The typical redevelopment houses that are almost identical characterize the urban settlements situated near the coastline. Those are most cases not bigger than 36 square meters each. The infrastructural network seems more than sufficient and allows the city to grow. The city is connected to Medan by train and on the Banda Aceh airport, connects with domestic flights the city with the rest of Indonesia and Malaysia. Towards the south of the city center the urban typology is similar to Banda Aceh’s pre disaster urban situation. Houses are built in compounds and organized in a less homogenously urban structure. Most of the houses have small green fields surrounding them, which have, among others, farming purposes.
Culture and religion today

Religion is still playing an important role in everyday life of Banda Aceh. People are still living according to the Sharia laws and although its laws are not very strictly followed, yet they are being applied as seen recently in May 2014, when a woman was sentenced to be caned publicly, after breaking the religious law (Independent, 2014). Religion and Islam is an important characteristic of the city that influences the city structure, and the daily life of the people. When people want to tell how far something is they refer to the distance of it to the great Mosque. Alcohol is strictly prohibited, and body parts need to be covered during the whole year. Furthermore some of the interviewees claim that, religion plays an even more dominant role now that it did in the past. Every gampong has a musholla and even in large shops men can still find places of worship.

In terms of culture, several years of reconstruction have also modernized the erstwhile puritan, Acehnese society. A large part of the people has learned English, and the education rates have increase. Yet in terms of Architecture and local cultural identity, due to the tsunami a large part of it was destroyed and the redevelopment agencies did not always paid attention to maintain and recover the local architectural style. Which can be clarified in the magnitude and complexity of the PDUR process. Only some, such as Islamic relief, build houses based on the local architectural principles.

Meuraxa district in t=2013

The Meuraxa district is fully recovered and the Harbour of Ulee Leeh provides major economic activity for the area. In and around the harbor numerous shops have opened. In terms of population the 2012 census in Meuraxa showed a total population of 19.459 (BPS, 2012). The main land use in this area was and still is dominated by housing and settlements. Only the Pungo Jurong village, which is located next to the city center, has a few commercial and public buildings nowadays. Most of the population occupation was and still is fishermen, construction workers and in the informal sector. Important difference now is that the formal fishponds have moved to east areas of the city. The coastal areas in and around the harbor have been reinforced and dunes provide additional safety for the inhabitants. The same counts for the rivers inside the city. Those were the main transporters of the massive tsunami waves. Their banks have been reinforced and heightened. In terms of infrastructure things have improved considerably. High quality broad roads have been constructed, that also function as escape routes in case of emergency. Furthermore there is a tsunami escape building that house now the TDMRC. It can receive 4000 people in case of an emergency. The population of the whole district of Meuraxa is 19.459 though. In total only 4 special buildings have been constructed as evacuation buildings in case of an emergency. Is should be questioned whether more of such structures should have been build, knowing that the area is highly disaster prone.
Fig. 4.39 The Ulee Lheue Tsunami Evacuation building in Meuraxa. By author

Fig. 4.40 Meuraxa district viewed from the evacuation building. By author
The Lampaseh Aceh village in t=2013

Although it’s pre-disaster situation in only known through maps and a limited amount of pictures, the village makes a coherent impression. It has numerous redevelopment houses, which appear to be in good condition when inhabit, others seem to be abandoned and deteriorated. In terms of population the village had in 2012, 2083 inhabitants wherefrom 55% is men and 45% are women (BPS,2014). Before the tsunami this number was significantly bigger (5336). It is expected that the population will have increase by now, yet no official census has been conducted.

In terms of the houses, most of them that have been developed are occupied. Extensions have been made to the actual structures of the houses the beneficiaries had received. This has influenced and changed the image that existed about the redevelopment neighborhoods. Furthermore some houses have added an additional floor to their houses and have increased herewith their living area. Nothing unreasonable, one should think. But when questioned the interviewees from UN-Habitat, if such structures have been calculated to withstand the additional weight of an extra floor, they answered that that was not the case. People did such actions at their own risk, and since little supervision from the authorities exists this will continue.

Another significant finding in the village was, that some of the wealthy inhabitants have created small compounds consisting of several houses for their families. Those compounds are enclosed by a high wall and are accessed through a gate. The previous owners have sold those houses and have either moved to other villages or inhabit a rented house elsewhere now.

Fig. 4.41 Houses with extension in Lampaseh Aceh. By author
Such adjustments to the houses were not only the case in Lampaseh Aceh. Especially in the coastal villages, were housing was provided by Uplink, the layouts have also been changed, and as a consequence it has increased the vulnerability of the inhabitants. The initial layout had lifting the house from the ground to allow water to pass freely in case of floods (left picture). Nowadays people have closed those spaces and made an additional house out of it, as can been seen in the right picture below.

The only physical problem the village was confronted with was the drainage system. The initial houses were built before basic infrastructure was laid and water supply was connected to the houses. As a consequence the drainage system that was build after, did not fit in the existing infrastructure and additional works need to be done. In general the condition of the structures and infrastructure in the village were good: access roads are paved, drainage systems are being organized and water and electricity were present in almost all houses (IRP, 2012).
Fig. 4.44 Houses in Lampaseh Aceh being expanded by the owners. By author
Chapter 5
General Conclusions and recommendations

Content
5.1 Evaluation
5.2 Conclusions
5.3 Discussion
5.4 Recommendations and further research

About
In this final chapter of the thesis the results of the research will be evaluated and discussed. The question will be answered whether the research goals, which were set in chapter 2, are met by the research. And finally, an answer will be given to the research question. The chapter will conclude with recommendations for further research.
In chapter 3 of this thesis the indicators were determined for the scope this research. They indicate those parts of the UR and PDUR theory from which community participation can be evaluated and the provide answers to the problem statement. The outcomes of this research are implemented into a model, which can be seen as the result of the research. The designed model will now be evaluated on the theory, to see if the research goals were met. The final model will be compared with the models designed in the previous ‘T’ moments in order to support arguments of improvements.

5.1 Evaluation
Evaluation of the outcomes is essential to validate or reject the hypothesis made. However since this is, and most likely will remain, an academic exercise, it is impossible to assess the real-life effects of the results. If it had been a proposal that would have been executed, it could have been assessed in time, during a follow up study, and or it could have been applied in another context. As it is, it is only possible to evaluate the proposal on internal consistency; assessing to what degree the final product adheres to the principles it originated from.

In order to do this, indicators were derived from the theoretical framework and organized according to the appearance in terms of stake and influence in each part (time moments). Those indicators are the challenges faced in the different investigated moments. Subsequently, those respective indicators that played a role at that particular time moment, contributed in the evaluation of each time moment. Conclusions from these evaluations are provided hereafter. Those are divided according to the three different stakeholders groups and according to their influence, interest and capacity in the different time moments.

Public stakeholders
We can conclude that the most important stakeholder in PDUR is the government; especially in large scales disasters such as our case study. The amount of power they posses is the highest among the other stakeholders of the PDUR arena in all moments, yet their ability to cope with such a situation heavily depends on certain factors. To name some: the previous experience the government has in dealing with disaster redevelopment actions and the effects the disaster had in terms of capacity, casualties and disruption. It goes without saying that the funds available also play a crucial and deterministic role in disaster development. What also becomes clear from this case study is that the large response from a large range of entities created additional stress to the situation. Regardless the benefits that such a response brought along to the Banda Aceh case. The coordination challenges had increased from the moment that hundreds of responders had provided their assistance. Varying from money, people and supplies.

In terms of capacity the government was heavily affected in T=0, but as time progressed and the BRR was equip with large capacities deriving from other governmental bodies, this issue was partly solved.
The fact that capacity losses on the area could not just be replaced remained an issue until capacity trainings were conducted. That specific fact had somehow weakened the governmental body because the local situation proved to be difficult to assess, since that many civil servants had died, and their facilities were either destroyed or heavily damaged. The formal “political” conflict added up to the complexity. As the development progressed their capacity stabilized and BRR was their representation in the redevelopment area.

Their influence had been very high at the beginning, as has their interest. Their urge to control and coordinate almost every action seemed very optimistic given the circumstances. As development progressed their influence in the different actions was different depending mostly on the strategic importance of the project and their previous experience which such projects. Yet it always remained somewhat high since they could implement law and designated areas to conduct and execute projects on.

With regards to their stake, we can conclude by saying that they started by having the highest stake but as the dynamics changes their role and thus their stake also changed. After sectors were divided and areas where designated to the different agencies their role also changes gradually. They did sent representatives through the BRR to every project yet they did not have full delegated power to decide. Their role was more of a facilitator and in some housing cases also they were implementers.

**Private sector**

The private sector in this case study was predominantly the NGOs that had come to the city to provide assistance and spend their gathered funds, to express it gently. In the beginning of the redevelopment process they did a rather good job providing all victims with supplies medical help and shelters. The fact that the disaster had occurred a day after Christmas had made it possible for all of them to gather huge sums of money, which continued to come in even a year after, the tsunami had occurred. As the disaster effects had started to be assessed, the realization of the scale of disruption prompted their commitments beyond their core activities and far from their initial expertise. This very fact triggered many issues and challenges of coordination, mismatches and funding gaps to name some that have seen the light. Again, it would be indecorous not to mention that without their presence the reconstruction would have lasted much longer and the beneficiaries would most probably had receive less attention.

In terms of capacity, in same cases as described in several parts previously, those were large. In some cases even overrepresented, especially in the first months after the disaster. The fact that coordination was lacking in the beginning made them react adhockery, rather than consistently with a long-term vision to the actual needs of the area. Of course they are not the ones with the highest
stake of blame. The situation was unprecedented, and no stakeholder knew how to exactly cope with it.

Regarding their influence, we can conclude that it was high; in projects they coordinated and or facilitated. With respect to the housing provision they had the upper word in the decision making process. Their interest was to spend their funds as good as possible without causing neither any problems both to the ones receiving the benefits or the ones funding them.

**Civic societies**

Concerning the civic societies in Banda Aceh, doubtless the strong hierarchical structure had offered a foundation upon which their role in the redevelopment actions was determined. Due to the high number of casualties all inhabitants of the city had been affected by the catastrophic event. Thus their capacity was battered. As the developments had started their role started to become more clear and their opinions where at least heard.

In terms of influence, although they did participate in many redevelopment actions and made their opinions and visions clear, those were not always translated in the plans. Depending on the scale and impact of the project their participation increased or decreased, as can be read in the previous parts.

With regards to their interest, we can conclude that it was high in projects affecting their living environment and habits directly. On a larger scale it was les.
The level of participation in the different scales and challenges

The model below is a summation of the three models designed in the investigated time moments. \( T=3 \) has not such model, since the situation has return to normalcy. Below comments are given with respect to the level of participation in the different moments and scales. Thereafter the new suggested model is given together with arguments, about the desired level (rung) of participation for the different scales.
**T=0**

What can be concluded from the model above is that in T=0 is that the initial master plan, aimed to form the foundation for the preparation of actions plans and accordingly the implementation of them. Regional government together with the BRR had to inform the people of what was going to happen. The community itself did not have the change to participate. On a city, district and village level, communities needed urgently to be cured. The impact of the tsunami in their lives was tremendous and you cannot and probably should not request any contribution from them. Overall the level of participation in this time moment is sufficient, and therefore we can conclude that is was done in an appropriate way.

**T=1**

Concerning the level of participation in t=1, the general characteristic for this period is, that dynamics were changing constantly. Although leaders in Jakarta had committed themselves to ensure local people would be involved in the decision making process, in order to avoid disagreements between central government and local government and communities. Projects affecting a national level correspond to rung 4 of the ladder of participation model. That means that people views and opinions were sought through various means, as explained before. Yet the BRR and the other members of the coordinating framework made the final decisions. Although it can be argued that rung 4 is appropriate for T=1, rung 5 can most probably achieve a common vision towards a redevelopment plan that will ensure better, a sustainable future.

At a regional level, communities were also involved by providing their opinions and views (rung 4). But what derived from the interviews is that communities were dissatisfied and felt their aspirations had not been properly reflected. Thus, although it can be justifiable to keep the participation level at rung 4, if the aspirations are not translated into the actions then friction would occur and a less optimum result will be achieved.

On a district level, especially in this case study, we can clearly see what public support does to the plans. People refused to abandon the coastal areas and manage to make the BRR change their intentions. This is a successful representation of rung 4, wherein their opinions are heard and plans are adjusted accordingly. The participation level should remain on rung 4.

Concerning the rung of participation for city level projects, we see that it is currently positioned between rung 2 and 3. In this particular case, the societal structure of Kecamatans (districts) and gampongs (villages) in Banda Aceh, could have make it easier to conduct consultations and listen to opinions and increase herewith the level of participation between rung 3 and 4. But in the Banda Aceh case, especially in its coastal areas, it was not possible. Those were completely destroyed and
local leaders had often died. Therefore we could argue that in societies where hierarchical structures such as in aceh exist, we could have higher-levels of participation.

Taking into account the findings of this case study and the methodology used in this case we can clarify that the level of participation at a village level was very low. People had to process the disaster and were not in state of mind to provide any form of contribution, due to the disarray that existed. They were kept informed about the progress and the intended actions (rung 3). We could argue that we should position then between rung 3 and 4. Conduct consultations were possible, in order to get a better understanding of the pre disaster situation. Yet this could only in developing countries were information is scarce and public authorities have been severely affected by the disaster event.

Regarding the individual project level of participation in T=1 it corresponds to rung 3. Since it is argued in theory previously, that participation if a proved method of personal rehabilitation, which gives the affected people again a way to contribute and process differently the disaster situation, we could position it at rung 4. Again this is always context depended.

T=2

The general characteristics in the T=2 model show us that on a national level, there was little to no participation. This was mainly because the indented actions had already been planned in T=1. For the purpose of a greater acceptance of the initiated plans we should position it at least at rung 3. Then people are informed about the plans that are going to be carried out, and a greater public support can be herewith created.

In terms of participation on a regional level the current level in this case corresponds to rung 3, which means that people are informed yet no contribution is expected from their side. It could be questionable whether this is desired; but taking into account the existing complexity of such large-scale projects with multi-stakeholder involvement, it appears to be adequate.

Projects indented for the city require special attention. They have a broad interest from many stakeholders and users of the city. In the Banda Aceh case study, the level of participation corresponds to rung 3. Baring in mind the affect a citywide project can have, it seems acceptable to be positioned at rung 3.

Concerning participation on district level projects, the rung that appears in this case study is 5, placation. Communities have an active role as shapers of opinions and by expressing their ideas about the outcomes. Although the facilitators of the projects take the final decisions, a two-way communication ensured that fewer conflicts regarding the plans occurred. Depending always on the nature of the project it is reasonable to have a rung 5 in terms of participation. But some could
dispute that in strategic plans rung 4 (consultation) would seem to be more acceptable. Herewith long-lasting consultations will be avoided.

In the case of Lampaseh Aceh village, villagers were offered partnerships with UN-Habitat, yet this does not correspond to rung 6 of the model, as being explained in T=2. People were given grand blocks for the construction of their homes, after certain progress was booked. The decision regarding the layout of the house and which materials were going to be used was taken by UN-Habitat. Therefore it is positioned at rung 5. They spoke and participated in the decision making process but for practical and (material) quality reasons decisions were taken by the facilitators. Although this thesis has started with the assumption that higher community participation, especially in the field of housing construction, is desirable; evidence from this analysis proves that the initial assumption was wrong. Although it is always context depended, the general challenges that occur in post disaster situations and are argued by numerous reports and researches, justify a lower degree of participation. Therefore rung 5 (placation) should be preferred in future PDUR.

With regards to individual projects in the Banda Aceh case in t=2, the level participation of participation correlates with rung 6. People are giving clear roles and responsibilities. They have agreed upon a partnership with the initiator and facilitator of the project. They have a stake in the decision making process and share a common goal. Exampled of corruption have seen the light in this case study, and although it is justifiable to give people the possibility to execute themselves projects, close monitoring of them is required. Herewith possible gaps and corrupt behavior can be bypassed.
Having all the previous positions justified, the following model is provided. This model provides a better overview of which participation rung should be applied in the different time moments of the PDUR process, according to the urban scale the project encompass. Important to mention though, is the fact that such a model is impossible to be applied in all disaster situations. A thorough understanding of the background of the area that have been subject to a disaster is required.
Comparison of the challenges graphs

It the theory chapter of this thesis certain challenges were described that appear most often in post disaster situations. Those challenges were analyzed in the investigated time moments of the case study chapter. Below the two graphs are compared and the thereafter the outcomes supported with conclusions are provided.

What can be concluded from the two graphs that have derived from the extensive research upon the challenges that occurred in the two important investigated moments is, that the stakeholders groups
had different role in each of the challenges. Taking the corrupt tradition that Indonesia has you would expect the governmental bodies to exceed the other stakeholder groups. But it appears that the private sector, which incorporates the NGOs, also had a considerable stake in those challenges. Although several mechanisms have been applied to avoid negative outcomes from those challenges, it is pertinent to state that the enormous scale of the disaster and everything that came into play, made it rather impossible to avoid such situations.
5.2 Conclusions

This thesis set out to research community participation in a post disaster urban redevelopment context. It was hypothesized that community participation needs to be high during the PDUR process, in order to have an optimum overall result combined with high satisfaction among the beneficiaries. The main output of this research is a proposed model divided over three time moments, wherein the preferred community participation levels can be applied according to the scale of the project.

In terms of the level of public participation:

The initial response, says Pak Iskandar who was deputy of Economics at the BRR when questioned about the community participation process, had shown fast construction progress, but lack of supervision and technical support had produced quality flaws; and cost increases and construction material shortages had slowed down the progress. Thus, the question that needs to be asked according to him is: to what extent should community-based development be applied to all walks of life and to all types of projects? This question was argued almost by all people interviewed. The existing evidence indicates that some communities have achieved extraordinary results. For instance, UN-Habitat projects. Those started almost a year later than all the other housing projects, because they had extensively designed the areas based on their collaboration and consultations with the local communities. Regardless the complains of the local inhabitants, the project appears to be completed after all successfully. At the same time other communities had felt overloaded and charged with too many responsibilities. Although this was also argued by the residents of Lampaseh Aceh, evidence from literature prove, that other NGOs used different approaches and have more complains by the beneficiaries. Therefore, Teti Argo who was in the National Committee for Disaster Assessment for Aceh (NCDAA) and is associate professor at the Bandung Institute of Technology (ITB) stated, when questioned about the community participation process she said that: it may well be that community participation cannot be instrumentalized as if it were a panacea for all the shortcomings of actions by government or contractors. As long as survival, livelihood, and well-being are so much at stake, the scope and potential role of community participation cannot, and should not, be overrated. Rather, it may take years for life to return to normal, and under these circumstances community-driven development cannot prosper in a normal manner. So if it is to give an answer to the main research question of this thesis:

“How did the redevelopment of Banda Aceh facilitated community participation?”

We could say that the answer is not, easy to be given. Due to the high number of housing providers houses in Banda Aceh (120 in total), the successes and failures were always depending on the approach the implementing agency had chosen and the challenges it had faced. In the case of the Lampaseh Aceh village, which was part of the broader Sheikh Khalifa housing city project, the UN-Habitat approach seems to have received credits, for its approach and methodology, both from the
international community as from the BRR.

Doubtless some mistakes were made, but given the circumstances of post disaster Banda Aceh, while bearing in mind the pre-disaster situation the people were living in, we can conclude that the beneficiaries have been given the foundation for a sustainable future. The biggest challenge in post disaster Aceh now is unemployment. Donors have delivered their pledges and formal fishers that had become small contractors are left behind seeking for a job. In the part below follows a last summary of the interviews taken in Banda Aceh. It was apparent that different issues played a role among the community members. The questions that was raised to them was:

**How did the people experience the whole PDUR process?**

During the interviews people from the villages, together with some others that had worked in the redevelopment period for several agencies, had mentioned several issues that were according to them the most challenging ones. The findings that derived from the interviews are described below.

- **Lack of Coordination**
  The very fact that during the redevelopment actions complete chaos had taken over had made it difficult for them to contribute to the planned actions in the beginning. In later stages, that had improved.

- **Landownership issues**
  The method to prove that a piece of land was yours, was very primitive and therefore very often friction occurred between the local inhabitants, the local leader and the organizations that were conducting redevelopment actions had to take the final decision, which resulted in some cases to people being left outside or compensated with a smaller piece of land than before.

- **Lack of knowledge**
  Local people were requested to support the organizations by providing them information about the characteristics of their living environment but simultaneously they did not have the knowledge to collect such data. This fact also caused friction after a certain time since they have to participate in numerous consultations without understanding the need of such time consuming consultations.

- **Capacity lack in manpower**
  The people were requested to contribute to the redevelopment of projects but there was often a shortage of manpower, which caused delays in the delivery of projects and friction among the beneficiaries. They were given money to construct their individual houses but there was no additional help and everyone was busy either building his own house, or the houses of a relative.

- **Lack of material resources.**
  There was often a shortage in material to construct and therefore friction often occurred among the community members that had manage to get materials and those who did not and had delays in their progress.
• Lack of exit strategies

Most of the stakeholders involved in the redevelopment process did not have a proper exit strategy. When the redevelopment actions had come to an end most of the people did no longer have an occupation. Unemployment rates increased rapidly after the completion of the projects in mid 2009. As a consequence the social cohesion of the city was in decay.

What can derive from the issues stated by the interviewees is that those are more practical in nature. It is important to make a clear distinction between the factors of friction and irritation among community members and among other stakeholders in PDUR. Having that beard in mind and by providing adequate information such issues can be avoided. This would be the first recommendation for further studies upon this topic.

**Was it built back better?**

And finally during the theory research an often-recurring topic was Building Back Better and the window of opportunity. The ability to rebuild a more sustainable and well functioning area, in short. But in this examined case study the political and donor pressures for accelerated rehabilitation and reconstruction were certainly mounting, and there was a continuous danger that compromises will be taken on essential components of the rehabilitation and reconstruction agenda in favor of faster delivery of assistance like, for instance, the abolition of the community-based development approach, the shedding of environmental safeguards, or reduced attention to land and tenure rights of communities, or their indigenous architectural and cultural traditions, as being discussed in previous parts. It cannot be confirmed yet whether the political postulate of “building back better”, a slogan which has its own risky political nuances, can be achieved within the time frame of 4 years, e.g. 2005–2008, which BRR had defined as the reconstruction period. It might very well be necessary to conceive a substantially longer period of time, of up to 10 years, for a truly integrated and consolidated reconstruction and retrofitting program, in order to cover all development requirements, and make the people the main agents of development were possible and desired. The development of housing and infrastructure is certainly not the end in the effort to build communities, and communities like Gampong Lampaseh Aceh in Meuraxa, Banda Aceh, had already articulated their request for more job opportunities and livelihood support in order to attain a more sustainable future.

BRR had hoped that reconstruction and rehabilitation of the human settlements would be completed by December 2006 at the latest. But as it turned out, neither the housing units nor the residential infrastructure had being accomplished by that date. Rather, it was only until 2008 that finally all earthquake and tsunami victims were back in permanent and earthquake-resistant homes.
Whether, we can say that the “mission was accomplished” in 2008? Not by far, is the answer. It depended on the reconstitution of all other aspects, which constitute “community” and the economic and social basis of life. Those were not completed until 2010. To accomplish this more complex task of building back communities and their lives, community participation will play an indispensable and useful role. The efforts of UN-Habitat to mention the housing provider of Lampaseh Aceh, had engage communities in action planning and intend to leave behind trained community leadership, aimed at an established “culture” of community-driven development that could be sustained and applied more universally in the future. We can conclude that this is partly achieved. If this can be accomplished and applied in future PDUR cases, a much broader goal of development of civil society will be achieved.

5.3 Discussion

It has already been mentioned that the complexity of the PDUR situation is very complex and therefore it has obstructed some results of the research. The dynamics were hard to understand due to the scale of the disaster. Another point of discussion was the scores given to the stakeholders in the different investigated moments. Although interviews were conducted with regards to the chosen village the determination of the exact scores given to the various stakeholder groups can be subject of discussion. The scores are now based on the intuition of the author, supported by the views of certain interviewees that have crosschecked those scores. Based on the evaluation of the research it becomes clear that the focus of the research was the amount of community participation in the different times moments and in the different scales, and whether this is desirable or not.

5.4 Recommendations and further research

This part fill be finalized in the final stage of this thesis the P5. Fur the purpose of this report some recommendation as briefly given.

As mentioned before, what can derive from the issues stated by the interviewees is that those are more practical in nature. It is important to make a clear distinction between the factors of friction and irritation among community members and among other stakeholders in PDUR. Having that beard in mind and by providing adequate information such issues can be avoided. This would be the first recommendation for further studies upon this topic.
Appendixes

1) The legislative council and the respected members;

Besides Keuckik and imeum meunasah, tuha peut is a very important body in a gampong structure. It is a representative body of the village and serves as the keuckik’s counterpart in conducting the gampong administration. It consists out of several important figures in the community that typically possesses four qualities of tuha, which means ‘the respected’.

• **Tuha** means they are old and wise and therefore know how to deal with all occurrences of the village.

• **Tuho** means they are well versed in issues particularly related to property transactions. Those who possess tuho have had another important role in the past, either as keuckik, tuha peut or imeum meunasah.

• **Teupeu** means they are all well educated, knowledgeable, and socially accepted by the gampong community.

• **Teupat** means they are honest, trustful and sincere. They show objectivity when expressing their opinions and when they give their recommendation for solving problems in the gampong.
2) The BRR

Led by a respected former minister, Kuntoro Mangkusubroto, BRR took responsibility for managing and coordinating the rehabilitation and reconstruction program in the post-disaster regions.

BRR had wide-ranging responsibilities including: managing the implementation of the rehabilitation and reconstruction program; establishing working relationships with other stakeholders to coordinate rehabilitation and reconstruction projects that are not financed by the central government’s budget; and facilitation, coordinating, supervising and collaborating with international parties participating in rehabilitation and reconstruction projects directly financed by foreign aid. BRR’s mandate was for four years only and expired in April 2009, which meant that its main focus on reconstruction and less on the promotion of longer-term development.

Once it became evident that the Government would contribute substantial funds of its own, BRR’s mandate was expanded to also include the coordination and implementation of rehabilitation and reconstruction projects based on the implementation guidelines set forth in the central government’s budget. The task of implementing projects was onerous, and soon the agency’s attention was firmly on implementation and less on the coordination of other agencies.

As an agency, BRR reported directly to the President and had the authority to build and develop programs across a range of sectors. This meant that it had the power to implement projects usually reserved for specific national government ministries or the provincial government. Ideally, projects would need to be planned and implemented to ensure that the appropriate ministry (national or provincial) agreed with the need of such a project, and had the ability to ensure the ongoing viability of the project (including staffing and maintenance) after BRR’s departure in 2009. Coordinating the involvement of national and provincial ministries became an arduous and time-consuming task for BRR. Divergences in defining needs and future requirements emerged creating some tension between the various agencies.

The Master Plan for Aceh was developed in the first six months after the tsunami, when data availability and resources were limited. As a result, the Master Plan started to become less relevant as the full details of needs transpired and developed over time (Christoplos, I. 2006). Consequently, the Master Plan was revised in early 2008 after re-evaluating the needs of beneficiaries, examining the progress of BRR, and after considering the longer-term development needs in association with the provincial government. The new master plan was now called Ache Recovery Framework (ARF).
In order to better coordinate the activities of NGOs, BRR established a mandatory mechanism to capture project information called the “Concept Note Approval” process. BRR, as the coordinator for reconstruction, retained the right to approve or reject projects proposed by reconstruction players. Once approved, details of projects were entered into the publicly accessible Recovery Aceh Nias (RAN) database.

BRR also established a Coordination Forum for Aceh and Nias (CFAN), which was designed as an annual forum to bring together all stakeholders working in the reconstruction of Aceh and Nias and to provide a platform for discussing progress and challenges. The 2005 forum identified issues and obstacles facing the reconstruction community, allowing these issues to be tackled in the following months. Following a process of ‘regionalization’ by BRR in 2006, the 2006 forum gave input on how the reconstruction process could be decentralized, and funds and authority devolved to the districts of Aceh and Nias. The 2007 forum was proceeded by a series of technical meetings, with the output from the forum being incorporated into BRR’s mid-term (two-year) review process, constituting a new baseline for reconstruction needs and outlining progress to date. Views of success of the forums are mixed. The forums appear to have achieved their goal to provide a platform for discussing progress and challenges. However, there was an expectation that the forums would coordinate agencies, helping the reconstruction actors to set their strategies and shaping longer-term development plans. However, these expectations were not realized (Masyrafah, H., and McKeon M.J.A, 2008).
At the request of the Government, the World Bank established a multi-donor trust fund (MDF) to pool donor contributions to finance reconstruction projects and provide assistance for Government programs that were part of the rehabilitation and reconstruction effort. The MDF is guided by the Government’s reconstruction strategy and all its activities should be consistent with, and guided by, the Government’s Master Plan under the leadership and direction of BRR. A “better” Aceh and Nias are envisaged by improving infrastructure and adhering to social concerns such as reducing poverty, improving livelihoods and increasing equity. The MDF mechanism also provides for increased opportunities for interaction between donors, and national and regional governments.

The advantages of such a fund are numerous. In addition to minimizing transparent administration costs, the MDF provides a coherent framework through which contributing agencies can ensure that their financial contributions are meeting the needs of the Government’s reconstruction agenda. Also, bidding procedures for procurement are relatively transparent and internationally competitive, with the capacity to access cross-country experience and see the big picture. The MDF also has a capacity to respond directly to BRR guidance and previous experience of on-the-ground community-driven development in Aceh. Smaller donors with limited overseas experience or administrative capacity can also use the MDF as a channel for their aid. The MDF also helped donors to allocate funds quickly when detailed information on needs was unavailable, allowing the fund to disburse the money at a later stage.

Despite these advantages, some argue that the MDF was slow in executing projects due to its procurement and administrative mechanisms. Nonetheless, the MDF has proved an effective mechanism in promoting reconstruction and also longer-term development with better planning, coordination, transparency and accountability.

The World Bank played a pivotal role in the establishment and operation of the MDF. Its role as trustee and secretariat provided many donors with the assurances they required that rigorous policies and transparent procedures would be put in place to ensure appropriate use of funds. The World Bank also acted as co-chair of the MDF, along with the head of BRR and the European Commission. However, as the World Bank is also the recipient of funds from the MDF, some contributors expressed concern over the lack of a clear separation of duties to avoid potential conflicts of interest.

Not all bilateral or multilateral donors contributed to the MDF and no NGOs made contributions—despite the obvious advantages of such a mechanism. Some bilateral agencies emphasized the importance of maintaining influence through direct bilateral relationship with the Government, which
would have been diluted had funds been channeled through the MDF, together with a loss of visibility.

By December 2007, the MDF had US$702.6 million in allocated funds from 15 donors, 22 of which US$492.5 million had been allocated to 17 projects; with a further six projects under consideration for implementation worth US$106 million.

4) Damage rate of streets by District (kecamatan), Source: JICA Study team
## 5) List of interviewees

### Interviews conducted during the field visit

<table>
<thead>
<tr>
<th>Authority / Organisation</th>
<th>sub-authority, organisation</th>
<th>name</th>
<th>occupation</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRR</td>
<td>Bureau Reconstruction Rehabilitation</td>
<td>RATNA DEWI</td>
<td>head of planning &amp; water resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ratma</td>
<td>data analyst at the Data Information Centre</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pak Iskandar</td>
<td>Deputy Economics BRR</td>
<td>Kappedan/ State Ministry of National Development Planning</td>
</tr>
<tr>
<td>Unbodies</td>
<td>UN habitat</td>
<td>Julian Gresenda</td>
<td>UN office for project surfaces 2006 - 2008</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNDP</td>
<td>Bima Indra</td>
<td>Project Manager housing project in Aceh 2005 - 2009</td>
<td>In total 5000 houses where constructed under his supervision</td>
</tr>
<tr>
<td></td>
<td>UN habitat</td>
<td>Edy Husnial</td>
<td>community development specialist 2005-2008</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IDM = International Organisation For Mitigation</td>
<td>Edy Husnial</td>
<td>regional coordinator 2008-2010</td>
<td></td>
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<tr>
<td></td>
<td>American Red Cross</td>
<td>Edy Husnial</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UN habitat</td>
<td>Setya Budi</td>
<td>community development specialist 2009-2010</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NGO</td>
<td>Fiona Zakaria</td>
<td>Monitoring and evaluation of WASH response in emergency situation, WASH focal points at certain IDPs camps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Catholic Relief Services</td>
<td>Fiona Zakaria</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Charles Germany</td>
<td>Perry Suferia</td>
<td>Consultant in Disaster Management</td>
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</tr>
<tr>
<td></td>
<td>World Vision</td>
<td>Ade</td>
<td>Housing reconstruction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MRI = Indonesian Society for Disaster Management</td>
<td>Perry Suferia</td>
<td>Consultant in Disaster Management together with WORLD Vision they redeveloped 50 villages</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FIWET</td>
<td>Perry Suferia</td>
<td>Disaster Risk Reduction specialist in Aceh Barat</td>
<td></td>
</tr>
<tr>
<td>TDMRC</td>
<td>Tsunami Disaster Mitigation Research Center</td>
<td>Syamsidik</td>
<td>Research Development Manager</td>
<td></td>
</tr>
<tr>
<td>ITB</td>
<td>Institute of Technology Bandung</td>
<td>Saut Sagala</td>
<td>Regional and Rural Planning Research Group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Architecture, Culture and Development</td>
<td>Syamsidik</td>
<td>Architectural and Cultural development</td>
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<td></td>
<td>Techno-social of Built Environment Design</td>
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<td>Architectural and Cultural development</td>
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<td></td>
<td>National Research Group for Disaster Assessment Banda Aceh</td>
<td>Syamsidik</td>
<td>Architectural and Cultural development</td>
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</tr>
<tr>
<td>LOCAL PEOPLE</td>
<td>Teaching</td>
<td>Head of the Lambauk Aceh village</td>
<td>instructor in regional and city planning, Bandung University of Technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jakarta</td>
<td>Junira Adriana</td>
<td>Student of Universitas Riau, student of Banda Aceh and survivor of the tsunami</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jakarta</td>
<td>Ferry Suferia</td>
<td>Consultant in Disaster Management to together with WORLD Vision they redeveloped 60 villages</td>
<td></td>
</tr>
<tr>
<td>Royal NL embassy</td>
<td>Jakarta</td>
<td>Wachid Ridwan</td>
<td>Representative of the Dutch government in the Aceh region during the redevelopment period</td>
<td></td>
</tr>
</tbody>
</table>

**Interviews conducted during the field visit**

Persons, authorities and organisations that have been contacted and interviewed during my field visit in Indonesia. A list of interviewees.
7) Challenges overview for each Time moment (t=1, t=2, t=3).

### T=1 CHALLENGES

#### Table 1: Influence and stake matrix in t=1 for the Political Situation in t=1.

<table>
<thead>
<tr>
<th>Low Influence</th>
<th>High Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Least priority stakeholder group</td>
<td>Useful for decision and opinion formulation, brokering</td>
</tr>
<tr>
<td>• Local Corporation &amp; business</td>
<td></td>
</tr>
<tr>
<td>• Local community</td>
<td></td>
</tr>
<tr>
<td>• NGOs</td>
<td></td>
</tr>
<tr>
<td>Important stakeholder group perhaps in need of empowerment</td>
<td>Most critical stakeholder group</td>
</tr>
<tr>
<td>• Religious groups</td>
<td></td>
</tr>
</tbody>
</table>

#### Table 1: Influence and stake matrix in t=1 for the coordination challenge.

<table>
<thead>
<tr>
<th>Low Influence</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Least priority stakeholder group</td>
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<tr>
<td>• Local community</td>
<td></td>
</tr>
<tr>
<td>• NGOs</td>
<td></td>
</tr>
</tbody>
</table>

#### Table 1: Influence and stake matrix in t=1 for the collaboration and communication challenge.

<table>
<thead>
<tr>
<th>Low Influence</th>
<th>High Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Least priority stakeholder group</td>
<td>Useful for decision and opinion formulation, brokering</td>
</tr>
<tr>
<td>• Local Corporation &amp; business</td>
<td></td>
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<td>Important stakeholder group perhaps in need of empowerment</td>
<td>Most critical stakeholder group</td>
</tr>
<tr>
<td>• NGOs</td>
<td></td>
</tr>
</tbody>
</table>

#### Table 1: Influence and stake matrix in t=1 for the mismatches challenge.

<table>
<thead>
<tr>
<th>Low Influence</th>
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<tbody>
<tr>
<td>Least priority stakeholder group</td>
<td>Useful for decision and opinion formulation, brokering</td>
</tr>
<tr>
<td>• Local Corporation &amp; business</td>
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</tr>
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<td>• Local Organizations</td>
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</tr>
<tr>
<td>• Local community</td>
<td></td>
</tr>
<tr>
<td>• NGOs</td>
<td></td>
</tr>
</tbody>
</table>

#### Table 1: Influence and stake matrix in t=1 for the communication challenge.

<table>
<thead>
<tr>
<th>Low Influence</th>
<th>High Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Least priority stakeholder group</td>
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</tr>
<tr>
<td>• NGOs</td>
<td></td>
</tr>
<tr>
<td>• Religious groups</td>
<td></td>
</tr>
</tbody>
</table>

#### Table 1: Influence and stake matrix in t=1 for the interagency competition challenge.

<table>
<thead>
<tr>
<th>Low Influence</th>
<th>High Influence</th>
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</thead>
<tbody>
<tr>
<td>Least priority stakeholder group</td>
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<td></td>
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<tr>
<td>• Central government</td>
<td></td>
</tr>
<tr>
<td>• NGOs</td>
<td></td>
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</table>

#### Table 1: Influence and stake matrix in t=1 for the community participation challenge.

<table>
<thead>
<tr>
<th>Low Influence</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Least priority stakeholder group</td>
<td>Useful for decision and opinion formulation, brokering</td>
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<td>• Religious groups</td>
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<td>• Local community</td>
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<td>• NGOs</td>
<td></td>
</tr>
<tr>
<td>Central government</td>
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</tr>
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</table>
## T=2 CHALLENGES

### Table 1: Influence and stake matrix in T=2 for the coordination challenge

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<tbody>
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<td>Least priority stakeholder group</td>
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<tr>
<td>• Local Corporation &amp; business</td>
<td>• Religious groups</td>
</tr>
<tr>
<td>• Multilateral organizations</td>
<td>• Central government</td>
</tr>
<tr>
<td>• Local government</td>
<td>• NGOs</td>
</tr>
<tr>
<td>• Local Organizations</td>
<td>• Local community</td>
</tr>
</tbody>
</table>

### Table 2: Influence and stake matrix in T=2 for the Community participation challenge

<table>
<thead>
<tr>
<th>Low influence</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Least priority stakeholder group</td>
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<tr>
<td>• Local Corporation &amp; business</td>
<td>• Religious groups</td>
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</tr>
<tr>
<td>• Local government</td>
<td>• NGOs</td>
</tr>
<tr>
<td>• Local Organizations</td>
<td>• Local community</td>
</tr>
</tbody>
</table>

### Table 3: Influence and stake matrix in T=2 for the challenge of mismatches between demands & supplies

<table>
<thead>
<tr>
<th>Low influence</th>
<th>High influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Least priority stakeholder group</td>
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<tr>
<td>• Religious groups</td>
<td>• Religious groups</td>
</tr>
<tr>
<td>• Municipality</td>
<td>• NGOs</td>
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<tr>
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<td>• Local government</td>
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<tr>
<td>• Local Corporation &amp; business</td>
<td>• NGOs</td>
</tr>
<tr>
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### Table 4: Influence and stake matrix in T=2 for the funding gaps challenge

<table>
<thead>
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<th>High influence</th>
</tr>
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<tbody>
<tr>
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<td>Most critical stakeholder group</td>
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<tr>
<td>• Religious groups</td>
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### Table 5: Influence and stake matrix in T=2 for the challenge of corruption.

<table>
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### Table 6: Influence and stake matrix in T=2 for the coordination challenge.

<table>
<thead>
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<th>Low influence</th>
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<td>• Local government</td>
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- United Nations Environment program: [http://www.unep.org](http://www.unep.org)
- International Federation of Red Cross and Red Crescent Societies: [http://www.ifrc.org](http://www.ifrc.org)
- Transparency International global coalition against corruption: [http://www.transparency.org/topic/detail/humanitarian_assistance](http://www.transparency.org/topic/detail/humanitarian_assistance)
- CBS News, Asian Tsunami, 27-12-2004: [http://www.youtube.com/watch?v=g15sZ_d2WUY](http://www.youtube.com/watch?v=g15sZ_d2WUY)
- Badan Pusat Sta
Fig. 5.25 Indonesia thanks the world, By author