With this BRR Book Series, the Indonesian government, its people, and BRR wish to express their deep gratitude for the many kind helping hands extended from all over the world following the December 26, 2004, earthquake and tsunami in Aceh and the March 28, 2005, earthquake in the islands of Nias.

Four years on, the once devastated landscapes are again vibrant with the sporadic rhythm of human life. This achievement is the result of a steadfast commitment of the local, national and international community, combined with the resilience of the people who lost so much.

The dynamics and challenges encountered during the massive undertaking of rebuilding homes, hospitals, schools and other infrastructure, while striving to empower those who survived to reshape their future and redevelop their way of life, provide an important understanding of the disaster-recovery process in Aceh and Nias.

In light of this, within the pages of this book, BRR would like to share those experiences and the lessons learned as a small contribution to return the favor to the world for the invaluable support it contributed to building Aceh and Nias back better and safer; as a history of the humanitarian journey of a united world.
I am proud, that we can share the experiences, knowledge, and lessons with our fellow countries. I do hope that what we have done can be a standard, a benchmark, for similar efforts at the national and international levels.

Speech of President Susilo Bambang Yudhoyono at the Official Closing Ceremony of BRR at the State Palace, April 17, 2009 about the BRR’s trip to the Tsunami Global Lessons Learned Conference at the United Nations Headquarters in New York, April 24, 2009
Aerial view of Beuramoe New Town, Aceh Besar District, that was built as relocation complexes for the post-tsunami beneficiaries, April 3, 2009. Being equipped with complete and integrated basic infrastructure and facilities, the new satellite town built together by a number of Recovery Partners has become a monument of the international humanitarian cooperation. Photo: BRR/Arif Ariadi
## Contents

**Introduction** viii

Chapter 1. When the Unimaginable Happens 1  
   An Unprecedented Disaster  1  
   Formulating Direction and Steps 8

Chapter 2. Determination to Rebuild Better 17  
   Determining the Right Guidelines 17  
   Designing Sensible Policies 21  
   Rebuilding with Strategy 21

Chapter 3. Building Hope and Communities 29  
   Village Planning 29  
   Sub-District Spatial Frameworks and Action Plans 36  
   Reconstruction of Aceh Land and Administration System Project 41  
   Community Participation in Settlements Reconstruction 43  
   New City, New Hope 54  
   Offering the Haven for Renters 56  
   Providing Area and Settlements Infrastructure 62  
   Building Housing and Settlements with Friends 63  
   Facts Emerge Through Geospatial Information System 66

Chapter 4. The Moves Overcoming Challenges 75  
   When Houses Had to be Built Instantly 75  
   Dilemma at a Crossroads 77  
   Thousands of Houses, Thousands of Contractors 78  
   Encountering Obstacles, Facing the Challenges 83  
   Adapting to the Needs 84

Chapter 5. Lessons for the Future 93  
   The Four-year Achievements 93  
   Lessons Learned from the Field 101  
   Closing Reflection 113

Glossary of Abbreviations 114
Introduction

FOR a period of three days, beginning on December 27, 2004, the Indonesian flag was drawn to half mast, and a nation was in mourning. A national disaster was declared and the world watched in disbelief. An earthquake, followed by a series of tsunamis, struck the western-end of Indonesia, causing an unprecedented loss of life and the obliteration of whole communities. For those who survived, their homes, livelihoods, and prospects for the future were swept out to sea.

The earthquake, one of the largest in recent history measuring 9.1 on the Richter scale, was the result of a convergence between two tectonic plates beneath the ocean floor. Although dormant for over 1,000 years, with the buildup of pressure caused by one plate slowly sliding under the other at an estimated rate of 50 mm per year, on December 26, 2004, these two tectonic plates ruptured along a 1,600 km length of what is known as the Sunda mega-thrust.

The epicenter of this earthquake was located 250 km south-west of the Indonesian province Nanggroe Aceh Darussalam. Its rupture - a slippage of up to 10 meters, resulted in the ocean floor being (permanently) lifted and dropped, pushing the entire water column up and down, and generating a series of powerful waves. Tsunamis swept violently up to 6 km inland over the shorelines of Aceh and surrounding islands, beginning less than half-an-hour after the earthquake. A total of 126,741 lives were lost and, in the wake of the disaster, an additional 93,285 people declared missing. Some 500,000 survivors lost their homes, while as many as 750,000 people lost their livelihoods.
In the private sector, which constituted 78 percent of the destruction wrought by the earthquake and tsunamis, up to 139,195 homes were destroyed or severely damaged, along with 73,869 ha of land with varying degrees of productivity. A total of 13,828 fishing boats vanished, up to 27,593 ha of brackish fish ponds disappeared, and 104,500 small-to-medium businesses ceased to exist. In the public sector, 669 government buildings, 517 health facilities, and hundreds of educational facilities were either destroyed or rendered non-functional. The loss to the environment included 16,775 ha of coastal forests and mangroves, and 29,175 ha of reefs.

The loss and damage of these regions did not end there and, on March 28, 2005, another major earthquake measuring 8.7 on the Richter scale struck the nearby islands of Nias in the Indonesian province of North Sumatra. This second natural disaster resulted in the death of 979 people and the displacement of 47,055 survivors. The proximity of this earthquake, a result also of two tectonic plates rupturing, slipping a length of 350 km, directly beneath the Simeulue and Nias islands, resulted in massive damage to the islands' infrastructure.

The eyes of the world once again watched in disbelief as the devastation of these regions unfolded, and helping hands began arriving from all corners of the globe to assist in the rescue and relief operations. Individuals of every race, religion, culture and political persuasion across each and every continent worldwide, along with governments, the private sector, non-government organizations and other national and international bodies, reacted in an unprecedented show of human concern and compassion.

From the scale of the devastation wrought by both disasters, it was clear that it would not be enough to simply replace the homes, schools, hospitals and other infrastructure. The rehabilitation and reconstruction program would need to embrace the rebuilding of the social structures that once thrived along the shores of Aceh and within the hinterlands of Nias. The trauma of losing friends, family and a means to support those who survived required that the recovery program focused not only on physical, but also non-physical, development, and on rebuilding an economy to a level that would ensure a firm foundation for future (re)development and growth.

On April 16, 2005, the Government of Indonesia, through the issuance of Government Regulation in Lieu of Law No. 2/2005, established the Agency for the Rehabilitation and Reconstruction (Badan Rehabilitasi dan Rekonstruksi, BRR) to coordinate and jointly implement a community-driven recovery program for Aceh and Nias. BRR’s mandate was to design policies, strategies and action plans, within an atmosphere of transparency and accountability, and to implement them through effective leadership and coordination of the combined domestic and international effort to rebuild Aceh and Nias back better and safer.
The rehabilitation and reconstruction of Aceh and Nias have constituted a challenge not only for the people and Government of Indonesia but for the entire international community. That this challenge was overcome successfully is reflected in the conclusions drawn in evaluations concerning the recovery program. In the final months of the program, the World Bank among others concluded that the recovery was an unprecedented success story and a model for international partnership - outcomes which were realized through effective government leadership.

The nation’s management of the recovery program gained the confidence of donors, both institutions and individuals, and through BRR’s anti-corruption policies and processes, the trust of the international community. And without the cooperation of the international community, the post-disaster situation in Aceh and Nias - the unparalleled devastation - could never have been reversed.

In recording this humanitarian achievement, BRR has produced the BRR Book Series containing 15 volumes that detail the processes, challenges, solutions, achievements and lessons learned during the rehabilitation and reconstruction program in Aceh and Nias. It is hoped that these books will function to capture and preserve the experience of the recovery, and to establish guidelines for future disaster-recovery programs across the world.

This book titled *Roofing the Pillars of Hope* analyzes how housing and its basic infrastructures are built and laid out to establish a convenient settlement. Without such, it is difficult for the survivors to rise, do activities, plan their future, and realize their hopes in comfort and peace. This is where the importance of this sector is presented.

Construction of houses is, clearly, prioritized to fulfill the survivors’ need of shelters. Although we stumbled over and hindered by numerous challenges, but now, the houses were built here and there. Colorful and new houses are grouped as clusters of new settlements. Community participation and incorporation of their hopeful aspirations, though at times not easy to materialize completely, have become the main pillars to implementation in providing people home.
### 4-Year Achievement
Rehabilitation and Reconstruction

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>People displaced</td>
<td>635,384</td>
</tr>
<tr>
<td>Small-medium enterprises (SME) destroyed</td>
<td>104,500</td>
</tr>
<tr>
<td>Laborers trained</td>
<td>155,182</td>
</tr>
<tr>
<td>SMEs received assistance</td>
<td>195,726</td>
</tr>
<tr>
<td>People killed and missing</td>
<td>127,720</td>
</tr>
<tr>
<td>Schools destroyed</td>
<td>139,195</td>
</tr>
<tr>
<td>Houses destroyed</td>
<td>635,384</td>
</tr>
<tr>
<td>Hectares of agricultural land destroyed</td>
<td>73,869</td>
</tr>
<tr>
<td>Teachers killed</td>
<td>1,927</td>
</tr>
<tr>
<td>Teachers trained</td>
<td>7,109</td>
</tr>
<tr>
<td>Fishing boats destroyed</td>
<td>13,828</td>
</tr>
<tr>
<td>Fishing boats built or provided</td>
<td>140,304</td>
</tr>
<tr>
<td>Religious facilities destroyed</td>
<td>1,089</td>
</tr>
<tr>
<td>Religious facilities built or repaired</td>
<td>3,781</td>
</tr>
<tr>
<td>Kilometers of road destroyed</td>
<td>2,618</td>
</tr>
<tr>
<td>Kilometers of road constructed</td>
<td>3,696</td>
</tr>
<tr>
<td>Schools destroyed</td>
<td>3,415</td>
</tr>
<tr>
<td>Schools built</td>
<td>1,759</td>
</tr>
<tr>
<td>Health facilities destroyed</td>
<td>517</td>
</tr>
<tr>
<td>Health facilities constructed</td>
<td>1,115</td>
</tr>
<tr>
<td>Government buildings destroyed</td>
<td>669</td>
</tr>
<tr>
<td>Government buildings constructed</td>
<td>996</td>
</tr>
<tr>
<td>Bridges destroyed</td>
<td>119</td>
</tr>
<tr>
<td>Bridges constructed</td>
<td>363</td>
</tr>
<tr>
<td>Ports destroyed</td>
<td>22</td>
</tr>
<tr>
<td>Ports constructed</td>
<td>23</td>
</tr>
<tr>
<td>Airports or airstrips destroyed</td>
<td>8</td>
</tr>
<tr>
<td>Airports or airstrips constructed</td>
<td>13</td>
</tr>
</tbody>
</table>
When the Unimaginable Happens

An Unprecedented Disaster

SURPRISED. Astonished. Shocked. Hundreds of thousands of people southwest of Sumatra felt these emotions in turn as a 9.1 on the Richter Scales earthquake followed by a coconut tree high tsunami struck the island. No doubt, the earthquake that happened on December 26, 2004, was the biggest in the past 40 years. It was the worst natural disaster to occur in Indonesia since Krakatau Volcano erupted in 1883. That Sunday morning, at 8 o’clock local time, the unimaginable happened.

Within seconds the tsunami rolled over 800 kilometers of Aceh Province’s coastline – covering a distance roughly equal to that between Jakarta and Surabaya, on opposite ends of Java Island. The earthquake followed by tsunami cost many lives. As many as 126,741 people were killed and 93,285 reported missing in Aceh and North Sumatra. The disaster affected the housing and settlement sector tremendously, causing half a million people to lose their homes. Banda Aceh, the capital of Aceh Province, was one of the hardest hit spots.

Not long after, another disaster struck. On March 28, 2005, at 23:09 local time, an 8.7 on the Richter scale earthquake hit Sumatra Island for about five minutes. This was the second biggest earthquake in the world since 1964. The effect covered a 1,000 kilometer radius and shook Bangkok, Simeulue and Singkil again.
In short, the Housing and Settlement Sector faced very difficult tasks of rehabilitation and reconstruction. Searching for and preparing plots of land, collecting data on potential beneficiaries, building houses and infrastructure, including formulating effective spatial planning and relocating beneficiaries to their newly built houses, were far from easy tasks.

Land itself was a tremendously problematic issue. About 13,610 hectares of land were affected by the tsunami out of the previously 5,736,577 hectares. Parts of the Meuraxa, Syiah Kuala, Kuta Raja and Jaya Baru sub-districts were submerged. Most of the documents concerning land in the tsunami affected areas were destroyed or lost to the water.

Not only that, tsunami also destroyed established land parameters. Many of the land owners were missing with no concrete news of their possible whereabouts. The National Land Agency (Badan Pertanahan Nasional, BPN), Indonesia’s land administration authority, was crippled in Aceh because its offices had been destroyed and about 30% of its staff were missing or killed. Later, it was found that only 10% of the survivors could officially acknowledge they owned a piece of land prior to the tsunami and produce the proper land documents issued by Indonesian Government to prove it. Most of the land in Aceh were privately owned following local customary law.
The next issue was to count how many families would become beneficiaries of the reconstructed houses. Data collection had become an important part of the first phase of recovery. If the counting was not accurate, some people, who had rights, might not receive houses and some people might receive more than one.

In post disaster areas like Aceh, disparity, injustice, and discrepancy in fulfillment of basic needs is prone to trigger conflicts. However, once the field reality was checked, it was revealed that post-disaster conditions made it difficult indeed to find tsunami victims’ relatives. Some had died, some were missing, and some had taken refuge elsewhere, moving to other towns, or even to other countries. The various census or survey methods were difficult to conduct. To overcome the problem, a unique strategy in counting the beneficiaries was formulated.

Housing became one of the most important issues in post disaster management. This is because housing is a basic human need. Thus, rebuilding housing became critical. And within the context of the prolonged 30-year conflict that had been going on in Aceh before the tsunami, ensuring basic accommodation became increasingly important. Discrepancy or failing to accommodate the need for housing could potentially retrigger the regional conflict, and make it even worse.

However, the building of houses could not be done just like that. Field data convey that housing and settlement conditions is one cause of the high fatalities and injuries, including:

1. No high ground to take refugee on.
2. No direct access to high ground.
3. Bottle-necking of escape routes due to patterns and networks of roads that were not designed for evacuation.
4. Huge chunks of debris, such as segments of buildings and cars carried by the tsunami waves, had to be cleared away.
5. Many buildings had clasped or been swept away because they were not built to sustain earthquakes or tsunamis.

For these reasons the houses had to be built in line with specific standards; they had to be able to be earthquake resistant. Apart from that, any reconstructed settlement would require the basic infrastructure needed for evacuation and disaster mitigation. Housing design as well as spatial planning had to involve the local community participation to ensure a sense of community ownership that would consequently guarantee sustainability of maintenance of the housing and settlement infrastructure.

Despite the aforementioned difficult tasks, another additional one needed to be considered, which was managing the international aid coming from 900 organizations around the world that wanted to become involved in the rehabilitation and reconstruction process. As the saying goes, coordination is much easier said than done. And, in this situation, coordination was crucial to avoid disparity of aid; meaning that
When Land Has No Owner

**Land** has important value as a symbol of origin, as well as being an economic asset. Many cases regarding inheritance rights in the post-tsunami period had to be taken into consideration in relation to land administration. Therefore, a solid legal basis was set forth in Law No.48/2007 concerning the handling of legal issues related to the rehabilitation and reconstruction of Aceh Province and Nias Islands, North Sumatra.

This law regulates existing and destroyed land and related compensation, as well as relocation and land clearing for infrastructure development, such as for public facilities, social facilities, dikes and sea wall defense construction. Any cost for clearing land is based on negotiating process of a previously agreed upon reference for existing prices with the assistance of an independent appraisal team from the local community.

District/city Land Acquisition Committees (Panitia Pengadaan Tanah, PPT) were set up by District Heads/Mayors to control public land procurement. The committee members consisted of local government officials.

The committee’s tasks were:

- To conduct research and inventory of the land, buildings, plants and other things related to the transfer of land property rights.
- To conduct research on the legal status of future transferred property and its supporting documents.
- Provide estimation and proposal of compensation for the land.
- Provide clarification to local landowners on development plans through direct or indirect public consultation, face to face or through the printed or electronic media.
- Hold meetings on the land compensation with land owners and the related government institution in need of the land to determine the size of compensation.
- Witness the delivery of land compensation to the rightful land owner.
- Create official reports on the handover of land rights.
- Fill and document each and every land acquisition document, and
- Handover to the competent/relevant party.

If the owner of any given plot of land cannot be immediately identified, the land is classified as belonging to Mr. X. Procedures to identify Mr. X begins with putting forward possible owners by a team directed by the mayor. Subsequently, the Syariah Court will determine that the measured land does not have a known owner. The management of the land will be handled by *baitulmal* (zakat collection institution). Because the baitulmal is rarely found in the village, the land management is supervised by the *geuchick*, or village leader or *tuha peut*, community leaders, and the land will be utilized for a *meunasah* (religious facility) for the benefit of the community. Property, he/she has the right to request full reimbursement from the *baitulmal* by showing proper documents stating that he/she is the rightful owner of the land.
some areas would be flooded with assistance, while others were not. Some areas were completed in a given time frame, while others were not. Some areas received certain methods and approaches, while others accepted different steps and measures.

These differences may not be conceived as diversified, but instead as deliberate discrimination. In a post conflict area like Aceh, such a perception has a tendency to reignite the previous social discord.

Thus, it is not extreme if people working in the Housing and Settlement Sector claimed to have encountered incomparable level of difficulty at work. Not only were project implementation and completion daunting, the technical and social risks were tremendous. For this reason, the housing and settlement sector was not merely building houses or roads, but also empowering society to become involved in the process as well.

Moreover, every bit of rehabilitation and reconstruction work for the housing and settlement sector has to be completed in just four years.
To assure housing is built based on the basis of both needs and rights, an accurate and up-to-date beneficiary list is a must. The verification of the housing beneficiary is the starting point for the housing and settlement rehabilitation and reconstruction process. In 2005, during the early stages of rehabilitation and reconstruction, beneficiary data was acquired through surveys conducted by Garansi (a local NGO) in cooperation with the Aceh Provincial Social Service, the United Nations Development Programme (UNDP), United Nations Information Management System/Service for Sumatra (UNIMS), the Humanitarian Information Center (HIC) and the Electronic Data Management Institution (Badan Pengelola Data Elektronik, BPDE) of the Aceh Provincial Information and Communication Department.

Surveys conducted using census methods involving local government at village and sub-district level were done without active community participation. Data delivered to the BRR Housing and Settlement Department showed the number of houses to be either repaired or rebuilt in each village. The report was based on numbers of households, but the names of beneficiaries were not listed.

Although the data was sufficient to determine the number of houses needed, it was not a proper basis housing beneficiary verification. Therefore, there was a need to establish a unit solely in charge of beneficiary data collection, as well as verification. In 2006, the Verification Directorate was established. The Verification Directorate’s structure consisted of regional officers, including: District level Housing and Settlement Assistant Manager and Sub-district facilitators who had direct contact with the Village Committee for Housing and Settlement Development Acceleration (Komite Percepatan Pembangunan Perumahan dan Perumkiman Desa, KP4D) as well as beneficiaries at the village level. KP4D was a group of beneficiaries at the village level including village officials and leaders.

In general, the approach to determine a beneficiary’s status was to check on whether the tsunami victim (head of household) was eligible to receive housing assistance. The future beneficiary data collection conducted using the community participation approach considering the locals’ knowledge of the area prior to the disaster was the best justification as to whether a person could receive housing assistance or not. People regarding themselves as tsunami victims could register for verification, validation and recording. KP4D then actively assessed eligibility. In the end, the above processes resulted in a list of eligible housing beneficiaries.

Once the initial list was compiled it was widely publicized in order to gather more input for confirming its accuracy from the related local community members. This community participation approach used in data collection and the verification process ended when the Final Data Collection Official Report was legalized by village government officials, village leaders, the KP4D, and the head of the of sub-district of each given rehabilitation and reconstruction area.

Below are the procedures for the beneficiary verification process undertaken in 2006-2007.

The Committee for the Verification and Closure of Housing Data was established in October 2006. The committee’s task was to re-verify data and investigate any discrepancies in the housing data collection process. Data collection finalization was conducted from the end of 2006 until the end of May 2007, with a mass media announcement letting the public know that the last date for data input was May 20, 2007.
Figure 1.1 Data Collection and Verification of Housing Beneficiaries and Its Relation with the Construction Implementer

Chapter 1. When the Unimaginable Happens

7
Daily chores at the barracks, such as cleaning the yard and drainage system, are carried out by the displaced to create a clean and healthy living space, Sigli, Pidie District, May 13, 2005. Photo: BRR/Arif Ariadi

Formulating Direction and Steps

Housing is one of the basic human needs. It gives human beings protection from weather, a sense of security, and comfort that allows them to recalibrate their spirits in tough situations, in also provides a sense of togetherness and community.

The earthquake and tsunami that struck Aceh in late 2004 immediately and starkly pinpointed the need to build new more secure homes, where those who survived the disaster, together, can heal their trauma.

In early 2005, using financial assistance from Ministry of Public Works and with the help of local governments in providing space, many temporary shelters (barracks) were constructed in Aceh. Most of them were constructed on property owned by the government, including the Indonesian National Army (Tentara Nasional Indonesia, TNI). The rest was constructed on property owned by local people or Islamic foundations. Several NGOs participated in the activity. The barracks were not only facilitated with physical infrastructure, such as sanitation, but also provided with social and humanitarian infrastructure, such as counseling. On December 2006, the number of barrack sites was 190.
Barack maintenance was the responsibility of local governments, while they were operated on sub-district level by the Sub-district Leadership Group (*Musyawarah Pimpinan Kecamatan*, Muspika), including heads of sub-districts, commanders of military subdivisions and sub-district police commissioners. If issues could not be resolved on the sub-district level they would be taken to the district head for resolution. Overall barrack management was the responsibility of the Aceh Provincial Governor and under supervision of the Ministry of Social Affairs.

Most of the time, any given barrack’s occupants came from a number of different areas. The barrack location did not always represent the areas of origin of the occupants. Some barracks located in non-tsunami affected areas, such as Jantho, Samahani, and Sibreh in Aceh Besar. These barracks were occupied by internally displaced persons from Aceh Jaya.

Overall coordination of displaced persons during the emergency period was handled by the Unit for Coordinating Implementers of Disaster and Displaced Persons Management (*Satuan Koordinasi Pelaksana Penganggulangan Bencana dan Penganan Pengungsii*, Satkorlak), who provided basic needs, such as foods, medicines, water and sanitation. Satkorlak also collected data on the number of displaced persons, but not details on the head of household, and often did not pay take note of where the were from or the status of their residence prior to the disaster.
From January 2005, every temporary housing occupant received living assistance from the Ministry of Social Affairs. This assistance, which covered rice and other food stuffs, was known among the displaced persons as *jadup* (survival rations).

Barrack coordination varied in every sub-district depending on the scale of the damage to individual area infrastructure and the psychosocial impact of the tsunami on the barracks occupants; improvisation was needed. The temporary paralysis of local government had also impacted the situation, with some barracks receiving adequate assistance and others not as much. The quality of life in the various barracks depended on the barracks leaders’ coordination with the head of sub-district during efforts at obtaining aid assistance from various parties.

It became apparent with time that a culture of aid dependency was rapidly taking root in most barracks. As time passed it became apparent that in some barracks the level of hygiene and sanitation was deteriorating, and that overcrowding was taking its toll in terms of lack of privacy and no special facilities for children. Barracks living soon became perceived as inhumane and intolerable.

The barracks and the survival rations were a fact of the life from the emergency phase and this was the situation when BRR was established in April 2005. Although during the emergency phase barrack coordination was handled by the Satkorlak under local government supervision, gradually the coordination was transferred to the BRR Deputy for Religion, Social and Cultural Affairs in cooperation with the Aceh Provincial Government’s Social Affairs Department and other international organizations, such as the World Food Program (WFP).

Within the BRR structure, the Social Affairs Directorate was responsible for the welfare of barrack occupants regardless of their future housing location. Many of the barracks were located outside of the disaster area although the BRR Deputy for Housing and Settlement reconstruction work gave more emphasis on the tsunami affected housing reconstruction. The data collection process also focused on disaster areas along the coastline.

Lack of coordination among BRR Deputies during the early days of the establishment of the body had caused several internally displaced persons locations to initially miss out on the housing assistance data collection process. The wide variety of the backgrounds of its own human resources and the policies in place for task delegation, as well as the intense reconstruction orientation gave rise to specific challenges for the new organization.

The pressing need for each deputy and department of BRR to continuously interact and coordinate with outside parties made it difficult to cultivate detailed coordination between department, and this was exacerbated by the assumption that a solid coordination system would eventually fall into place on its own. It took an entire year of the reconstruction process to solve this problem.
In the field, immediately following the disaster, as an emergency shelter, tents were a swift way to meet the needs of the refugees. Yet as time passed, the tent materials will not last long and whither easily from the effects of heat and rain. For this reason, it is important to find an alternative place to live.

Temporary shelters designed by the International Federation of the Red Cross (IFRC) was chosen as the best alternative to tents due to their physical construction from light steel frames and wooden walls that are more solid and enduring. These temporary shelters can be constructed relatively quickly and easily, and require a small number of people. In comparison to communal barracks, these temporary shelters offer each family an individual unit as to ensure their privacy.

At the end of 2005, the policy of relocating all internally displaced persons from tents to more permanent temporary shelters was implemented by the Indonesian Red Cross (PMI) and other NGOs, such as Catholic Relief Services, International Organization for Migration (IOM), UN-HABITAT. These efforts were supported by IFRC. These temporary huts were generally constructed in the same location as tents or on the land where the homes of the displaced persons had previously stood. However, some temporary houses were also constructed on government or public property to house displaced persons who had not acquired space in the communal barracks.

BRR, in cooperation with the United Nations Office of the Recovery Coordinator (UNORC) became involved in the distribution and assembly of these temporary housing units. Acting Aceh Governor at that time, Musthafa Abubakar, was very supportive of the temporary shelter construction and planned to evacuate barracks in Aceh by June 1, 2006. After undergoing aid disbursement process, thousand of temporary shelters were built in Aceh in April 2006.

In mid September 2006, 200 internally displaced persons coordinated by the Interbarracks Communication Forum (Forum Komunikasi Antarbarak, Forak), an NGO, demonstrated in front of BRR headquarters. One of their main objectives was the need to provide greater consideration on housing reconstruction for barrack occupants. The housing assistance program, in particular for those still living in barracks, as accelerated.

The demonstration highlighted the fact that the BRR strategy to include a social and cultural affairs into the housing program was not efficient enough in its implementation. Deputy for Religion, Social and Cultural Affairs needed to be involved in finding a solution for the transition from barracks to houses and must be intensified significantly by forming a team to resolve barrack related issues.

This realization was a wakeup call and sharpened BRR’s focus and commitment. Several considerations were made based on Aceh’s condition as a former longtime conflict region and as an incomparable disaster area. It was understandable that it would not be easy for the people of Aceh to overcome the traumatic situations they had to face. BRR intervention, particularly through housing and settlement rehabilitation and
ANYONE who has ever built a house or dreamed of building one, could understand that the discussion of design and construction starts long before the foundation is laid. Housing design is the foundation of everything. A similar thing happen in Aceh because design determined house quality, price, the workforce needed and the work timeline. Other considerations came into play as well, including utilization of eco-friendly accessible materials, and ensuring the design fit the environment and the size of the land parcel. The house also had to be earthquake and disaster resistant and adhere to the appropriate building code. Another important matter was to include the community in the planning process; the community participation approach.

The minimum standard for newly built housing assistance was the Type-36 Plus house, meaning the structure was built using an expandable house concept, with the core house measuring 36 m² and consisting of 2 bedrooms, 1 living room/dining room, a kitchen, a bathroom and a terrace. This minimum standard was planned based on accommodation for a family of 2 children, with individual basic space need calculated at 9 m².

BRR offered leeway to accommodate community homeowner requests, aspirations, and desires. This was important for BRR since a house is a reflection of the future hope of the community. Therefore, each house was built with consciousness of the diversity inherent in the basic design. This was done to ensure that the individual homes would not look completely identical to each other, but could, as much as possible, reflect the needs and characters of the inhabitants. The reason for this was the need to allow the people of Aceh to find their own true identity as a plural and cosmopolitan society that reflected their roots and their inherent cultural identity.

Figure 1.2 Building and New House: Core House Principle
reconstruction, was expected to offer an experience for the beneficiaries by witnessing an achievement in development. This is expected to become a strong and solid foundation for the Acehnese upon which to build their future.

Therefore the housing and settlement rehabilitation and reconstruction program can not be perceived through a narrow lens. Although BRR held to the strict mandate of reconstructing houses only in the tsunami affected area, flexibility to reach outside these areas were considered. A broader and extensive approach was used to lessen the possibility of a development gap emerging between non-affected areas and affected areas, particularly in the high risk former conflict areas.

This approach was one of the motives behind the eventual extension of the housing and settlement rehabilitation and reconstruction program into destitute areas and communities. The objective was to avoid future social resentment which could cultivate a conflict that could eventually destroy the physical and non-physical reconstruction. Most reconstruction actors in the field understood this, and every NGO worker interacted directly with the community and wisely took into account their inputs to avoid such a thing.
This did not mean that everything was done without solid and appropriate planning or done in a shoddy way. The planning and calculations were clearly set out, but with leeway to be flexible, responsive and need oriented. On the other hand, related monitoring efforts were increased. For example, the data collection process, housing and settlement beneficiary verification and re-verification, were done several times by many parties over an adequate period of time. All these processes were to assure that the housing was given to the right beneficiaries.

Challenge after challenge emerged and it became apparent that the community did not have enough information to determine and ensure the rights of each and every beneficiary. For example, in the case commonly called “division of Household Card”. Some beneficiaries assumed that one house, previously inhabited by a number of head of households, was expected to be replaced with a greater number of houses to accommodate all head of household. The reason for this assumption was that the new type 36 houses being provided were far too small to accommodate the extended families as the larger, pre-disaster housing had.

Regulations were put in place to standardize the aforementioned issue. Still the public’s expectations driven by real needs is not without a reasonable basis. Cautious policies were applied due to the prevalent potential of manipulation. Accurate results were consistently aimed for, bearing in mind the limited resources and capacity, to engender fair treatment among individuals, communities and the government that have been isolated for so long, to return to their land to truly rebuild livelihood.

Another challenge was the change in the structure of BRR itself. Every housing reconstruction effort centralized in the BRR Deputy for Housing and Settlement had to be decentralized into representative offices in different regions. The objective was to bring policy closer to the different field situations. Nevertheless, the new heads of representative offices, after undergoing a short transition period, often faced severe time constraints that made management of their tasks difficult.

This time pressure distorted the decision making process, particularly in relation to determining how many houses actually needed to be built. In such a situation, the policy of building more houses than the bare minimum required in order to avoid miscalculation was cautiously applied. The thinking behind this was that if the number of houses built exceeded demand among the displaced persons, the houses could be used by the local government to facilitate the post-conflict reintegration program envisioned by the government.
Determining the Right Guidelines

Aceh was devastated in the aftermath of the disaster. Houses, schools, buildings, public facilities, roads, bridges, harbors and other infrastructure were practically obliterated. Out of all this destruction, the most urgent was housing, or more specifically settlements.

On a more concrete level, the most basic understanding of what happened led to the conclusion that for a place so badly affected by a disaster, such as the earthquake and tsunami, rehabilitation and reconstruction needs to happen on a large scale. The recovery effort must be directed so that communities can quickly return to their normal activities in a better and safer environment than before the disaster. This is what needs to be achieved in the post-disaster recovery of the human living environment.

However, in Aceh, being safe from a disaster was not the only goal in mind. Aceh needed to be rebuilt in such a way that the living conditions are better than previously.

“Better” here is not a measurement of physical indicators or clever technical know-how. More than this, better means to ensure the continuity of development. This continuity focuses on a balance between a number of aspects, including a balance between economic, social and environmental considerations, keeping in mind the developments between and among generations.
The funding of the rehabilitation and reconstruction of housing and settlements, as is the case in the other sectors, can be grouped into two mechanisms: 1) aid from the Government and donors/NGOs managed and included in the mechanism of the state budget (APBN) or known also as on-budget; and 2) aid managed by related donors/NGOs not through the state budget, or otherwise known as off-budget.

In the on-budget scheme, there is what is known as on-treasury and off-treasury. Basically with this scheme, whether the funding were on or off treasury, BRR could act directly as the executing agency in reconstruction or coordinate institutionally with donors, whether bilateral (such as Germany with its German Development Bank or KfW), or multilateral, such as with the Multi Donor Fund (MDF), which is managed by the World Bank, or the Asian Development Bank (ADB) through a Grant Agreement mechanism, or with ‘non-traditional donors’, such as other developing countries.

On-treasury is a certain mechanism or budget management scheme that is registered in the Listing of the Issuance of Spending Authority (Daftar Isian Pelaksanaan Anggaran, DIPA) for the state budget, and existing funds are channeled through the Special Office for State Services and Treasury (Kantor Pelayanan dan Perbendaharaan Negara-Khusu, KPPN-K) as the national treasury, and the withdrawal of any of these funds follows mechanisms under existing legal regulations.

The on-budget/on-treasury scheme is divided into two kinds of funding sources, the first is often called the ‘Pure Rupiah’ (Rupiah Murni, RM) and the second, External Loans and Grants (Pinjaman/Hibah Luar Negeri, PHLN). For housing and settlements most of the funds were from the RM fund managed directly by around 20 Project Implementing Units (PIUs) in BRR, whether on the Deputy/Central level or in the Representative Offices. Also several programs that were funded through PHLN: the ReKompak Program (co-financed by MDF), the Housing and Settlements Program funded through the ADB Earthquake and Tsunami Emergency Support Project (ETESP), ADB-Japan Fund for Poverty Reduction-Seismically Upgraded Housing in Aceh Darussalam and North Sumatra (JFPR-SUHA), Non Project Type Grant Aid (NPTGA) Japan (all four cover the building of housing and settlement infrastructure), and the Reconstruction of Aceh Land Administration System (RALAS), a project funded by MDF for land certification. Details of these programs are available in Chapter 3.

Off-treasury, meanwhile, is a mechanism or a budget management scheme of External Loans and Grants (PHLN) in accordance with the Grant Agreement between two governments, the funds are registered in DIPA, but these funds are not channeled through the KPPN-K treasury, but are managed and channeled directly by the donor. The on-budget/off-treasury scheme was not that common. In the housing and settlements sector, there was only one program that used this scheme, which was the Rehabilitation and Reconstruction of Housing and Settlements Program (RRHS) funded by KfW and managed by a German consulting company, GITEC Consult GmbH in cooperation with PT Darena and Mamamia Indonesia Foundation. Another example would be the programs in infrastructure development that were managed by the Japan International Cooperation System (JICS), discussed in more detail in the book covering the Infrastructure sector. Programs specific to housing and settlements are described in more detail in Chapter 3.
In *off-budget* schemes BRR acted as a coordinator and facilitator. The execution of day-to-day duties, including fund management, was handled fully by each related agency or NGO. Also for *off-budget* schemes, the donors/NGOs organized their own activities, including looking for funds and management of funds. BRR’s Deputy for Housing and Settlement supported, accompanied, facilitated and coordinated accordingly to ensure that everything went well. In this scheme, the forms and levels of cooperation between BRR and the NGOs were very varied.
It is also important to keep in mind that the utilization of natural resources and the sustainability of the environment, along with supporting elements, such as the use of the latest, most appropriate, environmentally friendly technology.

This balance is of course not easy to implement in the field, but this is what should be striven for.

These steps were taken as a move towards reaching the rehabilitation and reconstruction vision, specifically in housing and settlement, to bring into reality improved settlements for families of the earthquake and tsunami victims. To this end, on the more concrete and operational side, the mission was to carry out the process of rehabilitation and reconstruction of housing and settlements in the most effective and efficient manner, whether it be funded on-budget, meaning through the Government of Indonesia’s National Annual Budget (Anggaran Pendapatan dan Belanja Negara, APBN), or through coordination and cooperation with non-governmental agencies which directly manage the funds themselves (non – APBN or off-budget).

All of this served as a compass guiding BRR in its efforts to move the wheels of the rehabilitation and reconstruction process in Aceh. All of the above, indeed, became the guidelines for building back better.
Designing Sensible Policies

For housing and settlements, the following policies were formulated and applied. First, prioritizing on infrastructure required to meet basic and logistical needs. This was done simultaneously by giving the main priority to the rebuilding houses, access to drinking water, sanitation and drainage, as well as the rehabilitation of infrastructure for transportation access, including strategic harbors and airports and connecting road networks.

Second, to assist and carry out the rehabilitation and reconstruction of houses along with basic supporting infrastructure for disaster victims. This was carried out by helping those victims who wished to return to their former homes in the form of in-cash or in-kind, as well as helping those who wished to relocate to a new resettlement area. Along with that, encouragement and facilitation was given to complete housing reconstruction funded by donors and other stakeholders.

Rebuilding with Strategy

A series of strategies were put in place in the implementation of the rehabilitation and reconstruction in Aceh and Nias. The first was, determining that the decision making process would be participative and fair. To this end, the public was given, as broadly as possible, the chance to actively participate. Also, vulnerable groups, including the handicapped, must benefit from the rehabilitation and reconstruction process as much as possible. Apart from that, to ensure transparency, the public was involved in every step of the process through community self-assessment.

Second, spatial planning was conducted along with the public. The design of spatial planning was carried out in four steps. These four steps included the involvement of the community, during identification of which areas were suitable for relocation up through the cleaning up of the debris.

Additionally, facilitation was carried out to determine the needs and plans for basic infrastructure in the affected locations. For those who lost their land due in the tsunami, land was reallocated with consideration given to spatial planning and local preferences. Collecting of information, identification and redesigning spatial planning of

No Wood Available, Steel It Is

INEVITABLY, with so much rehabilitation and reconstruction taking place, there was bound to be a great demand for building materials, one of them being wood. In the event of scarcity, the price would skyrocket and certain illegal practices would surface, such as smuggling or illegal logging. In light of these problems, BRR had to figure out a way to prevent the rehabilitation and reconstruction of housing and settlements from damaging the environment.

Soon a solution was found; besides setting strict requirements in the use of wood, another material was found that could be used, that of pre-fabricated steel frames. This material is not only earthquake resistant, it is also fire and weather resistant. Its tendency to rust and corrode can be prevented with a coating of anti-rust chemicals in the factory, or galvanization.

This solution had the twofold effect of supplying much needed building materials and preventing environmental and social damage.
settlements was also done through the participation of the community to build public trust in the reconstruction process.

The third strategy put in place was to determine the status of land ownership and its use. This strategy also incorporated the involvement of the community. The community took part in investigating the status and ownership of the land together with BPN based on the previous owners. Innovative solutions were also facilitated for certification, the issuance of temporary land certificates, and the issuance of collective land certificates, land readjustment and land consolidation.

The fourth strategy was to conduct settlement spatial planning in rehabilitation and reconstruction within a limited settlement area. This strategy is expected to be faster, cheaper, easier and more straightforward in its implementation. Approaches used included participative planning, which started from environmental planning based on spatial planning prior to the disaster, reconstruction plan for the city’s structure, and efforts to improve the quality of housing and settlements through revitalization.

The fifth strategy was to assist the disaster victims in home repairs and construction. This was to be done in six steps. The first was to supply technical expertise, materials and offer informed options on traditional architecture as initial considerations for designing and building. The second was to supply technical assistance to facilitate in the
RECONSTRUCTION and rehabilitation required a massive amount of resources, including the availability of raw materials, as well as manpower, such as contractors, workers and other skilled labor.

In the early days, there were two streams of thought. The first was to bring in all of the raw materials needed and to mobilize the manpower from existing, qualified sources. The second was to call upon the participation of the local community as broadly as possible for local manpower and materials.

The first stream of thought would have made possible very strict control over the expenditures related to the supply of materials and manpower. The required materials of standardized and controlled quality along with the manpower with relatively equivalent skill level and capacity would be made available. The community would simply be on the receiving end of the reconstruction process.

The second consideration would allow for market system to function. The gateway for local community participation would be opened widely. Locals could apply to be suppliers, contractors, workers, bricklayers, carpenters, and others. Through a selection process, only the best would be chosen. It is crucial to ensure a transparent, accountable, and fair selection process. In short, the chosen one is the best.

This opened up other possibilities. The recovery took place in an unstable region due to the prolonged conflict. This situation indubitably affected the quality of local manpower. The ability and skills of the local labor are possibly below the quality of their counterparts from Java, for example, where most of the skilled labor for reconstruction efforts came from. This was a matter for serious consideration because of the magnitude of the rehabilitation and reconstruction that had to be done. Delivery of faulty materials and substandard human resources has a clear effect on impeding the rehabilitation and reconstruction efforts.

This dilemma had to be resolved at the beginning of the reconstruction and rehabilitation period. The choice made would color all strategies, policies and programs that were to be carried out in all sections of rehabilitation and reconstruction as implemented by BRR. Both choices could have had long-range effects that required deliberate, careful consideration.

After deliberating, the second choice was chosen – to include the local community. BRR realized that this choice was not without risks. Apart from the potential for delay and an increase in costs, the underdeveloped market with heavily damaged infrastructure would restrain strict control over the supply and variety of materials, as well as over the level of skills of the human resources. It was not impossible to imagine the likelihood of cost escalation and fluctuation.

Nevertheless, BRR chose this option because of its high expectation of promoting self-sustaining community in the end. The involvement of the community would teach them to take an active role in the rehabilitation and reconstruction process – starting from the planning and execution, through to the evaluation, and also the continuity of the construction industry in the future, for an environment conducive to peace.

The accumulation of these experiences could result in two outcomes, success or failure. However, both of them, success as well as failure, would bring valuable lessons for the Acehnese – who after all this time had been marginalized from development as a result of the long-standing conflict and stood below the poverty level. These new experiences were expected to become a strong foundation on which to build after BRR completed its tenure; thus the speed, direction and development strategies could be directed by the local community.

Also, the community would benefit from the experiences of rebuilding as well as reaping direct financial benefits. It was hoped that local businesses in Aceh would grow and recover. Along with that, there would be dynamic financial movements within the community, increasing their ability to withstand social and economic trials and tribulations. From this process, it was hoped that the community would feel included in the post-disaster rehabilitation and reconstruction process and would continue to take care of and maintain the results achieved.

Of course there were risks inherent in making that choice. But BRR also realized that there really could be no gain without pain. More importantly, the Acehnese community could taste the fruits of their own labor.
Tents of the internally displaced persons (IDPs)

Temporary shelters or barracks

Socal and cultural facilities
- Village meeting hall
- Worship places
Concept of Housing Provision for Survivors

From emergency tents to temporary shelters then to settlements equipped with basic infrastructure and facilities.
rehabilitation and building of the houses. The third was to improve the building skills of the community by training bricklayers and carpenters. The fourth was to strengthen the community to become independent in the building and rehabilitation of houses. The fifth was the use of new technology to anticipate earthquakes and tsunamis. The sixth step was the establishment of building codes in house reconstruction.

The sixth strategy was to improve multi-sectoral integration in repairing and building houses. This was for two purposes. The first purpose was to foster a link between the building and rehabilitation of the houses and the economic sector, such as manpower, the supply market, businesses and small and medium enterprises. The second purpose was to create integration and coordination between housing and its related supporting infrastructure, such as drinking water, sanitation, garbage disposal and drainage.

The seventh strategy focused on improving the capacity, comprehensiveness and decentralization of program management in three ways, which were increasing the role of the government officials at the provincial and district levels in supervising and monitoring housing and related infrastructure rehabilitation and reconstruction program; increasing training and technical assistance for regional officials; and enhancing the roles of local contractors and NGOs in the repair and building and rehabilitation of self made housing.

Last, the eighth strategy was to carry out consistent monitoring and evaluation by strengthening the monitoring and evaluation mechanism at each level of government and developing an independent system of monitoring and evaluation to ensure the success of the program.

Recording houses in Alue Naga, Aceh Besar, was carried out using a sophisticated GPS system, January 9, 2008.
Photo: BRR/Arif Ariadi
BUILDING better than before was the basic premise held in the area of housing and settlements. A series of programs and projects were launched to rehabilitate and reconstruct of the post-disaster areas. These programs and projects were not just about building houses and infrastructure, but also helping develop renewed hope and dreams of a better future.

Village Planning

One factor that significantly contributed to the number of casualties and injuries during the tsunami was the fact that their villages did not have easy access to routes for the villagers to escape. With this in mind, the rehabilitation and reconstruction of housing and settlements should include more proper spatial planning so that evacuations following any disasters can be done easily with minimum number of casualties. This is why village planning was so important.

Who, then, should plan the village? None other than the community themselves. They were the ones who knew the situation as it used to be, as it was during the disaster and as they would like it to be after the disaster struck. The survivors must be the main actors in mitigating the effects of the disaster.
Village planning is not only important in ensuring that the villages are earthquake proof. The planning also includes the process of the community planning their own future. Their villages are not only where they go to rest and relax after working the whole day, but also where they interact with others, agree on their future and build hopes and dreams. How the settlements is developed is part of realizing their dreams and goals for a better future.

Putting together village planning at the start of the rehabilitation and reconstruction phase was also instrumental in helping the villagers got over the trauma they suffered (trauma healing) whether from loss of valuables or property, or because their families and friends were killed or missing. Involving them in the planning process was expected to help them through their grieving processes, and to thus shorten the period of grieving as much as possible.

Village development can always progress at different pace. Good village planning naturally considers the social and environmental aspects. The settlements of fishermen, for instance, are different from those of farmers. Even the fishermen’s settlements shouldn’t be the same from one to another, as their local histories are different. As the needs of each area are different, so should be the planning for the development.

In Aceh, village planning done by the villagers themselves certainly prevented conflict among the villagers. Every fence, every boundary, every stake, would have already been determined and agreed on by the villagers themselves. As there would be a common consensus, it was hoped that the process of determining land areas would have a strong social legitimacy. This could become a strong base to ensure cohesiveness among the villagers.

The effect of a common goal in planning a village also paid off socially. Those citizens who were used to discussing things, have an open mind, were willing to listen to others’ opinions and input, made a concerted effort to find a solution, negotiated rationally, compromised for the sake of everyone’s interest. By doing things this way, it is expected that the community consistently found solutions together. If anything happens to affect the development or continuity of their village, the community will have become used to looking for a solution together for everyone’s good.

Using a community–based approach, means making the community a subject in the planning process and the execution of the post-disaster rehabilitation and reconstruction. With this kind of approach, the community holds an important role in rebuilding its villages. This kind of approach also ensures that the villagers feel a sense of ownership and belonging to their village and will maintain what has been built.

This approach, with Aceh in mind, is a reflection of the honor shown towards a house owner (ureueng po rumoh) or in its deeper meaning—the local people, the masters of their areas. Ureueng lingka (neighbour or outsider) can come bringing aid or facilitators
but the final authority rests with the ureueng po rumoh, who holds the ethical authority to determine what kind of house to build and what kind of settlement areas to develop. Moral messages regarding the importance of showing respect towards the ureueng po rumoh were formulated in the Taushiyah Silaturrahmi or the Gathering of the Islamic Boarding School Muslim Leaders from all over Aceh on April 8-9, 2005.

Village planning is also mentioned in the Government Regulation in Lieu of Law which was then further ratified into Law No. 10/2005. The law emphasizes this in the clause of considerations article c which says “the rehabilitation and reconstruction should be handled in a specific, systematic, directed, integrated and all encompassing manner; ensuring the participation and paying heed to the aspirations and needs of the community”.

Basically, planning includes identification of the house development location, the points at which the road networks will be constructed, the drainage systems, electrical circuitry, sports fields, schools, markets and the boundaries for each one. This kind of planning became the guidelines for rehabilitation and reconstruction of villages that were damaged or destroyed. Ideally, the village planning should have a vision up to 10 or 20 years ahead.
Generally speaking, the process of village planning started from land mapping. During this process, the boundaries of individual plots, commonly owned land and protected land were measured and drawn on a map. This process, participative in nature, was done by the villagers themselves.

Two methods could be used, the conventional method using standard geodetic mapping or unconventional mapping using simple tools: a compass and meter tape. The problem was, conventional mapping needed a rather long period of time, and experts. Unconventional mapping was the opposite: it got quick results, but for further certification, it needed remapping.

After considering the weaknesses and strengths of each method, it was decided to use the unconventional mapping widely. The rationale being that this method could cover a wide area of the disaster-affected regions quickly, and the manpower and expertise needed was easily available. The issue of certification could be taken care of later.

Afterwards, the result of this village planning would be the availability of spatial planning documents specifically made for the disaster-hit housing and settlement areas.

Initially, village planning was a part of the efforts of local and foreign NGOs in the badly hit areas. Being included only in the off budget mechanism, BRR’s role was simply as coordinator. In 2005, this was done by the BRR Deputy for Planning and Programming.
While both used the participative approach, different agency used different methods and techniques. For instance, UN-HABITAT since March 2005 used the method called Community Action Planning (CAP). This method was used to prepare assisting communities and write up village planning. Village plans generally were limited to house plans and did not touch on matters related to development of settlements and disaster mitigation.

As time went by, it was felt that guidelines were needed to regulate minimum specifications of the process and product of village planning. In response to this need, in June 2005 BRR issued the Guidelines for Village Organization and Development. These guidelines gave initial guidance on matters that needed urgent attention.

These guidelines were then refined further by BRR in April 2006, becoming Guidelines of Village Planning, a document which was more technical in nature through the cooperation of NGOs and the main international agencies that were active in village planning, such as the Australia Indonesia Partnership for Reconstruction and Development (AIPRD) Local Governance and Infrastructure for Communities in Aceh (LOGICA), Mercy Corps, UN-HABITAT, and USAID, which was the moving force behind the writing up of the document.

Key elements of the guidelines were: (1) the different levels of plans that could be realized and divided into three categories: housing site plan, minimum settlements plan, and improved settlements plan, (2) the process of participative planning with the community playing a pivotal role; (3) participative mapping; (4) discussions of use (including re-use) of land; (5) basic community infrastructure plans; (6) disaster mitigation plans; and (7) the environmental plans with a focus on identifying areas at high ecological risk.

In further developments, additions were made in relation with the village development. Those included the economic development plans (livelihoods, use of local resources, etc.) and social development plans. By having this guidance, standard process and product qualifications were obtained.

This was followed by the formation of the Deputy for Housing and Settlements in 2006, which fully supported the implementation of village planning. This time, BRR was not only the coordinator but also the implementer of the planning that was managed under the Directorate of Spatial Planning using the on-budget mechanism. Its role as the executor of the development was carried out with the assistance of consultants. Here, BRR entered those villages that previously had not been reached by any other agencies, whether local or international.

Out of the 6 stages of development housing and settlements, village mapping and planning are in the first stage, together with the community organization.

The first visualizations were formed through a number of basic maps: topography/morphology, natural resources and conservation areas, boundaries of areas and plots, and
From the community to the community

Community organization, land mapping and village planning

Beneficiary data verification

Procurement of construction services planning/monitoring consultancy

Housing construction implementation and monitoring

Housing handover to the community, and basic infrastructure to local government

Provision of basic infrastructure and facilities for settlements

planning maps such as site maps and those of infrastructure networks, mitigation plans, and others. These maps were even enhanced by the addition of 3 dimensional maps. With good initial visualization, the community was able to become planners of their own settlements.

As a symbol of the community participation in the process of planning their villages, in several village planning cases, prominent members of the community signed their names on the initial designs of the village planning documents. After this initial stage, the later stages were easier to execute, particularly for the thematic planning, such as plans for mitigation, plans for greening or plans for infrastructure, by using the valid planning norms.

Village planning, for all its uses, had not yet become the dominant approach. This was because of weaknesses in the related basic legal framework and regulations. Village planning had not yet supported by the existing land policies. Technically speaking as well
in almost all of the villages that were being planned together, land boundaries were not clear. This might have been caused by the erosion of the soil from being dragged and torn by the tsunami resulting in permanent inundation, or perhaps because none of the boundaries had ever been written down by the local villagers.

Also, village planning had not yet been well known among spatial planners in Indonesia and there were not many experts available. The process of participative planning took a relatively long time. As a result, the community grew impatient with the process.

There was also the added factor of the community not always being involved in agreements made in the villages, as some of the members had become displaced or had moved away temporarily. As a result, when they returned to their villages, they did not always accept the consensus that had been achieved by some who had stayed.

What was agreed on in a consensus could also change not only because of the comings and goings of the villagers but because of new information coming in. When a number of villagers had agreed to donate some land to be used for the common good, such as roads, schools and such, they changed their mind about donating the land after hearing that the said land area would be compensated for by other parties.

Other villages experienced conflicts between groups or communities. A consensus was difficult to come by in light of these conflicts in these types of villages.

In addition, the planning and development often was not carried out in the correct order. In some places, the process of planning was starting when the development was already in process. There were also some contractors who ignored the village planning altogether. As a result, the aspirations of the community could not be accommodated.

On a separate note, however, most of the mapping and village planning was a success. Based on monitoring and evaluation results done by BRR, 346 villages in Aceh used the village planning approach.

The true impact of all the hard work put into the community-based village planning will only be felt in the next several years. However, the hard work has already paid off, in view of the fact that almost 350 villages in Aceh have conducted a valuable “experiment,” learning to build commitment and creating their own destiny.

The results of village planning were also used by other units, such as the Directorate of Construction Design Management and the Directorate of Settlements Infrastructure, as a basis for housing plots and designing Detailed Engineering Design (DED) of infrastructure in the housing areas about to be built.

This is a reason to be happy indeed, in view of the fact that village planning using a participative approach such as this is not yet commonly done. It hasn’t become part of village development even in areas of Indonesia with no history of conflict or being disaster-affected, much less a conflict-riddled and disaster-hit area such as Aceh.
Aceh’s success in implementing village planning, even in the face of the bitter memories of its past, deserves a thumbs up. Why? Because village planning requires something of great significance, the feeling of trust. It is said that trust is a word easily spoken but very difficult to hold on to. With this feeling of trust, the Acehnese were able to shake off their burdens of the bitter past in favor of a brighter future.

Sub-District Spatial Frameworks and Action Plans

Now that the village level had its own village plan, what about plans for inter-villages or at the sub-district level? What are the guidelines to support the rapid rehabilitation and reconstruction needed at this level? On a technical level, where are the locations to rebuild roads and bridges? Where would be the best locations for the fish markets and produce markets, to encourage the fast normalization of the communities’ social and economic sectors?

These questions, at the beginning of 2006, motivated the next step in spatial planning, the Sub-district (Kecamatan) Action Plan (KAP) which then developed into becoming the Sub-district (Kecamatan) Spatial Frameworks and Action Plans (KSF-AP).

The KSF-APs are a series of suggestions for a project or program in spatial planning for the sub-districts. This document was needed to support the development of the sub-districts in the post-reconstruction period. This document was written connecting the main ideas of the project and/or program with the plans and development process of existing districts, sub-districts and villages.

Together with this, a project sheet was made, which included full details of the specifications of the project/program, including indications of cost, what needed to be done, uses of activity execution, and priority listing of what needed to be done, etc.

Why sub-district? In spatial planning, sub-districts are an important administrative unit. This is because sub-districts unify the building and development of the village areas. Thus, village planning done in several areas can be integrated in one unit at the sub-district level. That’s why the sub-district plays such a vital role in reconstruction. It is a part of the overall development of the districts.

This is why there should be accurate guidelines on carrying out reconstruction at the sub-district level with spatial planning set in a higher hierarchy. Furthermore, the projects and programs need to be updated to become compatible with changes in the conditions and policies of the continually developing district planning.

The KSF-AP, as in the case of village planning, was prepared by participation on the part of the community and other related parties at the sub-district level and with services/offices at the district and provincial level, including BRR.
The KSF-AP itself went through a process of improvements, especially from the aspects of coverage, form and depth. Previously, in 2006, this initiative was known as the KAP. The KAP only covered the areas of the sub-districts that had been badly hit by the disaster. The emphasis of this plan was limited to identifying the project of rehabilitation and reconstruction in infrastructure and livelihoods. This was all done to ensure that the community would get back to normal as quickly as possible.

After the KAP ended, BRR underwent a series of learning processes, which gave important contributions to the finalizing and perfecting of this action plan. Some were of the opinion that there should be more in-depth analysis. It was considered not enough to just recommend rehabilitation and reconstruction of the damaged infrastructure on a long term basis. It was better to recommend more strategic rehabilitation and reconstruction of infrastructure with the aim of developing the area on middle to a long term basis. On this basis, then, a more in-depth analysis was needed and a comprehensive one to cover the sub-districts as well as the districts. In time, this perfecting would be integrated into the second stage on the Kecamatan Action Plan, which then would be referred to as KSF-AP.
KSF-AP issued a main document consisting of identification of strategic projects in infrastructure and livelihood in a certain sub-district. This was supported by an analysis made at the district level with a focus on the sub-district level, regarding:

(a) Condition of natural resources and environment (physical environment, beach/sea and vegetation, and potential for natural disasters);
(b) The direction taken of economic planning and development (plan for development of relevant area and spatial planning, population, regional government funds, land use and closure, regional economy);
(c) Description of infrastructure condition (roads, bridges, clean water services, electricity, social and health infrastructure, irrigation and drainage); and
(d) Description of district/sub-district development prospects.

The results of identifying the strategic projects also had project sheets added to them which functioned as a pre-feasibility study.

So, the KSF-AP was basically a program that combined bottom-up planning involving the community through extensive public consultations, such as what was achieved with participative village planning that was community-based. Planning with community involvement was in line with the approach of top-down elements of existing
development plans to identify the main needs and to improve the quality of decision-making in the development of sub-district areas.

The KSF-AP had very good results. The first wave succeeded in reaching 19 sub-districts, the second wave reached 28 sub-districts and the third wave reached 16 sub-districts. In total there were 63 sub-districts that were included in the coverage. Most of these sub-districts were spread over the areas that had the most extreme damage from the disaster or needed a technical plan to switch from a general plan or detailed spatial plan.

The KSF-AP initiative, which was supported and funded fully by the Asian Development Bank (ADB) through the Earthquake and Tsunami Emergency Support Project (ETESP) had the added advantage of having an accurate database on planning and spatial planning. This database was closely related to the action plan for reconstruction needs at village, sub-district and area levels on a wider scale.

The participative process used was also a plus because it positioned the community as the main actors in planning the development in their regions. This participative approach was in line with Law No. 10/2005. In this case those who participated were not only prominent members of the community and officials of the sub-districts/districts, but also members of NGOs and international agencies who were working in these areas. Through this process, overlapping of activity between different parties could be avoided. In this manner, then, the process of rehabilitation and reconstruction could be carried out more effectively, quickly and reach a wider audience of the needy.

The KSF-AP document had other advantages as well. This action plan could be suggested by a sub-district to be financed by the District Government through the mechanism of Discussions on Planning for Regional Development (Musyawarah Perencanaan Pembangunan Daerah, Musrenbangda). Thanks to this document, the sub-district had a document for a very valid development plan with technical descriptions and accurate usage. It was made ready to be deliberated on at the Discussions on Planning for Regional Development, at the sub-district or district levels.

<table>
<thead>
<tr>
<th>Coverage</th>
<th>KAP</th>
<th>KSF-AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only the areas of the sub-districts damaged by the disaster</td>
<td>All areas of the sub-districts</td>
<td></td>
</tr>
<tr>
<td>Depth</td>
<td>Focus on identifying strategic R/R projects</td>
<td>In-depth analysis was made at the district and sub-district levels, and the direction of structure and space development was done according to the Urban Regional Spatial Plan (Rencana Tata Ruang Wilayah Kota, RTRWK), as a basis for determining sub-district strategic projects</td>
</tr>
<tr>
<td>Reference to the existing spatial planning</td>
<td>Not available</td>
<td>Emphasized</td>
</tr>
</tbody>
</table>
Reconstruction of Aceh Land and Administration System Project

Land ownership is usually defined by the presence of a certificate stating that the said piece of land belongs to a certain individual. In Indonesia, all matters pertaining to land certificates are managed by the National Land Agency (Badan Pertanahan Nasional, BPN). Having said this, however, the situation in Indonesia is such that a lot of land belongs to the community in the traditional sense. This also happened in Aceh. It became known that only 10% of those who said they had house and land certificates before the tsunami were able to produce evidence of having these legal documents, because on the most part the land belonged to individuals and was regulated by the traditional laws.

In addition, there were also problems related to lack of transparency in spatial planning. In certain cases, there were those who had bought land but later didn’t have a chance to use it as the land was declared a part of a green belt. Therefore even land ownership based on land certificates was still in a mess. This was a big challenge to good governance.

The issue of rights to this land became one of the key elements in the process of rehabilitation and reconstruction in Aceh and Nias. This was firmly set out in the blueprint that was legalized by Presidential Regulation No. 30/2005 in April 2005. This document became BRR’s guide in working. In view of the existing challenges, it was realized that proving that the community members had rights to their land was not going to be an easy thing to achieve.

On the other hand, this became the main key to post-disaster rehabilitation and reconstruction. This was important because, on this land, houses would be built for the beneficiaries. BRR was convinced that the legality of the land and the buildings that would be built on them was an urgent and necessary matter.

However, issuing certificates to as many as 400,000 beneficiaries alone in the Aceh province was not an easy thing to do. The National Land Agency, as a state agency with full authority in land matters was paralyzed as most of its offices in Aceh had been destroyed and 30% of its employees died or went missing. This meant that those land owners who did have certificates at the BPN offices ended up with damaged or wet ones.

To assist with this problem, friendly nations got involved. One of them was Japan, which helped by building a facility to dry the documents and paper so that the ink and the paper of the certificates were not permanently damaged and could be read again. The salvaging of these documents gave hope that the land owners whose names were printed on the certificates could be traced back to their present location. However, this process took quite a long time. Also, even if the documents could be saved, whether the land area could be found was a matter of some doubt. This was because the tsunami disaster was so devastating that even whole pieces of land disappeared, or were inundated and therefore rendered uninhabitable.
In spite of these factors, BRR still held to the view that land certification was an urgent matter and needed to be done. Besides allowing for direct economic advantages, full recognition of land ownership would also be a social safety tool, as it would guarantee economic stability for widows, orphans and the homeless and poverty-stricken.

In view of all these factors, in May 2005, the government put together a main mechanism for restoring full land ownership rights in the post-tsunami period in Aceh. This mechanism was known as the Reconstruction of Aceh Land and Administration System Project (RALAS). It was hoped that RALAS would be an innovative response to solve the problems caused by the uncertainty of land rights. This mechanism regulated certification of freed land, whether it was allotted land for a certain use (for example to build housing for the disaster victims or for public facilities) or not – later this land would be handed over to the local government. RALAS program received financial aid totaling US$28.5 million from the Multi-Donor Fund (MDF) managed by the World Bank. The program carried out its operations in making land certification covering 600,000 sections of land from August 2005 until December 2008.

The RALAS mechanism itself adopted three steps. The first was the Community-Driven Adjudication (CDA) or community-based arbitration. In this process, the community in each village would sit down and discuss regarding land plot locations and their
boundaries. This discussion would then result in a map being drawn. This map would then be signed by the land owner and the village head/leader. In this process, then, each land owner would sign a statement regarding land ownership. These statements would receive support from the neighbors and village heads/leaders. This indeed was proof that the records were true documents.

The second step was to survey the land boundaries that had been agreed upon by the National Land Agency. Then the Agency would issue a letter of land ownership (certificate) based on the agreement made earlier, which was the CDA. The third step and last was registration of the agreed upon land. In this step, the land ownership certificate would be published legally.

**Community Participation in Settlements Reconstruction**

Housing and settlement rehabilitation and reconstruction was also done through the contractual approach with the community, as an effort to implement the community-driven approach; starting from planning, through construction work, and on to reports and the financial accounting for of funds. An example of this was the Community-based Rehabilitation and Reconstruction of Settlements (*Rehabilitasi dan Rekonstruksi Pemukiman Berbasis Komunitas, ReKompak*) program.

The embryo of this program had actually been in the making in March 2005, while BRR was being prepared for its role as the body that would take care of the rehabilitation and reconstruction of Aceh and Nias. The Department of Public Works launched a program for the rehabilitation and reconstruction of settlements in the Aceh region using the Project for the Fight against Poverty in the Cities (*Proyek Penanggulangan Kemiskinan di Perkotaan, P2KP*).

In time, this program would become known as “Bridging ReKompak,” which later became ReKompak at the beginning of 2006. Little by little, the management and execution of the program was handed over from the Department of Public Works to the control of BRR. This program also received financial support from the World Bank on a national level. It was also supported by the MDF with a grant of US$85 million, and by the Government of Indonesia with aid totaling Rp. 25.6 billion.

The ReKompak program specifically reached the following target groups: (1) families, either owners or renters, who up until the time of the earthquake and tsunami on December 26, 2004, were living in the tsunami-affected area, (2) families who at the beginning of the program had been or were repairing or rebuilding their homes, and (3) families whose homes were partially or entirely destroyed and had not received any kind of aid from other parties.
Three Steps of Reconstruction of Aceh Land and Administration System

**Step 1: Community Driven Adjudication (CDA)**
- Carry out village consultation with the land owners regarding the mechanism of mapping (filling out the forms, marking land boundaries and preparation of basic satellite mapping)
- The lawful land owner or heir or proxy would mark the boundaries of the land and fill out a statement confirming the location and their rights to it as agreed on by the landowner whose land is next to theirs
- The community would draw a map identifying the ownership and boundaries of the land in their village

**Step 2: Measurement and Mapping**
- The community reports having a CDA to the National Land Agency (Badan Pertanahan Nasional, BPN)
- The Agency does a survey and maps the land boundaries and issues a community land map
- This map is put up in the village for 30 days and the community can make objections accordingly. The National Land Agency will take action on any objections and settle them either by village discussions or setting up a provincial complaints team.
Step 3: Issuance of Certificate

- If there are no objections, the National Land Agency will issue a land certificate.
- If the land is jointly owned by a married couple, the certificate will have both their names on it.
- If there is no owner, the certificate is made on behalf of a legal heir.
- If the heir is underage, the land documents will be made in his/her name, but the management of the land will be done by his/her guardian.
- If the heir has not been identified or if there are problems with the inheritance, a land document will be made. A certificate will only be issued once it becomes clear who the heir is.
- If there is a problem with the land, only a land document is made and the boundaries will be recorded as being temporary. Once the land ownership has been clarified, the owner can then register it at the National Land Agency.

A large number of women lost their husbands in the aftermath of the tsunami. In Aceh, it had been the custom for most of the land ownership to be in the men’s’ names, because the men were the heads of their families/households. Only a small percentage, 20-25 percent of land ownership titles in the names of the women. Even rarer were certificates with the names of both husband and wife.

There was a concern that those women who lost their husbands due to the disaster would end up losing their rights to their land as well. The outcome to this would be that their children would also lose their inherited rights to the land. This meant that they were also threatened with losing their rights of being beneficiaries for housing.

Joint Land Titling (JLT) is a mechanism for land certification, but the name on the certificate would not only be that of the head of the family, meaning the man, but the names of both the husband and wife. Stated on the certificate would be the name of the husband, wife or immediate family member/child/sibling. The land ownership would be divided equally among them. This means that JLT would be implemented in those families with legal marriages or orphaned siblings.

In the context of Indonesian law, whether Islamic or traditional customary, although there weren’t any prohibitions as such, the JLT mechanism has rarely been used. This was because the administrative mechanism ready to be implemented was not yet available. The low incidence of JLT in the above data reflects the fact that it is only considered an option. This also reflects the social-economic obstacles facing women in being able to formally own land. Many women also did not know about JLT, causing low participation in this program.

Women in Aceh not only had restricted access to information, they were restricted in the social and economic spheres and by tradition in being able to own land. This obstacle originated from the domestic role of women. In Aceh, land matters were considered the province of men. The husbands were the ones most involved in land mapping. This resulted in many land areas being registered under the husbands’ names but not the wives’.

Obstacles also came from the trauma of the armed conflict and the tsunami, which made it difficult for the women to make public claims on their land. The women also found it difficult to make time to mobilize themselves or to stake their claim on their land because of their housework. This was especially true for widows and young girls. Not only were they marginalized in the local structure, things were made doubly difficult by the fact that patriarchal decisions were made by the local leaders.

It is a fact that Indonesian law recognizes that land, including all property, obtained after marriage is definitively considered jointly owned. Indonesian law also protects the co-owners of land, even if their names are not on the certificate. This is because registration in itself does not automatically emphasize ownership as it is only proof of certification. The owner can emphasize his ownership rights—even if it is not explicitly recognized on the land certificate. The Marriage Laws of 1974, for example, regulate the dividing up of land in marriage, if the couple divorces, regardless of whose name, whether the husband’s or the wife’s – is on the land certificate. In cases where the husband or wife is not able to pay his or her debts and is forced to sell the land, the Land Certificate Official (Pejabat Pembuat Akta Tanah, PPAT) will conduct an investigation to ascertain whether both husband and wife agree to sell the land.
In this case, what then has caused JLT to stand out? JLT firmly states its preference towards the woman in protecting her rights explicitly. JLT guarantees the rights of women.

Also, JLT emphasizes that land status is marriage property. It guarantees the woman’s position and all the members of the family in the family’s decision-making process. The fact that there is formal recognition of women’s rights in land matters has implications for a strategic role for women in social and economic development.

The implication lies in the fact that land ownership provides a direct economic advantage as the land can become a source of income through renting out, selling, or as collateral for investing. Often, women are not able to share the advantages, if they are not able to formally share their land rights. Only with a joint or individual certificate can women, men and children be guaranteed access and control over the income generated by the land.

The JLT policy was officially launched by BRR and the National Land Agency on September 19, 2006. JLT was a formality only in the cases of beneficiaries receiving land that been bought by BRR or the regional government (relocation). With JLT those who moved to land bought by BRR or the regional government would receive a land certificate that stated the name of the husband and wife, or siblings.

For those who received housing aid in the form of rehabilitation and reconstruction on their own land, JLT was voluntary. BRR and the National Land Agency encouraged them to join the program.

Specifically, JLT was focused on three important groups in the post-tsunami period. The first, were tsunami victims who were officially married and received land aid in the relocation area that had
been bought by BRR or the regional government. This kind of land ownership was divided equally between husband and wife. Second, orphaned children who were siblings received BRR land in the relocation area, and the land ownership was divided between as many as there were. Third, married couples and orphaned siblings who received rehabilitation and reconstruction aid outside the relocation area.

In the JLT program, four parties held responsible positions. First, BRR as the initiator who took action to promote it to the community. BRR was also active in the collecting, verifying, and validating of the beneficiaries. JLT was the integral part of the Reconstruction of Aceh Land and Administration System (RaLaS) program in the budget year of 2008. Second, the National Land Agency was responsible for the implementation of the JLT program and issued the certificates.

Third, the Islamic Law court which was part of the JLT program response team, which supported the program by spreading the word throughout the community. And fourth, implementing partners would provide information to the beneficiaries. Implementing partners also conducted discussion forums with the beneficiaries, and invited the response team to answer questions from the community.

The National Land Agency supported this program because JLT created equality between men and women in land ownership and provided a foundation for continuity of economic development in Aceh. Support also came from Oxfam in Aceh and Nias.

“The Indonesian government deserves everyone’s congratulations, from all national and international partners who were involved in the recovery process, on the launch of the policies and the issuance of the first Joint Land Titling in Aceh,” said Ian Small, Senior Program Manager of Oxfam Aceh and Nias. Ian Small also explained that the initiatives of BRR and The National Land Agency ensured guaranteed protection and legal access for those who are vulnerable and continuity for recovery and for future social and economic development. This is a clear example of building back better.
The ReKompak program had great value in that the process of planning and construction was done by the community itself. The community members organized themselves into groups and were accompanied by a facilitator. This meant that all systems and mechanisms in this approach centered on the principles of development based in the community such as: openness, transparency, accountability, solidarity, being democratic, bound by the rules and regulations, accepting of differences and restrictions, emphasizing local capacity building, independence, discussion and collaboration, paying special attention to the weakest interests, and using external resources wisely and positioning the external executors as enablers.

As ReKompak implementer, the community was obliged to implement the accountability principles in the process of decision-making, and managing activities and finances. The implementation of accountability principles had to be adhered to consistently by all ReKompak executors without exception, by being open towards audits, questions and/or claims towards the decision-maker related to public interests. This means that all decision-making processes had to be done in a participative and democratic manner by carrying out several activities, such as public consultation and awareness drives, a rebuttal process, community deliberations, and examination or auditing by those given authority to do so.

In Aceh, the coverage of the ReKompak program included some 130 villages in 41 sub-districts and 14 districts/cities. The ReKompak program covered two kinds of aid to the target groups, which were Financial Aid for Housing (Bantuan Dana Rumah, BDR) and Financial Aid for Environment (Bantuan Dana Lingkungan, BDL). Financial Aid for Housing consists of financial aid for housing reconstruction (for those whose homes were destroyed or heavily damaged) and financial aid for housing rehabilitation (for those whose homes were slightly to moderately damaged). The Financial Aid for Environment was given to do repairs or build environmentally friendly infrastructure/facilities. Type and activity were decided on by the community by holding discussions.

The execution of these two kinds of aid could be handled by the community members who were recipients of the aid themselves, or be done as a group activity, or even given to a third party to manage. The process was assisted by a Housing Facilitator who helped to monitor the use of the funds to ensure that they were used properly.

In order that the ReKompak program succeed in its goals, it was a given that the community being assisted by the aid should be willing to carry out the process of rehabilitation and reconstruction of settlements as a community-based activity. The level of physical damage to the buildings and the environment in the area of the community members was quite high. In this area, there were quite a number of residents who had not been as affected as badly by the disaster who were rebuilding their homes. Also, this program received support and agreement from the local government. With all of these advantages, the ReKompak program went smoothly. Another strategy used by BRR for the housing and settlements sector, besides the contractual approach with the community, was using contractors.
The development of aid-assisted housing with contractors’ assistance had its own challenges. These challenges existed even at the beginning of the construction, while searching for the locations to build the aid housing.

Land issues also included the development of aid housing on a location that had no owner because of the owner no longer being in that village. The fact that there was still an owner only became evident after the houses were built. Rather than become involved in a land dispute, it was decided to leave the houses empty.

Occasionally in one village, there would be several housing assistance supplier agencies, whether NGOs or BRR Project Implementing Units, although the housing packages offered through the small-scale contractors only covered 5-15 housing units. It was therefore easy to imagine the possibility of overlapping of locations from different housing suppliers.

If overlapping did occur in the field, BRR took the position of “filling the gap”. BRR Project Implementing Units chose to push aside or move part of a location or the whole house out of the overlapping housing package. This kind of alteration was for sure not as easy it sounded. This was because the change required improvements or additions to the contract. The change also affected the time taken, and as a result the development of the housing packages experienced some delays.
Together Rebuilding

THE community-based rehabilitation and reconstruction approach was one that had a lot of people all roll up their sleeves together and pitch in. To manage this program, an organization was needed to prepare it in stages, starting from the levels of beneficiaries of aid, to villages, sub-districts and provincial levels, and even on to the national level.

At the community or village level, a number of tools were needed in the community-based rehabilitation and reconstruction process, they were:

(a) Settlers Group (Kelompok Pemukim, KP); group of beneficiary families based on 5-10 household leaders;

(b) Activity Managing Team (Tim Pengelola Kegiatan, TPK) or Committee for Rehabilitation/Reconstruction of Settlements (Komite Reabilitasi/Rekonstruksi Permukiman, KERap); leading the rehabilitation and reconstruction of settlements at the small town/village level, and coordinating various development input for their areas and forming teams of settlement volunteers from among the local people. KERap later became the Community Self-help Body (Badan Keswadayaan Masyarakat, BKM);

(c) Settlers Volunteers Team: an organization of settlers who volunteered that was comprised of local people;

(d) Housing Facilitator (Fasilitator Perumahan, Fasrum): accompanied the TPK/KERap/KP in their various duties related to the development of the settlements.

At the sub-district level, a person responsible for operational activities was appointed. This was usually a sub-district official who was promoted by the mayor/district head and acted as the person in charge of the administration of the ReKompak activities in their work areas.

At the district/city level, the ReKompak program also formed the following:

(a) The Project Implementation Unit (PIU), through the decision of the mayor/district head, which would coordinate with the Project Management Unit (PMU) at the provincial level.

(b) The District Management Consultant (DMC), which would assist the PIU, comprised of experts in planning and design (architects), financial experts, and MIS experts whose areas of work covered several cities/districts. A Sub Team Leader of DMC (STL-DMC) would be assigned in each town/district.

At the provincial level, coordination was done by BRR, in this case handled by the Deputy for Housing and Settlements. The operational activity of ReKompak was managed by the PMU, which was based in Banda Aceh. The head of PMU was promoted by the Minister of Public Works and re-installed by the Head of BRR’s Executing Body.

In carrying out its duties the PMU cooperated with the BRR’s PIU for Development of Housing and Settlements as the Budget Authority Officer (Kuasa Pengguna Anggaran, KPA). This BRR’s PIU carried out BRR’s Issuance of Spending Authority (Daftar Isian Pelaksanaan Anggaran, DIPA). Another office, that of the Provincial Management Consultant (PMC) was formed to conduct monitoring, coordination and control of the DMC in several cities/districts.

From the beginning of its operations, the ReKompak program had several project organizational changes. Starting at the beginning of 2006, field operations were done through four DMCs. However, starting at a new extension period (March 21 to December 20, 2008), the DMC 1 was combined with the PMC, and DMC 2, 3 and 4 were unified to become one unit, with one overall name of DMC. Under these new arrangements, the handling of the project area was changed to fall under 6 Area Coordinators (Koordinator Wilayah, KorWil), with Area Coordinator 1 under PMC and Area Coordinator 2 through 6 under DMC.

In accordance with the Grant Agreement, the Directorate General of Housing, Planning and Urban Development of the Department of Public Works acted as the project executing agency. And because the ReKompak program was part of the P2KP and Sub-district Development Program (Program Pengembangan Kecamatan, PPK), which were assisted by the World Bank on a national level, the Government also formed inter-departmental directive teams comprised of the National Development Planning Agency, the Department of Finance, the Department of Internal Affairs, the Department of Public Works, the National Land Agency, the Ministry of People’s Housing, and BRR.
Navigating on a Winding Road in the Search of Justice

**REHABILITATION** work or house repairs had its own challenges, such as determining how much aid should be given to repair a house. One thing for sure, was that neither BRR nor the NGOs could give aid to repair all the damaged areas of a house.

Each house was damaged differently, and the way each one was built also varied. Those house owners who were well-to-do usually had large houses made of brick. For them, receiving millions of rupiah in aid had no meaning. On the other hand, for the poor in the community, the same amount of aid would be more than enough to repair their wooden houses.

In response to this, it was important to be fair in creating policies for housing repair aid. What measurement would be used to determine the amount of aid? How much was needed to ensure that the house would be livable again?

In 2005, the ReKompak program gave rehabilitation aid for the repair of damaged houses with a maximum amount of Rp. 15 million per house. This needed the services of a field worker to conduct appraisals of each damaged house. This policy was felt to be reasonably fair because the same amount was given to all owners, regardless of how damaged or not their houses were. This was based on the assumption that the house owners were still alive and had bank accounts or other assets, while in the field there were many cases of beneficiaries who were also heirs (their parents having died, for instance) who were not able to repair their house at all because they had no more savings or other assets.

Other policies were similar to those made by BRR in giving equal amounts of aid for all levels of damage. In 2006 and 2007 BRR gave a flat rate of Rp. 15 million as aid, through the program called House Repairs Assistance (**Bantuan Perbaikan Rumah**, BPR), to about 6,000 families in Aceh. For those whose houses were only slightly damaged, because they were located further inland, the remainder of the funds had to be used to either add something to their house or beautify it. The recipients were not allowed to use the funds for other purposes.

This aid was given through a Community Group, as beneficiary, in stages. The group drew a plan for allocation of funds for each house for each of the group’s members. The funds would be released in stages: a down payment of 40%, then the remainder of 60% given after 40% of the physical building was done. The group also had to make a report. All of this needed a monitoring person to ensure that the funds were used and could be accounted for in accordance with the existing regulations.

This policy was based on practical considerations and to reduce the possibility of disagreements among the beneficiaries in the community if the aid were of differing amounts, while it was debatable as to how damaged a house actually was.

A similar situation occurred in the policy of new housing assistance (reconstruction). Each family, who before the disaster either had a small or large house, fancy or simple, received the same amount of aid, that of a Type-36 house.

Other methods were similar to that done in Nias in 2006/2007. The aid was given in two categories, Rp. 3 million for slightly damaged houses, and Rp. 8 million for moderate to heavily damaged houses. This idea was once developed in Aceh with categories, which were Rp. 5 million, Rp. 10 million, Rp. 12.5 million and Rp. 15 million in accordance with the level of damage incurred. The areas of damage also were grouped according to criteria, which were: structural, walls and roof. This policy also needed a monitoring person. At this time around 200 sub-district facilitators were prepared with an Asperkim coordinator to act as the monitoring staff.

Providing the field facilitators came with a high price tag. To get around this problem, in 2007/2008 efforts were made to simplify the aid for rehabilitation. The program, called Social Aid for Home Repairs (**Bantuan Sosial Perbaikan Rumah**, BSPR) was directly given to the heads of each household/family whose house was damaged, through a bank mechanism. The amount of aid given was Rp. 2.5 million, paid through cooperation with Bank Rakyat Indonesia (BRI). From existing data, the number of recipients of this program totaled around 53,000 families in Aceh and Nias.

A few problems occurred with this program. In Meulaboh, Singkil and Lhokseumawe, and also in Banda Aceh, some demonstrations were held by those who thought that Rp. 2.5 million was nothing compared to the damage from the disaster. It was then decided to raise the amount to Rp. 7.5 million, which would be paid in 2009. It is clear that trying to be fair was not that easy to achieve. However, as justice and fairness was part of building to be better, it was important to be as fair as possible to all related parties. Not an easy thing to do, obviously.
There were times when the community forced its members to become laborers – even though they were not skilled and did not have the experience of working in construction. Other workers who had the necessary skills came in by the dozens from other areas, such as Sumatera and Java. In some areas, some conflicts occurred between outside laborers and local workers. Conditions at the isolated locations also caused some of the workers to abandon their work before their contract was over. After up and leaving, other problems appeared – debts that had not been paid off in the small eating-places.

Reflecting on the above stories, the use of the contractors approach was felt to be more effective top-down compared to involving community participation. The urgency of putting roofs over people's heads took priority and was given due consideration. The top-down approach was implemented, along with a combination of other methods that were more bottom-up and participative in nature.

The top-down approach was taken by BRR to carry out reconstruction and rehabilitation in the areas where the beneficiaries could not be identified clearly because of various obstacles, such as verification process and mobility among the beneficiaries. Thus, when at the time of registration of beneficiaries there were more ‘gray areas’ than black formally speaking, BRR acted in a consistent manner. In such situations, the housing and infrastructure development could not wait.

Keeping in mind that two important variables, the number of beneficiaries and the number of ‘clean’ houses built (while calculating the risk of failure possibly faced by ‘new’ contractors), fluctuated periodically, BRR had to be able to face this kind of critical situation. On another note, the target totaling 139,195 houses had been written down in the blueprint revisions.

On the field, if BRR were faced with building more or less housing than needed, BRR chose to not build less. This didn’t mean that BRR deliberately built more than was needed. But the risk of building more was thought to be smaller than of not building enough for the number of beneficiaries. If this were to happen, in a place that had only recently been devastated, such an occurrence held the seeds of social jealousy and conflict. This could even develop into a horizontal conflict, with the potential to damage things that had been rebuilt – physically and non physically.

The view taken was a broad and comprehensive one regarding the building of housing and settlements in a region that had been devastated by a natural disaster, and had just reached a peace accord after decades of conflict. Here the attitude was not to be too narrow minded but to consider that the community’s expectations of the rehabilitation and reconstruction were high. Combination of the aforementioned factors which was realized in the houses built, was eventually seen as the foundation for the community to transform itself toward sustainability.
New City, New Hope

The force of the tsunami resulted in around 10,000 families losing their land due to it having become submerged in water. This land could be said to be destroyed, disappeared, unusable or technically not able to be built upon. For these families, the only other possibility lay in their being relocated to a new area.

The relocation was not an easy or fast process. There were at least three main components needed – land, housing and settlement infrastructure supply. This meant that besides being built houses, the beneficiaries also received land and housing infrastructure.

The largest relocation area in Aceh is located around 17 km northeast of Banda Aceh in the district of Aceh Besar, and is known as “Beuramoe New Town”. There were at least eleven housing supply agencies who were developing new housing sites close to one another on an area of 52.5 hectares; they were Saudy Charity Champaign (336 units), ADB (332 units), Islamic Relief (150 units), Australian Red Cross (98 units), United Nations Environmental Program (4 units), and BRR (110 units). In Neuheun, not far from Beuramoe, housing was also being built by the Buddha Tzu Chi (780 units), China Charity Federation (606 units), Yayasan Nurani Dunia Mandiri (75 units), Rebuild Aceh Foundation (48 units), and United Methodist Committee on Relief (28 units).

In 2007, a Plan Outline for Beuramoe New Town was drawn up with an ADB grant through the Earthquake and Tsunami Emergency Support Project (ETESP). The New Town of Beuramoe was designed as a “satellite city” of Banda Aceh, which would have its own service centers.

Beuramoe New Town certainly was a relocation program of gigantic proportions. The land area alone came to 140 hectares. In this area, the concentration of the population was more than 2,500 households. In the future, it was estimated that this area would develop rapidly into one of the central new settlements.

In anticipation of this, public services support was also prepared to fulfill the needs of the people living in this area, such as water treatment. Other social facilities provided were kindergartens, a school building that could function as an elementary or junior high school, market stalls (2 locations), a local health center, a meeting hall (3 units), a mosque, and a playground.

Near this area, there were also a number of potential income-generating fields, both ocean-based ones such as fish cultivation and fishing and land-based ones such as honey, brick and earthenware and small farms. Business or working places were also around, although a little farther away, as in the Blang Ulam Industrial Area, the Malahayati Harbor, and Sultan Iskandar Muda Airport.
Building a New Life in a New City

RELOCATION was not an easy thing to do, for BRR or for international agencies who were preparing housing and infrastructure. Those community members who were beneficiaries also needed to be prepared to move to a new area, one that was strange and unfamiliar to them.

To anticipate all this, BRR formed a special team to facilitate the process of relocation. This team was known as the Relocation Center Team and its duty was to facilitate the provision of land in the interest of relocation. This team was comprised of:

- A Project Manager, who coordinated the activities of the Relocation Center with all parties in BRR as well as outside BRR (local and international NGOs, as well as the Local Governments);
- An Implementing Manager, who carried out planning, monitoring and evaluation of all work, held evaluations of the work being done and coordinated all activities;
- A Valuation Officer, who identified and analyzed the land needs and land relocation compatible with the needs of the settlements/relocation, and gave references/basis for determining the price of land for payment of compensation in land provision as well as evaluating land suitability;
- An Information Liaison Officer, who identified and inventoried the subject of beneficiaries (earthquake and tsunami victims who fulfilled the requirements), and clarified and verified beneficiaries’ subject data, administered all the documents related to relocation activities, and coordinated with all related parties (Regional Governments, housing builders) to ensure that all the activities run in an integrated manner;
- A Data Entry Operator, who did data input and updated the data changes;
- An Administration/Finance person, who took care of the administration of all incoming and outgoing letters/memorandums/official letters to and from the Relocation Center, and coordinated all needs of the Relocation Center staff members, while being in charge of all Relocation Center financial transaction matters and administration.

Also, this area had historical value. This was the location of the grave of Tengku Panglima Nyak Makam in Lamnga, as well as the site of Labuy city. The old city of Labuy was closely related to the Aceh-Dutch war (1873-1910) and is thought to have already been in existence in 1700. This city was abandoned during the Aceh-Dutch war in the 1890s.

The outer part still had empty land. This land would later be used and developed for the public interest in the future.

Beuramoe has shown everyone that developing a new town takes good cooperation on the part of the government, private investors and its own community. Further development is necessary and should be encouraged continually by the local governments, whether district or provincial, so that the community there can have a better life. Social aspects also need attention in light of the fact that a new town’s citizens come from different walks of life and different communities and locations. Good neighborliness should also be encouraged.

All things considered, developing a new town means the new beginning of a new life for the beneficiaries. In this new town they will be starting a new page in the history of their lives and they will be rebuilding their dreams. The experience of developing a new town or new settlements equipped with various facilities, such as was done in Beuramoe was also implemented in other places on different scales. In Singkil, the Pulau Sarok housing was developed by BRR with a grant from the Japanese Government, in Arongan (Lambalek), Aceh Barat District, housing was developed by the Catholic Relief Services (CRS) and BRR. The same thing happened in the sub-districts of Calang and Lamno in the Aceh Jaya District, as done by the Canadian Red Cross (CRC).
Offering the Haven for Renters

The basic premise behind the housing and settlements sector was to make sure those who lost their homes due to the disaster could once again have their own home. But what about those who didn't have houses of their own to begin with? Were they also to be built new houses?

BRR discovered this phenomenon at a later stage in Aceh. In the local culture, it was usual for children who were married to keep on living under one roof with their parents. This extended family would live in large houses. In several cases, one house could even hold four families at the same time. This was known by the term “hanging heads of household (kepala keluarga gantung).”

When categorizing the beneficiaries, it was in the regulation that 1 destroyed house would be replaced by one type -36 house. However, the next problem was that in many cases, the extended family, who all lived in one house, all or nearly all survived. The type-36 house obviously would not be big enough to accommodate all the family members. Did this mean that the family members who were under one roof had to get their own houses?

Also, in Aceh it was normal to have people who had renters’ status. They were from various villages in the countryside. Because of the armed conflict, they then moved to the cities to be safer and to look for work. They rented houses in the heavily populated areas of the city. When the disaster struck, many of the house owners were killed or missing, leaving many houses without legal owners. The question was, were these renters eligible for housing aid?

In response to this issue, a Social Assistance Aid for Residence (Bantuan Sosial Bertempat Tinggal, BSBT) scheme was created. This scheme was specifically aimed at the victims of the earthquake and tsunami who prior to the disaster didn’t have houses or any land ownership rights. The concept drawn up in 2006 for this group was that those who were eligible would receive cash aid. Nominally speaking this was the group that got the least amount in nominal terms compared to those who received houses, but in view of the fact that they hadn’t owned a house or land, were the ones who lost the least and therefore were not compensated on the same level as the house/land owners.

Conceptually speaking, the aim of giving Social Assistance Aid for Residence as cash was for the victims, who at the time of the disaster didn’t have homes of their own, being able to obtain proper place to live. At the same time the amount of available habitable houses had increased resulting in lower prices for rents. Another goal was to ensure that those living in the housing and settlements were more humane and open towards all groups/social layers of society. It was also hoped that Social Assistance for Residence would improve the self-help capacity of the program beneficiaries.
Household heads who fulfilled the Social Assistance Aid for Residence program criteria had the following characteristics:

1. They had become heads of their households before the earthquake and tsunami disaster
2. Their living places were totally destroyed leaving them homeless
3. They had been living as renters, had been living with parents/family, had built illegal housing on land not theirs, such as on riverbanks, state land (squatters)
4. They had never received housing aid of any kind from anyone before.

The aid received by the household heads who fulfilled Social Assistance for Residence criteria was always in cash, which could be used for the following choices:

1. rent a place; or
2. rent or contract a house; or
3. rent with the intention of buying; or
4. buy a house on credit using the Social Assistance Aid for Residence as down payment; or
5. buy a piece of land ready for building to be used to build their own house; or
6. build a house on their own land in another location or on land that had been given to them.
This is nominally speaking one of the smallest amounts of aid. Logically, this is right and proper and in accordance with their amount of loss. The Social Assistance for Residence's criteria ensured the identification of the rightful victims. They didn't lose houses they had built themselves, as was the case of the beneficiaries of the Aid for House Repairs (Bantuan Perbaikan Rumah, BPR), or those whose homes were totally destroyed, beneficiaries of Aid for Building New House (Bantuan Pembangunan Rumah Baru, BPRB) or even those who had to be relocated who received Aid for Resettlement (Bantuan Perumahan Dan Permukiman Kembali, BPPK) in the form of land and housing.

The Social Assistance Aid for Residence policies in 2006 were once criticized by many members of the community who fulfilled the program criteria. What they hoped for was not money but a place to live. What they wanted was a house located anywhere.

Another consideration of this group was that if they rented homes, at the end of the rental period they would once again be without permanent housing, meaning that their condition after the disaster would not be any better than it was before.

It should not be forgotten that the aims of BRR were to build back better. This can be understood in its broadest sense. In the context of giving housing assistance, ideally it should be on one hand an incentive to motivate the community's independence and create a better life for them. It would be even better if the household leaders who previously lived as renters had the chance to have a permanent place to live. This was in itself a blessing for them, something good to come out of the disaster that struck their living areas and their lives.

Building back better means also making pro-poor policies (defending the weak, but still in the context of their being household heads and victims of the earthquake and tsunami), thus in 2007 BRR perfected its policies regarding Social Assistance Aid for Residence. Whereas at first the aid was given in cash, in 2007 (based on the aspirations and needs of the victims' communities) the aid was changed to become aid in the form of land and/or house (in kind).

Social Assistance Aid for Residence given in the form of land and/or house in 2007 was intended for three types of beneficiary:

1. For those household heads, disaster victims who legally owned land, they would receive aid in the form of one house from BRR or other Recovery Partner;
2. For those household heads who didn’t own land but had a commitment or an agreement to have a house built from a Recovery Partner or whoever; they would receive a plot of ready-to-build-on land from BRR.
3. For those household leaders who didn’t own land and didn’t have any commitments or agreements with any partners or anyone else, they would receive a plot of ready-to-build-on land in a location determined by BRR along with one 21 m² house.
The first successful housing delivery to those receiving Social Assistance Aid for Residence occurred in 2007. Later, there were several examples of good Social Assistance Aid for Residence implementation in a number of areas, such as Kuta Baro Sub-district, Meunasah Mon-Krueng Raya Sub-district, Labuy-Baitussalam Sub-district, Lagang and other places.

The Social Assistance Aid for Residence program delivery in Kuta Baro was an example of the program’s success with type 1 aid—for household heads who legally owned land through aid in the form of one house from BRR or Recovery Partner. In this case there were ten household heads who owned land legally and wished for their house to be built on their own land.

While waiting for their housing aid, they lived temporarily in the Beurangong Barracks. BRR’s job was to ensure that their needs were in accordance with the supply, especially the ones from NGOs/donors. At that time, Government Information Technology Executive Council (GITEC) which was funded by German Development Bank ("Kreditanstalt fur..."
Wrederaubau, KfW) became the house providers for this area. GITEC succeeded in building the required number of houses in Kuta Baro as many as ten units of type 36 house.

The Social Assistance Aid for Residence provision in Meunasah Mon Village in Krueng Raya Sub-district was an example of the success of Social Assistance Aid for Residence type 2, which involved household heads who didn’t own land but had a commitment or agreement with an Recovery Partner or anyone else, to receive one plot of ready-to-build-on land from BRR. Some 23 houses were committed by the Canadian Red Cross for household heads owning the land.

After the land needed was provided by BRR Directorate of Mapping and Administration of Land in the location of Meunasah Mon village, the Canadian Red Cross successfully fulfill their commitment to build the 23 houses using the Social Assistance Aid for Residence program. This success was repeated in Lagang village. BRR provided the land for the survivors living in the Lagang I and Lagang II temporary shelters. The Recovery Partner namely GenAssist later built more than 100 houses in Lagang.

Another success story was also in the Kuta Baro area. BRR provided land for 19 of the household heads, who had been victims of the tsunami and were living in the Beurangong Barracks. Their houses were built by GenAssist. Other success stories involving the Social Assistance Aid for Residence type 2 aid were the China Charity Federation’s Indonesia-China Friendship Village in Neuhen; the Buddha Tzu Chi Foundation’s Cinta Kasih Housing Complex in Panteriek, Banda Aceh, and Cinta Kasih Housing Complex in Neuhen. The only difference was that the land was provided by BRR, and the houses were built before the beneficiaries had been selected. Then after a strict selection processs, the rightful beneficiaries were given their houses and placed in them.

Social Assistance Aid for Residence type 3 aid was then applied in Labuy. BRR, through its Representative Office I, built 110 houses on land that had already been provided earlier by BRR through the Directorate of Mapping and Administration of Land. However, as the Labuy site was a new settlement location, attraction factors were needed to encourage the beneficiaries to move and live there.

For that reason, type 36, rather than type 21 houses were built on 150 m² plots rather than the usual 100 m² plots. This did succeed in attracting the interest of the tsunami survivors who fulfilled the Social Assistance Aid for Residence criteria to live there. Before tsunami, these people were used to living in locations close to the center of a city.
Providing Area and Settlements Infrastructure

It is not enough to just build a house. Without public facilities and basic infrastructures, no one would even look at a house much less live in one. Facilities, such as roads, drainage systems, sanitation systems and drinking water had been heavily damaged or just swept away without a trace.

The issue of area and settlements infrastructure was an important one that was included in the rehabilitation and reconstruction of housing and settlements. This policy was set out in the form of basic infrastructure assistance, which was different in each settlement area because the areas all had different levels of damage, ranging from heavy, to moderate to slight.

Included in basic infrastructure and facilities coverage were neighborhood roads, drainage systems, availability of clean drinking water and sanitation, and garbage disposal, as well as landscaping or greening in particular places, and the provision of electricity.

For those villages or areas that had been heavily damaged or totally destroyed, Detail Engineering Design (DED) was prepared because certain basic infrastructure required exact calculations so that the technical aspects and costs could be accounted for. For other basic infrastructure, however, the development could be done based on existing prototype designs.

For those villages or areas with moderate damage, the development of infrastructure was sufficient by following the general program as mentioned in the Master Plan for Rehabilitation and Reconstruction. The development of the entire basic infrastructure system, specifically in the city areas, was done with the Deputy for Infrastructure, specifically the Directorate of Clean Water and Sanitation. For those villages or settlement areas which had slight damage, the design was based on existing prototypes.

In providing basic infrastructure and facilities, BRR held to the following principles:

- The provision had to be done after public planning or technical planning or design detail for specific types of infrastructure.
- The use of infrastructure development funds, as much as possible, should first go to relocation areas whose houses were built by NGOs;
- The policy of “filling the gap” should be in place for the work left by NGOs/International Agencies;
- The micro infrastructure development (housing scale) must be integrated into the macro infrastructure system (city or settlements scale);
- The providing of infrastructure, such as access and neighborhood roads, drainage systems, clean water, waste water and garbage disposal, and electricity, was so that the housing that had been built could function properly and the victims could live once again in habitable places.
With more and more housing being completed, more and more requests from the community regarding infrastructure for the housing and settlements came in. Foremost was the issue of clean water. This was motivated by the fact that as the temporary period of living came to a close in the barracks, more and more people were starting to move to the houses, but became reluctant to in the end because of a lack of infrastructure. Some infrastructure, such as access and neighborhood roads, could only be built after the houses were finished. If the roads had been built first, they would have become damaged. The development of infrastructure needed a proper strategy in its execution in the field so that it would be on time and hit the right target.

**Building Housing and Settlements with Friends**

The development of houses to fulfill the target as set out in the Master Plan was channeled through two methods, the on-budget and off-budget methods. BRR functioned as the executor or implementer in the on-budget method and as coordinator and facilitator for off-budget projects.

If viewed from the commitment of the number of houses built, the ratio between on-budget and off-budget is around 39% or around 57,000 units compared to 61% or around 90,000 units. It is clear to see from this that NGOs and international agencies had an important role and position in the housing sector.

The NGOs and international agencies who were involved in the process of rehabilitation and reconstruction basically includes partner agencies in the following groups: the United Nations, the Red Cross or Red Crescent from several countries, foreign or international NGOs, national NGOs, and local NGOs working in Aceh and North Sumatera.

These agencies did their work through the off-budget mechanism. Their activities were paid by the funds that they obtained and managed themselves. The common understanding is that these non-governmental agencies involved in the rehabilitation and reconstruction in Aceh and Nias were called NGOs.

A total of 140 NGOs and other agencies who were involved in providing housing, whether in Aceh or in Nias, were categorized in the following ways: those NGOs who had built more than 1,000 houses were categorized as “large”; those who had built 100 to 1,000 houses were categorized as “medium”; and they were categorized as “small” if their commitment was below 100 houses. The composition of grouping based on the size of the commitment and related to the type of NGO agency (UN, RC, foreign NGOs, national NGOs and local NGOs) can be seen in the table below.

From the table it can be seen that 21 percent or 29 NGOs in the “large” category contributed 72 percent or 65,238 houses from a total commitment of 90,815 houses. Thus, based on the “Pareto” law, the NGOs who gave larger contributions, but were fewer in number, held a strategic role in contributing to the target of providing aid housing in Aceh and Nias.
The Deputy for Housing and Settlements paid special attention to these donor agencies by forming a Directorate of Partnerships. While the Deputy had a variety of activities that were carried out in relation to these agencies, the most simple of them was that the NGO would only register and report what they planned to do and their commitment.

International agencies and donors who worked for the rehabilitation and reconstruction in Aceh and Nias, as with all NGOs who worked in the housing and settlements sector, registered their projects under a mechanism called Project Concept Notes (PCN).

With PCN, the NGOs which did not have direct working program with BRR could still have their activities monitored on the aspects of locations, the number of housing units built and the progress of their work. PCN were managed centrally by the BRR Data and Information Center (Pusat Data dan Informasi, Pusdatin).
The Deputy for Housing and Settlements could contribute assistance in planning, such as consultations regarding DED, house designs, site plans or technical designs for certain types of infrastructure. Other assistance often given was providing beneficiaries with their verification. This way the NGOs were able to concentrate on the work of building the houses.

For the development of the relocation and housing areas for the renters, the Deputy provided land which had been released from the community. According to existing laws and regulations, foreign parties were not permitted to buy land even though it would be handed back to the community. Therefore the relocation area where the NGO housing would be built was provided by BRR. The same thing happened with case of the Social Assistance Aid for Residence program; if the renters were not able to obtain released land or did not own land, someone else had to provide it. In several cases, BRR also cleared and prepared land so that it was usable.

Also, several NGOs requested assistance in the tender process or choosing of contractors by asking one or several BRR personnel to be involved in their tender committee. In the development process, the Deputy also assisted in the solving of
Table 3.2 The Number of NGOs/Donors in Housing and the Size of their Commitment

<table>
<thead>
<tr>
<th>No</th>
<th>CATEGORY OF AGENCY</th>
<th>LARGE Commitment &gt; 1,000 housing units</th>
<th>MEDIUM Commitment 100-1,000 housing units</th>
<th>SMALL &lt;100housing units</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>UN (United Nations)</td>
<td>2</td>
<td>5,166</td>
<td>2</td>
<td>5,166</td>
</tr>
<tr>
<td>2</td>
<td>Red Cross, Red Crescent</td>
<td>6</td>
<td>7</td>
<td>13</td>
<td>16,728</td>
</tr>
<tr>
<td>3</td>
<td>Foreign/International NGOs</td>
<td>18</td>
<td>33</td>
<td>17</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td></td>
<td>39,904</td>
<td>13,015</td>
<td>895</td>
<td>53,814</td>
</tr>
<tr>
<td>4</td>
<td>National NGOs and Foundations</td>
<td>2</td>
<td>18</td>
<td>13</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5,929</td>
<td>4,534</td>
<td>512</td>
<td>10,975</td>
</tr>
<tr>
<td>5</td>
<td>Local NGOs and Foundations</td>
<td>1</td>
<td>11</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,107</td>
<td>2,445</td>
<td>670</td>
<td>4,132</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Number of Agencies</td>
<td>29</td>
<td>69</td>
<td>42</td>
<td>140</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Size of Commitment</td>
<td>65,238</td>
<td>23,500</td>
<td>2,077</td>
<td>90,815</td>
</tr>
</tbody>
</table>

Source: taken from RANDatabase of BRR’s PUSDATIN, taken from November 2008 data

technical problems in the field, such as the preparation of access roads or taking care of inundated areas or floods that entered the project area. Several times, the Deputy also assisted in non-technical problems or mediated conflicts between the NGO management and contractors, workers, beneficiaries, or the local community. Through cooperation with the Legal Services Bureau, the Deputy also assisted in mediating a contractual dispute between an NGO and the work contractor.

Facts Emerge Through Geospatial Information System

When the gigantic waves and earthquake devastated Aceh and Nias, the need for spatial information became urgent. Information, such as earth maps, satellite or aerial photos, scanned maps, administration maps and a variety of spatial information, was urgently required to do the rehabilitation and reconstruction. This became the embryo of a housing geospatial information system.

At the beginning a number of initiatives appeared to produce mapping that was more technical to find out the spatial changes that had taken place, among others:
Japan International Cooperation Agency (JICA) made an analysis of the huge changes in Banda Aceh and lowered the interval contour 1 meter from aerial photo imagery reprocessing; BLOM-Norway did aerial photography in 60% of the tsunami affected area; Australian Agency for International Development (AusAID), through the auspices of Australia-Indonesia Partnership for Reconstruction and Development (AIPRD) Local Governance and Infrastructure for Communities in Aceh (LOGICA), and the United States Agency for International Development (USAID), through Yayasan Inovasi Pemerintahan Daerah (YIPD), did identification of the boundaries of the land for beneficiaries that had disappeared based on the community’s participative mapping.

At the beginning of the reconstruction phase several parties, including the NGOs, needed maps for site plans or village plan, as part of the initial stages of their programs. For this they did in house mapping or outsourcing. This was also the case with BRR and the provincial government, which did the same in a number of locations to support the release of land and to hurry along the development of infrastructure and housing in 2006.

Table 3.3 Types of Facilitation towards NGOs and Case Samples

<table>
<thead>
<tr>
<th>NO</th>
<th>TYPE OF FACILITATION</th>
<th>NGOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Planning and technical design assistance</td>
<td>Catholic Relief Services (Arongan Lambalek, Alue Naga), Kuwait Red Crescent (Kayee Lheu)</td>
</tr>
<tr>
<td>2</td>
<td>Providing beneficiaries and their verification</td>
<td>GenAssist (Ulee Tuy), Buddha Tzu Chi (Panteriek, Neuheun, Paya Peunaga), Australian Red Cross (Alue Naga, Labuy), China Charity Federation (Neuheun)</td>
</tr>
<tr>
<td>3</td>
<td>Providing land</td>
<td>China Charity Federation (Neuheun), Buddha Tzu Chi (Pante Riek, Neuheun, Paya Peunaga), GenAssist (BSBT Ulee Tuy), Canadian RC (Krueng Raya), Australian Red Cross (Ladong)</td>
</tr>
<tr>
<td>4</td>
<td>Clearing and preparation of land</td>
<td>Saudi Charity/Islamic Development Bank (Mireuk Lam Reudeup), UMCOR (Neuheun), Australian Red Cross (Kota Batu)</td>
</tr>
<tr>
<td>5</td>
<td>Providing INFRASTRUCTURE (access roads, drainage, clean water/piping)</td>
<td>Nurani Dunia (Neuheun), Emergency Architect (Sabang), Australian Red Cross &amp; Islamic Relief (Beuramoe), World Relief (Krueng Raya), Brunei &amp; World Vision Indonesia (Deah Mamplam)</td>
</tr>
<tr>
<td>6</td>
<td>Mediating non-technical problems in the field</td>
<td>Australian Red Cross (Lam Lheut, Ladong), Kuwait Red Crescent (Kayee Lheu), Plan Internasional (Leupung), Bakrie Peduli (Deah Raya)</td>
</tr>
<tr>
<td>7</td>
<td>Mediating disputes over contract problems</td>
<td>Soroptimist Internasional (Aceh Besar)</td>
</tr>
<tr>
<td>8</td>
<td>Providing steel structure for houses</td>
<td>CHF Internasional (Aceh Besar), German Agro Action (Simeulue)</td>
</tr>
<tr>
<td>9</td>
<td>Management handing-over</td>
<td>United Nations High Commission for Refugees (Krueng Sabee)</td>
</tr>
<tr>
<td>10</td>
<td>Arranging for IMB (building permit) with local government</td>
<td>Kuwait Red Crescent (Kayee Lheu)</td>
</tr>
<tr>
<td>11</td>
<td>Facilitating and channeling the infrastructure provision by local government or electricity by PLN</td>
<td>Canadian Red Cross (Aceh Jaya), Kuwait Red Crescent (Kayee Lheu), Australian Red Cross (Ladong, Kuta Batu)</td>
</tr>
</tbody>
</table>
In 2006, those units handling data and maps (Literal and Spatial Data Manager) under the Directorate of Planning and Programming, after studying several existing maps, found the following observations.

The Earth-surface Map of the disaster-hit area could not be used as the existing conditions had changed. The administrative map issued by the Central Statistics Bureau (Biro Pusat Statistik, BPS) contained many positional inaccuracies. Names of villages, which are located by the beach, are found placed in the mountainous areas, very far from the coastline. Same inaccuracies were also found on the boundaries of the administrative regions in the maps created by JICA and Indonesia’s National Coordinating Agency for Survey and Mapping (Badan Koordinasi Survei dan Pemetaan Nasional, Bakosurtanal). Some thematic maps issued by United Nations Information Management Systems (UNIMS) also had some issues: position of administrative regions and their naming were not the same as those on the field.

The results of participative mapping engaged in by the community with the help of AusAID and USAID had yet to meet the technical requirements needed for construction projects. The maps had their own coordinate systems, which were not integrated one to the other, making it difficult to re-map the area hit by the disaster.

Meanwhile, the maps created by the NGOs, consultants assisting BRR and the local government had different systems from each other and needed to be spatially integrated. The basic map available for planning were small in number. There was no integrated map showing the location of both acquired lands and development projects. Everything was running partially or separately.

The only spatial data that could be used as a basic map was the map created by JICA, a line-map, although only covering Banda Aceh. In addition, an aerial photo done by Norway of several spots in the coastal areas could also be used. This spatial data was released late, in mid 2006, although housing construction had been commenced since 2005 and continued in 2006.

Generally, the tabulated textual data at that time (2006) had several conditions that prevented it from supporting the construction work optimally.

- Location of project data administration was difficult to identify because not all location names did not refer to those issued by the Central Statistics Bureau.
- The mapping unit authorities were spread out here and there and their work was overlapping. Not a single unit had a complete and accurate set of data. We could easily find the staff at the unit with various backgrounds and different skills. Accountants, astronomers, architects, and high school graduates had to play the role of mapping and Geospatial Information System (GIS) experts.
Many staff lacked the perspective and experience on the need of geospatial data for construction projects, specifically housing. Eventually they were first given some trainings and relevant knowledge.

There was a lack of awareness on the need for maps among the policy makers although technically, maps were very much needed as an instrument of planning.

Based on the above conditions, an idea was launched to provide geospatial data to support planning, monitoring and evaluation of the acceleration of construction of housing and settlements as a new initiative. Efforts to obtain geospatial data had been going on since December 2005 with a commitment from AusAID through AIPRD to assist in funds for mapping. BRR's internal process was directed towards using the national budget funds to do the providing of geospatial data through revisions of its budget in mid 2007. The geospatial data would not only be used for planning purposes but more as a medium for accountability.

This was because the GIS, as part of the literal data (comprising of mostly lists, such as listing of houses in a district), had its own strengths. With the GIS, house position points could be known on a map, making it easier and faster for checking to be done in the
A typical day for the BRR Pusdatin staff, Banda Aceh, July 25, 2007. Photo: BRR/Arif Ariadi

field by anyone who could access the data. The GIS was a very useful tool as a medium for accountability, compared to literal data. This information means that every aid house that is built, whether on-budget or off-budget, can have all kinds of details added to it, such as the owner’s name, the name of the agency or house builder, the condition of the house, the status (finished, still in development process, or left undone), the availability of infrastructure (clean water, electricity, sanitation), and whether it is inhabited or not, with location coordinates ensuring that there is spatial and textual data with the same geo-referencing.

There were four work stages with the scope and target of work as follows:

1. The development of a mapping framework from Global Positioning System (GPS) Bakosurtanal/BPN point and 735 points of a new GPS point density to 1293 rehabilitation and reconstruction areas in Aceh and the Nias islands.
2. Situation mapping of the objects: houses, roads, drainage, and other utilities. The mapping used the Digital Total Station and GPS. The raw data of the Total Station and GPS was made into a line map, integrated with the textual data and photos by studio processing.
3. Doing textual data of houses and infrastructure to obtain the progress of house development, status of use, name of beneficiaries and ensuring the Donor was doing the development. The textual data for built infrastructure was to obtain data and infrastructure status that had been built, as well as the readiness of the settlements areas for living. Each house and infrastructure was given an identification code (ID) and their physical progress was documented through photos.

4. The making of a spatial database and textual database resulting in a Geospatial Database. Based on the Geospatial database some thematic map queries were made and printed based on a certain themes in accordance with needs. With all this, as many as 3,606 maps were made illustrating and describing 109,950 houses on 5,000 hectares of land in 1,293 villages, in 142 sub-districts in 17 Districts/Cities.

The geospatial data survey was done by a project officer who acted as coordinator and assisted by 4 technical staff from BRR. The consultancy work was divided into 3 packages covering 3 area clusters. The field work was coordinated by 18 professional experts, 120 mapping site surveyors and textual data surveyors and assisted by 240 members of the community. It is clear that this work was done on a gigantic scale.

Equipment used in doing this work comprised: 12 units of Geodetic GPS, 93 units of navigation GPS, 22 units of Digital Total Station, about 135,000 data and benchmark description forms, 138 computer units, and 158 digital cameras. This geospatial data survey was carried out for 4.5 months from December 2007 until April 2008.

Based on the resulted Geospatial database, a Housing Information System was formed using Environmental System Research Institute-Shapefile (ESRI SHP) spatial format data and made web-based. This system was to be used as a tool for doing monitoring, evaluation and information on the progress of the development of each house, each donor and each village in the disaster-hit area in the Aceh-Nias regions.

Based on the research of the Research Center for Seismology Volcanology and Disaster Mitigation, Nagoya University, it was discovered that the ground/land area in Aceh and Nias was not yet stable and changes in position were still going on. Based on these findings, a new basic map was made based on the analysis of the data and integration of the Bakosurtanal basic map, aerial photos and the latest geospatial measurements.

Through the web-based Housing GIS, with just a “click” on the Banda Aceh position on the map of Aceh Province, for instance, an illustration of the housing distribution would appear in black dots. Zooming could also be done, which would show information on house coordinates, the type of aid (reconstruction, relocation or Social Assistance Aid for Residence program), provider (agency giving aid), house owner’s name, and status of occupancy, and a photo of the front of house.
President SBY, during the opening of CFAN IV in Jakarta, received a presentation on the use and advantages of the GIS Housing software in the recovery of Aceh and Nias, February 13, 2009. Photo: BRR/Arif Ariadi

Geospatial technology played a big role in helping with auditing as the basic principle of Geospatial technology is one georeferencing object, having a dimension that can be a unique identity. The location and progress reported was in accordance with the information on that identity and can be obtained easily at any time for auditing. It was clear that reports based on geospatial information were very accountable.

Through the application of Housing GIS, it was easily seen that geospatial data was an important entry point in integrating all information, whether it was textual or visual. Indeed, geospatial data could be used as the most credible/trusted element in the accountability of information.

This made the Head of BRR Executing Agency proud of the fact that based on concrete evidence, there was no proof of the accusations that had been brought forth by some parties regarding the achievement statement of the housing construction in 2007. The auditing, done by several parties, could go smoothly with the data supplied through the GIS technology.

Another recognition of the success of using this data application is the “Government Technology Award 2008 on Best Practice Information Management” which was presented at the 4th Future Government Summit 2008 on October 17, 2008, in Bali. Some 450
nominees from 15 Asia Pacific countries competed in the event. Award winners of other categories include Singaporean Ministry of Education, Singaporean Defense Technology & Science Institute, Kepolisian Diraja Malaysia, etc.

Some thought that the use of geospatial data for the rehabilitation and reconstruction in Aceh and Nias, that was limited to the finished assets only, was not enough. If this kind of data had been made available from the beginning, technical information "before reconstruction", "during reconstruction", and "after reconstruction" would have been obtained. From the data of these three phases, spatial analysis and the resulted learnings could be used for the good of the country, its citizens and the engineering world.

Eventually, the Housing GIS has, at least, opened the eyes of the public and many experts, who once opposed the idea for implementing it, with a fact that the system developed has been the pearl of Aceh-Nias rehabilitation and reconstruction and will become a model which is replicated in many other institutions and future reconstruction or development projects.
The Moves Overcoming Challenges

HOUSING and settlement rehabilitation and reconstruction in a post-disaster region involving an area as large as tsunami-hit Aceh faced many constraints. Nonetheless, BRR was given what seemed to be the impossible task of completing this within four years. The challenge was like a steep hill that was almost impossible to climb. The series of hurdles needed to be quickly and prudently overcome.

When Houses Had to be Built Instantly

Housing rehabilitation and reconstruction was a critical problem in Aceh. Shelter is a basic human need and it was vital to promptly provide housing for the many people who had been displaced by the tsunami.

Due to urgency of the situation, the procurement of materials needed for housing rehabilitation and reconstruction using on-budget (state funded) funding received special treatment in that procurements could be made through direct appointment. The decision was made due to the critical need for shelter so that victims of the tsunami could resume their lives as quickly as possible.

The special treatment was regulated under Presidential Regulation No. 70/2005 regarding the third amendment to Presidential Decree No. 80/2003 on the procurement of goods and services. The regulation stated that materials needed for housing construction conducted prior to July 30, 2006, could be procured through the direct
A number of businesses and contractors participated in the tender process at the BRR office, Banda Aceh, March 2, 2006. Photo: BRR/Arif Ariadi

appointment of suppliers. The regulation also stipulated that everything related to direct appointments in the supply of goods and services was to be regulated by a Head of BRR Executing Agency Regulation.

Based on the regulation, a pre-qualification procedure to select contractors and monitoring consultants for housing construction for on-budget projects was established. A pre-qualification team was set up comprising staff from the BRR Deputy for Housing and Settlement and the BRR Deputy for Infrastructure.

Pre-qualification participants were estimated to reach thousands and to prevent subjectivity in assessment, the grading of applications was conducted electronically. Data input for proposed partners involved more than 30 specially recruited students.

Recruiting such a large number of students was deemed necessary to deal with the anticipated high number of applications for the procurement of housing material and construction. This was in line with BRR’s target of building 40,000 houses in the first phase of reconstruction in which the services of small contractors would be used in line with the BRR policy for the 2006 fiscal year.
It may be asked why BRR decided to use the services of small contractors when time was of the essence to deal with the urgent need for housing, especially considering there where large contractors that worked on a national scale and had proven their ability in executing giant projects within a short time.

This decision was not made lightly. Several things were considered, most of them outside the realm of engineering. Ultimately, it was in order to empower local contractors in Aceh to aid their recovery.

Dilemma at a Crossroads

Prior to the tsunami, Aceh contractors had never had the chance to develop. “The conflict has made Aceh’s business climate unhealthy,” was a comment often made by members of the Aceh Regional House of Representative.

The three-decade armed conflict had made security conditions unfavorable and had restricted constructors’ activities. It had been quite some time since Aceh had seen any construction projects. When BRR decided to use local contractors for housing development, the appointment process was not easy.
Later, the Aceh Regional House of Representative even insisted on direct appointments and a minimum quota for local contractors. In addition, simpler and looser requirements were requested to be applied especially for them.

BRR was facing a difficult choice. Using local contractors with less experience and capability could risk building standards and lead to delays. Meanwhile, using big outside contractors would sideline local contractors and BRR would be seen as being insensitive and bringing in risks of slow local capacity building.

One of the stipulations in Presidential Regulation No. 30/2005 regarding the BRR Master Plan stated that housing construction for tsunami survivors in Aceh and Nias should be based on actual needs, local community empowerment, and prioritize local materials and uphold building codes. Hence, Presidential Decree No.80/2003 allowed direct appointments for housing construction projects in Aceh or Nias if the projects were funded by on-budget funds.

BRR came under more pressure in early February 2006, when there seemed to be little progress in housing development. Criticism and people’s demands for housing became stronger. Actually, for the 2005 fiscal year, a special project implementation unit had been appointed for housing construction. However, at the time BRR still focused on its coordinating role, not being the implementer.

Community-based housing development had enabled each community to independently manage construction, but unfortunately there was slow progress with this approach as the preparation stage alone could take up to six months.

In the midst of the urgency, BRR finally decided to give a boost to the local economy by hiring local contractors. The decision was made to maximize local capacity building. BRR realized the consequences, but thought the cost was worth it when compared to the opportunity to enhance and improve local capacity.

Thousands of Houses, Thousands of Contractors

With high hopes and optimism, BRR finally took the step to start major housing construction in Aceh and Nias. During the first phase of construction management and design, BRR planned to build 10,000 houses.

BRR estimated that it would take 15 weeks or 105 days for 1,000 small contractors to build 10,000 houses. This created a new problem because it meant BRR would have to select 1,000 contractors before the June 30 deadline for the 2006 budget proposal.

This was an extraordinary situation as the technical guidelines for the pre-qualification process had just been legalized in February 2006, giving BRR just three months to select 1,000 contractors.
What made it even more difficult was the ambiguous beneficiary and location data. Presidential Decree No. 80/2003 clearly stipulated that a project should have a clear scale of work and location prior to signing a contract.

Despite the constraints, BRR formed a special pre-qualification committee, which at that time was not part of BRR’s organizational structure, to complete and announce assessment results by May 12, 2006. That is when the hard work began. Imagine the difficulty that 10 people aided by 30 outsourced assistants had in sorting through all the documents of 3,000 local and non-local contractors and selecting the ones best qualified.

For the pre-qualification committee, every day involved an overload of work. “During the selection, no committee member ever got home before 1 a.m.,” said one of the team members in recalling the demanding contractor pre-qualification process. What made it harder was not the deadline or the detailed document checks but outside pressure demanding that those chosen meet all the requirements. The contractors’ expertise varied, but almost all of them lacked experience.

The pre-qualification committee finally narrowed it down to 900 contractors. The announcement was met with objections that led to delays. Based on a Head of BRR Executing Agency’s memorandum, pre-qualification standards were lowered from grade 7.5 to 6. This resulted in about 1,200 companies qualifying, with most of them being small contractors. What made this exercise even more unique was that there was a “waiting list” that had a reserve of contractors to replace any that pulled out in the future.

However, the announcement of the 1,200 contractors’ names still attracted criticism. The Aceh Contractors Association reacted strongly to the number of qualified companies. The local newspaper declared Aceh in Mourning for the Loss of Local Contractors in its headline for that day despite the fact that 90 percent of the qualifying contractors were locals.

When Housing Construction is Procured in Batches

According to records, more than 3,000 contractors submitted documents in the pre-qualification phase. This was an extraordinary number. Contractors were very enthusiastic about participating in the recovery of Aceh. Pressure from the Aceh Contractors Association and other parties had a positive impact on attracting applicants. The enthusiasm was a positive start in boosting development in Aceh.

Optimism resulted from BRR’s decision to give priority to small contractors. BRR designed batches of project packages that could be executed by small contractors. Each batch was valued at less than Rp 1 trillion or contained construction projects involving 13 or 14 houses (depending on location). Later, BRR reduced project sizes to five houses per small contractor, which was more realistic and accelerated housing development. The decision to reduce the size of projects also encouraged contractors to participate in future projects.

By the end of the registration period, 3,088 companies had applied for pre-qualification documents. Of this number, 2,388 companies submitted project applications, 2,267 of which were contractors and 121 consultants. Of the total submissions, 2,134 or 89 percent were local companies and 254 or 11 percent were non-local.
After the committee short listed the 1,200 candidates, the selection process was far from over. The pre-qualification committee still needed to report the results to four project implementing unit heads that oversaw four areas of reconstruction in Aceh. The heads of the project implementing units, as the budget authority officers, had the responsibility of forming a procurement committee from unit members to determine which contractors would be officially appointed.

Of the 1,200 short-listed contractors, only 984 would be needed to meet BRR’s requirements. After the selection had been completed and 984 contractors were chosen, each was awarded a contract for work in their area of domicile. The selection completion was difficult since each project implementing unit only had one or two people on the procurement committee. This meant there were only eight people to negotiate with 984 contractors in the course of one month. It was almost impossible work.

BRR based its decisions on considerations of local capacity building. However, every decision had its consequences and BRR had to consider the best way to anticipate everything possible. One of the consequences was that contractors proliferated. Not every contractor had the competency, experience or ability to complete the work. Their limited resources led them to neglect the work and leave their projects unfinished. Moreover, their financial management systems varied, and some of them had even submitted bank
guarantees that were obtained under false pretenses, indicating that they were not recognized contractors. Their limited resources caused work delays and some of them eventually gave up and sub-contracted their work to others. In some cases, contractors sold their BRR contract to other contractors. These sub-contracts resulted in substandard construction. In the end, housing construction was incomplete and materials were of low quality.

BRR recognized the risks and accepted the consequences. BRR felt it was necessary and a good experience for the Acehnese to be involved in rehabilitation and reconstruction activities and thus benefit from the development achievements.

BRR faced every risk through the strict monitoring of housing projects, while making improvements for the next phase of rehabilitation and reconstruction. The improvements included resuming work on abandoned projects. Furthermore, BRR dealt with contractors that breached their contracts either by fining them, reporting them to the police or taking them to court.

Every improvement had a financial cost. But as the saying goes, it is impossible to make an omelet without breaking eggs. To achieve the grand vision of building back better, physical rehabilitation and reconstruction were not enough. It required the courage to experiment with social transformation to find the right solutions and the ability to anticipate the consequences. These were part of the lessons learned that will hopefully improve the quality of future construction management in Aceh.
Encountering Obstacles, Facing the Challenges

The task of rehabilitating and reconstructing in the housing and settlement sector was incomparably difficult. One of the challenges was the difficult physical conditions. Certain locations had very limited access, since bridges had been cut off or destroyed. There were also locations with special needs, such as submerged land and marshlands, which needed to be filled in, or hillsides prone to landslides.

Delivering construction materials was often difficult due to the remoteness of some locations, such as Pulo Aceh, and thus required special transportation. At the same time, conditions were worsened by some authorities who tried to monopolize the supply of construction materials, some of which were of low quality, over priced and took time to obtain.

From the workforce point of view, many challenges were encountered that needed to be resolved. The decades-long armed conflict had slowed down development. As a result, disciplined and qualified manpower was difficult to find. Sometimes conflicts between locals and outside workers occurred, as did frequent disputes between contractors and local communities, which led to a project being neglected.

On the other hand, some contractors did not have adequate equipment to complete the work, and some lacked the capital to carry out major projects. Some of them also had difficulty managing their workload and finances, or some were involved in internal or external disputes.

Meanwhile, from the beneficiary side, there were also several issues that needed to be resolved. In several locations, many issues regarding overlapping housing assistance occurred that required extra time to re-organize the beneficiary list. Some rejected a designated house after completion because they considered the house inadequate for their needs or they considered the housing inferior to the new houses built in a neighboring village. In addition, there were also beneficiaries of NGO houses that had obtained housing through false pretenses.

On top of these problems, sometimes contractors were denied access to a project location before paying a certain sum of money to locals. Local communities often demanded to be involved in development planning despite their limited abilities. To make matters worse, local contractors felt they have the right to execute a particular project due to their prior involvement in the data collection process, and when their expectations were not met, they would disrupt the project’s execution. Land disputes also occurred at project locations, plus some contractors felt no responsibility to complete projects for which they had already been paid.
Adapting to the Needs

During the four year of BRR’s operations (2005-2008), the Deputy for Housing and Settlement was restructured several times in line with demands in the field. The changes were necessary to ensure the effectiveness of project implementation as well as to meet objectives and targets.

The restructuring, including in regional policy through the establishment of district and regional offices, was undertaken in order to bring activities closer to the people and to the objectives. The changes were also in line with the increase in work intensity. In addition to the organizational restructuring, the function of staff members and job descriptions also changed.

Period of May-December 2005

The housing division was initially part of the Directorate for Housing, Water and Public Facilities under the BRR Deputy for Infrastructure, Housing and Land Administration. By December 2005, the directorate was being handled by four people headed by a director. Meanwhile, housing issues were the responsibility of a manager and one staff member.

At that time, the organization was small not only because BRR had been recently established, but also because BRR was finding it difficult to function as an executing agency. This was due to delays in the 2005 unified budget, which affected almost every on-budget development sector.

During this period, BRR acted as a coordinating agency, which was appropriate in view of the high number of pledges and commitments pouring in from NGOs and international donors. The BRR housing division was considered a support facilitator in off-budget funding.

Meanwhile, on-budget project implementation during the early days of BRR’s operations was handled by the relevant Aceh provincial government agency. Issuance of Spending Authority (Daftar Isian Pelaksanaan Anggaran, DIPA) for the Housing and Settlement Division was conducted by the project implementing unit from the Aceh Provincial Government Settlement and Urban Planning Department. This project implementation unit was established to manage BRR’s on-budget funding.

Therefore, the job of the BRR Directorate for Housing, Water, Sanitation and Public Facilities was only to monitor the Project Implementing Unit’s budget implementation. The head of the Project Implementing Unit was under the supervision of the head of the Aceh Provincial Government Settlement and Urban Planning Department.

Period of January 2006 to December 2007

Approaching the end of 2005, the Head of BRR Executing Agency decided to create a special division for housing and settlement that was separate from infrastructure. The
decision was made to deal with the increasing workload in the infrastructure and housing divisions.

The decision was also influenced by BRR’s change in policy on on-budget funding project implementation. Starting from the 2006 fiscal year, every on-budget project implementation was to be managed by BRR and no longer by a provincial government agency. BRR began its function as executing agency regardless of its function as coordinator.

The Deputy for Housing and Settlement effectively started its work in early 2006. Its main objective was to implement the BRR 2006 Issuance of Spending Authority on housing and settlement. Furthermore, the creation of this Deputy was driven by the demand that BRR also building houses using more on-budget funding compared to the previous year. The decision was made since donor commitment was reduced at end of 2005.

In December 2005, the Head of BRR Executing Agency announced a plan to construct 40,000 houses in Aceh and Nias using on-budget funding (including foreign grants using the on-budget off-treasury mechanism). Construction of the 40,000 houses was to be completed in 1.5 years or over two fiscal years. The organizational structure was adjusted to accommodate the increased workload.
Every directorate consisted of three or four sub-directorates supervised by a manager. The diagram shows the management of the Directorate for Construction and Planning Management as an example, which was far simpler than the other directorates such as the Directorate for Participatory Development Initiative that was responsible for data collection on housing beneficiaries and verification. The latter directorate also involved the district/city level, which was managed by an Assistant for Housing and Settlement (Asisten Bidang Perumahan dan Permukiman, Asperkim).

Not stopping there, during project implementation, the Asperkim received assistance from other staff members, the number of which depended on the workload in each district/city. For example, the workloads in Banda Aceh and Aceh Besar District were enormous due to the scale of the affected area and the number of victims. This was different from the workloads in South Aceh and East Aceh Districts, since the number of victims in both districts was fewer than 100.

Assistance was also obtained from sub-district facilitators. As Aceh consists of about 20 districts/cities and every district oversees four to six sub-districts, it was not surprising that the housing and settlement staff reached 150 people during this period.

Staff turnover in the Deputy for Housing and Settlement was quite significant. By December 2006, the BRR Deputy for Housing and Settlement had been replaced and at least three division directors changed.

**Period of January to April 2008**

In line with the 2008 BRR regionalization policy, the Project Implementing Unit at the regional office handled most of the development budget. The operational function was no longer assigned to the deputy level. The deputy focused more on policymaking and general monitoring programs. The shift from the operational sectoral approach (at the deputy level) to the regional approach reached its peak in early 2008. The representative office head was assisted by the district head in project implementation. During this period all Project Implementing Units, particularly those with unfinished projects, were transferred to the regional offices. For example, the housing and settlement Project Implementing Unit, which was previously under the Director of Construction Management and Design, was in 2008 transferred to work under the Head of BRR Representative Office I covering Banda Aceh City, Aceh Besar District and the west coast of Nagan Raya. The head of Region I concentrated on and was responsible for accomplishing Construction Management and Design packages in 2008. This policy ensured that the unit monitoring a project still under progress at the end of BRR’s mandate could be as close as possible to the project.

The Deputy for Housing and Settlement’s organizational structure was re-simplified to accommodate the policy. There were four directorates at this time and each director was assisted by four heads.
Changes in the organizational structure during this period included placing the Directorate of Spatial Planning and Land Plots was under the Deputy for Operations and dissolving the Directorate of Participatory Development Initiative. Consequently, the district offices were assisted by the Committee for Verification and Completion of Housing in taking care of matters related to beneficiaries. This unit was formed in the second semester of 2006, but was given new duties as of 2007. The head of the Committee for Verification and Completion of Housing reported directly to the Head of BRR Executing Agency. Directorate of Participatory Development Initiative staff, such as the assistant manager and facilitators, were transferred to the district office.

The changes were in line with the mission to strengthen coordination at the operational level. Hence, the directorates could focus on BRR’s exit strategies, such as asset management and documentation transfer. The deputy was still in charge of the completion of houses financed by foreign grants through the state budget.

The reconstruction of houses by NGOs was also still the deputy’s responsibility. However, the deputy coordinated with the Partnership Unit under the district office for operational matters. However, this development type had been deceased from the previous period.
A program called Social Assistance for House Rehabilitation (Bantuan Sosial Perbaikan Rumah, BSPR) was also executed during this period. The program involved collaboration between the special housing director and the Center of Regional Program and Project Controlling (Pusat Pengendalian Program dan Proyek Wilayah, P4W) under the Deputy for Operations and the district office.

**Period May to December 2008**

The Deputy for Housing and Settlement was merged with the Deputy for Operations during this period. However, no changes were made to the Presidential Decree on this, so in theory the Deputy for Housing and Settlement still existed, but two directorates were transferred to the Deputy for Operations, namely those concerning housing reconstruction and development partnership. The Directorate for Spatial Planning, which was initially under the Deputy for Operations, was transferred to the Deputy for Infrastructure, Environment and Maintenance.

The remaining tasks of the Directorate for Housing Reconstruction during this period were handed over to district offices in early 2008 through the Project Implementing Units. On the other hand, besides managing partners and NGOs, the Directorate for
Development Partnership still directly supervised Project Implementing Units funded by foreign grants.

With this organizational structure, the Deputy for Housing and Settlement also acted as the Vice Operational Deputy for Development Order, which coordinated settlements from audit findings and beneficiaries, particularly concerning housing. The Vice Deputy for Operations was also responsible to the Committee for Verification and Completion of Housing.

BRR continued to collaborate externally, while undergoing internal restructuring. Coordination and cooperation at the village level in Aceh had to be in line with the local culture. The smallest administrative unit in Aceh is the village, which has boundaries, local symbols, utility rights and infrastructure authority, income and a specific social order.

An Acehnese village chief is elected by the community and officially appointed by the regional district government. The customary leader is the deputy village chief, who acts as the executive authority, while the legislative position is held by village ulema/village elder.

Both positions differ from that of the head of a village in the rest of Indonesia, where village chiefs hold both executive and legislative powers. An Acehnese village ulema/elder is obliged to advise the village chief and customary leader on local laws, local customs, societal habits and spiritual matters. He is also responsible for resolving disputes regarding such matters. Village elders comprise government, religious leaders, intellectuals, farmers and businesspeople. The above is aimed at explaining the type of stakeholders that had to be accommodated by BRR in managing development partnerships.

Collaboration was needed in every stage of development, beginning with matters concerning land deeds, the determination of beneficiaries, land plot allocations, land exempt from relocation, and in coordinating contractors or community members building their own houses through Community Direct Assistance (Bantuan Langsung Masyarakat, BLM) funding.

The collaboration was also beneficial in the settlement of non-technical issues that frequently hampered rehabilitation and reconstruction. All related stakeholders, such as the community, contractors, NGOs, whether mediated by BRR or otherwise, needed to consult with the village leaders.

At the sub-district level, there was a need for collaboration in planning, rehabilitation, reconstruction and rebuilding settlement infrastructure, such as drainage and water supply. Coordination and collaboration for settlement infrastructure development under the Community Direct Assistance scheme was needed because the development was at the sub-district level. Coordination meetings for houses built by NGOs, particularly in early 2005, were held to prevent an overlap with reconstruction activities that also involved sub-district leaders.
Last but not least, collaboration and coordination for larger settlements was carried out at the district level, whether funded by BRR or NGOs. Almost all memorandums of understanding within a relocation area involved three parties, namely an NGO as the housing provider, BRR as the land provider and the local government as the permit issuer, plus the relevant administration agency that would be involved in the future.

Settlement infrastructure handover was done in collaboration with the local government. As private property, houses had to be handed over directly to the beneficiaries, while public infrastructure had to be handed over to the local government. Any operational and maintenance costs for the infrastructure became the responsibility of the local government.

Collaboration with the provincial government was conducted by the head of BRR, not by deputies.

There were programs that required coordination with the central institution or government. Institutions related to the Deputy for Housing and Settlements were the Ministry of Public Works, especially the Directorate General of Human Settlements, the Ministry of Home Affairs, and the Ministry of People’s Housing, and other relevant agencies, namely the National Development Planning Agency and the Ministry of Finance.

The Project Management Unit for the Rekompak program, for instance, was appointed by the Minister of Public Works. Therefore, the Ministry of Public Works was involved at the planning, implementation, monitoring and evaluation stages. It was similar with sub-district development, which is managed nationally by the Ministry of Home Affairs. The Sub-District Development Program has diverse program options at the national level, but in the rehabilitation and reconstruction of Aceh it focused on developing village infrastructure in disaster areas.

The Ministry of People’s Housing played no active role in the rehabilitation and reconstruction activities in Aceh and collaboration was more along the lines of information services.

Working with Acquaintances, Coordinating with Partners

Working with partners requires precise coordination. BRR coordinated through Project Concept Notes. The data required included the name (personal or private), country of origin, source of funds, type of development/support, program objective, development location, amount of funds involved, parties involved (related to visa requirements, equipment and raw materials to be brought into Aceh).

This information was aimed at guiding NGOs and private parties in participating in the rehabilitation and reconstruction of Aceh. Approval or rejection of Project Concept Notes was given within two weeks of the submission of a Project Concept Note.

Proposals could be accepted, rejected or postponed pending further information or elaboration. In short, BRR postponed some proposals due to doubts concerning funding availability. Subsequently, another meeting would be conducted to implement the approved projects.

Housing beneficiaries in Alue Naga, Syiah Kuala Sub-district, Banda Aceh, signed certificates before receiving keys to their new homes, February 19, 2009. Photo: BRR/Arif Ariadi
Lessons for the Future

EXPERIENCE is the best teacher. Despite the hurdles and obstacles that appeared as a result of technical conditions on the ground, related human resources, construction material, as well as internal institutional matters, the spirit for building back better continued to be the flame that energized the passion for work and the determination to achieve our aim.

What follows are the achievements in the area of housing and settlements, which don’t only include the results of physical developments, such as the number of houses, as well as facilities, that have been rehabilitated and constructed, but also other achievements: the lessons we learned. Notes, such as figures and technical elaborations, are expected to complement one another as lessons learned from the invaluable experience of doing work of a gigantic magnitude in a post-disaster region.

The Four-year Achievements

The vision for housing and settlement is the realization of a settlement area in the disaster-stricken regions as better residences for the surviving families of the December 26, 2004, earthquake and tsunami in Aceh, as well as the March 28, 2005, earthquake in Nias. The mission of housing and settlement work is to execute the process of rehabilitation and reconstruction in the field of housing and settlement in an effective and efficient manner, both through direct execution of development funded from APBN
and through the coordination and facilitation of non-governmental recovery partners whose funding came from their own resources and was managed by themselves.

The scope for the housing and settlement work encompassed:

1. The selection of the beneficiaries through data survey of land area locations, registrations and validations.
2. Design of villages’ spatial planning and regional spatial planning.
3. Provision of land for supporting housing and facilities.
4. Design (for houses and Basic Infrastructure and Facilities [Prasarana dan Sarana Dasar, PSD]).
5. The execution of house construction/development, as well as supervision.
6. The composition of the environmental impact analysis, environment management efforts and housing and design environmental control efforts.
7. The provision for settlement facilities and infrastructure.
8. The handover of assets.

The housing and settlement work has been conducted in adherence to Presidential Regulation No. 47/2008, which was a revision of Presidential Regulation No. 30/2005 regarding the Master Plan for Rehabilitation and Reconstruction of Aceh-Nias. In Presidential Regulation No. 47/2008, the targets for program and activities, spatial planning/land sub-sectioning and housing accommodated in the execution of Aceh-Nias rehabilitation-reconstruction, are mentioned.

The documents of planning resulting from the spatial planning sub-section throughout the BRR work term consist of:

- 670 village spatial planning documents,
- detailed spatial planning for 21 sub-districts,
- 63 documents for the framework of sub-district spatial planning and action plans,
- regional spatial planning (RTRW) for 14 districts/cities,
- 346 documents for village development evaluation monitoring based on the village spatial planning mentioned above, and
- one document on the revision of NAD Province regional spatial planning.

All documents on planning have been handed over to the local government. To support the handover process, as mandated by Presidential Regulation No. 47/2008, the spatial planning policies have been communicated to 11 districts and cities in NAD Province.

Even the results of village spatial planning have been also used by other units, for instance, the Directorate for Construction Management/Construction Design and the Directorate for Settlement Infrastructure, as a basis for placement of families or detailed engineering design of facilities and infrastructure in the housing area to be built. This is a positive point because the village spatial planning results have been integrated into the thorough process of rehabilitation and reconstruction.
In line with the Master Plan’s mandate in the land administration sub-sector, BRR purchased around 514 hectares of land for public interest, 461 hectares for housing relocation, and 11 hectares for renters who were the recipients of Social Assistance Aid for Settlement (Bantuan Sosial Bertempat Tinggal, BSBT). Other tasks of the land sub-directorate that BRR performed during its term were the restoration of land services and cadastral physical development in Aceh Province.

Additionally, a more specific restoration of land services was performed in 18 districts and cities, while cadastral physical development was done in 15 districts and cities. Base maps were also made of 350 hectares of land in Aceh and Nias. Other activities in the land sub-sector includes adjudication, as well as issuance of replacement land titles, issuance of relocation housing certificates, and land consolidation activities/granting of land rights. All BPN offices both at provincial and district/city level in Aceh have been equipped with computer systems and a digital database at the end of BRR’s work term.

Also by the end of its term of service, BRR had overcome various obstacles and challenges for the housing sector. Housing is a complex matter. The following table will illustrate that complexity.

The 2004 data on the number of houses came from the Provincial Housing Office (see the column on total number of houses). Then, when the Master Plan was being written, Bappenas issued data on the number of damaged houses, as can be seen in the second column. That number became the initial point for beginning and coordinating house construction.

In any project, there are always deviations from the original plan, so the implementers need to be alert and wise enough to keep adhering to the essence of the vision in the plan and balance it with the reality on the ground. They should not stiffly hold on to the standard figures on paper. Therefore, as the construction progressed, some studies were done to evaluate and verify the most accurate number of houses.

The table shows that Garansi, the Social Affairs Office and the Electronic Data Management Agency (BPDE), together with UNDP, conducted a survey in September 2005. Later, Planning and Control for Disaster Handling, (Perencanaan dan Pengendalian Penanganan Bencana, P3B) of the Bappenas issued its
Village facilitators match each and every key to the list of names of beneficiaries for houses in Neuheun Village, Aceh Besar District, September 11, 2007. Photo: BRR/Arif Ariadi

Evaluation on the number of houses in August 2007 and Komvertib also published data on the number of houses in April 2008.

Considering all the issues and problems noted at the point of evaluation halfway through BRR’s term, it was concluded that there needed to be an adjustment to the target numbers mentioned in Presidential Regulation 30/2005, which was then legalized in Presidential Regulation 47/2008. Even though BRR’s work mandate expired on April 16, 2009, some NGOs will continue working to the end of September 2009 for the housing development sector.

In execution, there were four factors identified as the basis for determining who would housing aid, and these factors contributed the increased targets for construction of new houses in NAD and Nias.

The first factor was the empathy of the survey officials, village officials or NGOs, towards the reality of the conditions on the ground, especially in light of the widespread poverty in Aceh (as a post-conflict region).

It was understood that aid should, indeed, be given only to people whose houses – made of concrete walls – were destroyed or damaged. But in many cases aid also had
to be given to the neighboring residents even though their houses only suffered minor damage, to bridge the economic gap in villages. Owners of houses made of wood were also given new houses of the same kind as the former owners of houses made of concrete.

The second factor was the consideration of **social justice**. The discrepancy between regions or in groups of society also motivated the donors to tolerate the provision of aid outside of the original plan. For example, in Aceh, the RRHS program funded by the German Government / KfW, gave aid only to tsunami survivors in its first four phases of aid in line with their program, while the fifth phase aid was directed to people not directly affected by the tsunami, which were victims of conflict in Pidie Jaya and Bener Meriah Districts.

Aside from that, the phenomena of so many renters living in barracks and the many families living with other families in inadequate space of type-36 housing aid motivated the establishment of the BSBT policy.

**Third, the consideration for disaster risk reduction.** In some cases, aid was also given to those who were at risk of falling victim to future disasters.

In dealing with such issues, the housing and settlement sector designed the mechanism of Komvertib, an independent organization to settle issues of deciding or
Table 5.1. Number of Houses Needed and Reconstructed in Aceh as of April 2008

<table>
<thead>
<tr>
<th>District</th>
<th>Total Houses</th>
<th>Presidential Regulation 30/2005</th>
<th>Garansi/Social Affairs Office / BPDE / UNDP</th>
<th>P3 Data</th>
<th>Komvertib</th>
<th>Presidential Regulation 47/2008</th>
<th>Commitment of BRR and NGOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Aceh</td>
<td>27,694</td>
<td>3,191</td>
<td>15,135</td>
<td>16,786</td>
<td>15,224</td>
<td>15,361</td>
<td>15,361</td>
</tr>
<tr>
<td>Southwest Aceh</td>
<td>21,341</td>
<td>2,849</td>
<td>1,600</td>
<td>1,760</td>
<td>1,733</td>
<td>1,693</td>
<td>1,693</td>
</tr>
<tr>
<td>Aceh Besar</td>
<td>58,894</td>
<td>6,780</td>
<td>20,024</td>
<td>32,182</td>
<td>27,031</td>
<td>27,262</td>
<td>28,611</td>
</tr>
<tr>
<td>Aceh Jaya</td>
<td>16,897</td>
<td>2,642</td>
<td>13,426</td>
<td>14,529</td>
<td>14,529</td>
<td>15,641</td>
<td>15,641</td>
</tr>
<tr>
<td>South Aceh</td>
<td>38,982</td>
<td>3,005</td>
<td>2,156</td>
<td>3,333</td>
<td>2,433</td>
<td>2,135</td>
<td>2,145</td>
</tr>
<tr>
<td>Aceh Singkil</td>
<td>30,291</td>
<td>2,804</td>
<td>3,205</td>
<td>3,548</td>
<td>3,389</td>
<td>2,952</td>
<td>3,066</td>
</tr>
<tr>
<td>East Aceh</td>
<td>66,350</td>
<td>2,426</td>
<td>1,255</td>
<td>1,409</td>
<td>1,257</td>
<td>1,300</td>
<td>1,478</td>
</tr>
<tr>
<td>North Aceh</td>
<td>97,172</td>
<td>8,414</td>
<td>6,089</td>
<td>4,894</td>
<td>3,299</td>
<td>5,902</td>
<td>6,115</td>
</tr>
<tr>
<td>Banda Aceh</td>
<td>38,228</td>
<td>20,448</td>
<td>17,286</td>
<td>22,664</td>
<td>17,953</td>
<td>18,790</td>
<td>19,810</td>
</tr>
<tr>
<td>Bireuen</td>
<td>69,683</td>
<td>5,319</td>
<td>6,193</td>
<td>12,638</td>
<td>8,371</td>
<td>8,684</td>
<td>9,054</td>
</tr>
<tr>
<td>Langsa</td>
<td>25,097</td>
<td>700</td>
<td>12</td>
<td>765</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lhokseumawe</td>
<td>27,199</td>
<td>2,147</td>
<td>3,131</td>
<td>1,458</td>
<td>1,277</td>
<td>1,232</td>
<td>1,384</td>
</tr>
<tr>
<td>Nagan Raya</td>
<td>25,592</td>
<td>2,500</td>
<td>4,391</td>
<td>3,327</td>
<td>3,086</td>
<td>3,588</td>
<td>3,725</td>
</tr>
<tr>
<td>Pidie</td>
<td>97,872</td>
<td>7,368</td>
<td>8,385</td>
<td>15,007</td>
<td>9,993</td>
<td>10,389</td>
<td>10,389</td>
</tr>
<tr>
<td>Sabang</td>
<td>5,978</td>
<td>947</td>
<td>231</td>
<td>560</td>
<td>539</td>
<td>611</td>
<td>611</td>
</tr>
<tr>
<td>Simeulue</td>
<td>12,421</td>
<td>1,863</td>
<td>8,467</td>
<td>4,621</td>
<td>4,621</td>
<td>5,641</td>
<td>6,829</td>
</tr>
<tr>
<td>Aceh Tamiang</td>
<td>-</td>
<td>1,000</td>
<td>-</td>
<td>200</td>
<td>-</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Gayo Lues</td>
<td>-</td>
<td>500</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>Bener Meriah</td>
<td>-</td>
<td>1,000</td>
<td>-</td>
<td>31</td>
<td>-</td>
<td>-</td>
<td>622</td>
</tr>
<tr>
<td>Central Aceh</td>
<td>-</td>
<td>2,000</td>
<td>-</td>
<td>23</td>
<td>-</td>
<td>-</td>
<td>85</td>
</tr>
<tr>
<td>Southeast Aceh</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>NAD</td>
<td>659,691</td>
<td>77,903</td>
<td>110,986</td>
<td>139,735</td>
<td>114,735</td>
<td>121,381</td>
<td>127,019</td>
</tr>
</tbody>
</table>
verifying victims who could receive aid and to impose order on violations in the giving or receiving of housing aid. Komvertib then formed the team for verification and order at the district/city level. It was headed by the local deputy police chief and members included BRR’s Head of District and representatives from the military, the district attorney’s office, Budget Authority Officer (Kuasa Pengguna Anggara, KPA) and local government of each district/city.

There were four categories of violations in the reception of housing aid: receiving more than one unit of housing aid or house renovation aid; receiving two or more types of aid – for example new housing aid as well as house renovation aid; receiving new housing aid or house renovation aid even though they were not eligible (not victims of the disaster), and imposing levies or fees on the aid receivers.

As much as possible, such violations were settled through amicable negotiations. But in cases where crime had apparently been committed, such as in cases of data or identity fraud, or extortion and forceful acts, matters were taken to the appropriate law enforcement agencies. Komvertib welcomed reports and conducted investigations in the field to obtain information on the occurrence of violations based on the categories mentioned. One of Komvertib’s actions in the cases of violations was to seal the houses in dispute pending resolution of the matter through negotiation or legal processes under existing law.
Table 5.2. Number of Violations and Solutions

<table>
<thead>
<tr>
<th>No.</th>
<th>Categories of Violations in Reception of Aid</th>
<th>Number of Cases Based on Reports</th>
<th>Number of Cases Discovered in the Field Outside of Reports</th>
<th>Total Cases</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Receiving more than one house</td>
<td>511</td>
<td>144</td>
<td>655</td>
<td>63</td>
</tr>
<tr>
<td>2</td>
<td>Receiving both a house and the fund for house renovation</td>
<td>70</td>
<td>11</td>
<td>81</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>Ineligible for aid but received aid</td>
<td>218</td>
<td>30</td>
<td>248</td>
<td>24</td>
</tr>
<tr>
<td>4</td>
<td>Taking levies or fees</td>
<td>43</td>
<td>5</td>
<td>48</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>842</td>
<td>190</td>
<td>1,032</td>
<td>100</td>
</tr>
</tbody>
</table>

In February 2009, the Deputy for Housing and Settlement submitted the data on 408 cases of reception of more than one house to the NAD Police. The data contained 408 names of people who had received more than one house, along with the addresses and the numbers of the houses obtained and the details of the case at point. There were a total of 1,042 housing units in dispute in those 408 cases. In some cases, certain individuals had received no fewer than eight houses, while most others received 2-4 units of houses, and some others were actually ineligible to be considered aid recipients.

Quantitatively, the houses that BRR built could be entirely identified from the contract of the 22 PIUs, that were involved in the house construction between the 2005 Fiscal Year and the 2008 Fiscal Year. The total number of houses completed, with the BRR PIUs as implementers of construction in Aceh during those four fiscal years, reached 41,883 units.

Many parties felt they had been misled several times by numbers issued and accused BRR of deceiving the public concerning the actual number of houses built. This was caused by the public’s inability to distinguish between BRR’s task as implementer of reconstruction and as coordinator.

As implementer of reconstruction, BRR formed the PIUs to build houses using the APBN funds (see on-budget column). But to avoid work overlap, BRR also conducted coordination of house construction in Aceh, which was being performed by NGOs or other donor institutions (see off-budget column). BRR never claimed those off-budget houses as houses BRR built, but the total for the APBN-funded and the non-APBN-funded housing represents the total of houses received by the Aceh people in the rehabilitation and reconstruction period of April 2005-April 2009.

The number of houses that NGOs and other institutions made commitments to make exceeded those achievements. Some of the houses are still in completion process and some are only on the initial stage of construction. Some NGOs will not complete their house construction until 2010.
Meanwhile, the PSD, or settlement infrastructure, in 595 villages in Aceh and Nias, was under the execution and coordination of the Directorate for Area and Settlement Infrastructure. The scope of work for both the APBN-funded and non-APBN-funded mechanisms included environmental sanitation, clean water provision, environmental drainage, environmental roads and access roads to and from the housing neighborhoods, village halls, greening or environmental landscaping, as well as retaining walls for landslide-risk areas.

Meanwhile, 97 percent of the channeling of aid for house renovation or rehabilitation was handled by BRR. This was done en masse by the PIU under the Deputy for Housing and Settlement with support from district offices and the Center for Regional Program and Project Control (Pusat Pengendalian Program dan Proyek, P4W), which greatly contributed to the achievements of the housing renovation and rehabilitation, amounting to 75 percent of the work.

Lessons Learned from the Field

All things began with one word. A similar thing can be said of BRR’s Housing and Settlement Sector. All BRR’s housing and settlement efforts started with the words “build Back better”. “Better” was not merely measured by number indicators or technical engineering, but also from how much and how wide the usefulness of the aid was toward society’s social and transformational change.

Building Local Strength

From the start, BRR had decided to realize a resourceful society. The involvement of the populace on community level was expected to give them the experience to take an active role in the process of rehabilitation and reconstruction – from planning, execution, to evaluation, and also the sustainability of the construction industry in the future, which is expected to occur in peace.

Such experiences are expected to provide a strong foundation. When the BRR completed its term, the acceleration, direction and strategies of development were expected to be in the hands of the local people themselves.

Table 5.3. Total Housing Aid in Aceh

<table>
<thead>
<tr>
<th>PSD type</th>
<th>State Budget (On-budget)</th>
<th>Non-State Budget (Off-budget)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconstruction</td>
<td>36,228</td>
<td>72,074</td>
<td>108,302</td>
</tr>
<tr>
<td>Relocation</td>
<td>5,012</td>
<td>4,096</td>
<td>9,108</td>
</tr>
<tr>
<td>Renters/BSBT</td>
<td>642</td>
<td>2,679</td>
<td>3,321</td>
</tr>
<tr>
<td>Total</td>
<td>41,883</td>
<td>78,849</td>
<td>120,732</td>
</tr>
</tbody>
</table>

Table 5.4. Achievements of PSD Infrastructure Provision Program Execution Funded from the State Budget (in village units)

<table>
<thead>
<tr>
<th>PSD type</th>
<th>FY 2006</th>
<th>FY 2007</th>
<th>FY 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Village Locations</td>
<td>164</td>
<td>210</td>
<td>227</td>
</tr>
<tr>
<td>Sanitation</td>
<td>10</td>
<td>40</td>
<td>89</td>
</tr>
<tr>
<td>Clean Water</td>
<td>51</td>
<td>65</td>
<td>135</td>
</tr>
<tr>
<td>Drainage</td>
<td>56</td>
<td>99</td>
<td>93</td>
</tr>
<tr>
<td>Environmental Roads</td>
<td>125</td>
<td>149</td>
<td>155</td>
</tr>
<tr>
<td>Village Halls</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Green areas</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Retaining Walls</td>
<td>6</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

Note: Total village locations are not the number of facilities built, because in one village, two or more facilities can be built.
Additionally, the usefulness, both in experience and in financial benefit, can be directly felt by the people of Aceh. Aceh’s business world is expected to grow and recover. Aside from that, a bigger cycle of funds is expected to eventually emerge within communities, increasing the strength of Aceh in the face of the usual jolts and upheavals of general socio-economic issues.

From this process, it is expected that the people of Aceh who feel that they have been involved in the post-disaster rehabilitation and reconstruction will take care of the results achieved in that process.

Therefore, the lessons learned from the experience of conducting rehabilitation and reconstruction are as follows. Once disaster strikes, the first and main step to be taken is to immediately make an inventory of capacity at the local level. It is true that the people in the disaster-stricken areas are victims that need to be helped and supported. But the survivors also have the power and the ability to rise to the surface to help their fellow citizens, and also to re-energize the wheels of effort toward post-disaster recovery. Aside from that, with consideration of the disaster scale, it may be that not all of the areas are totally damaged, thus some members of the society are in a resourceful condition and position.

The lessons learned from the rehabilitation and reconstruction experiences, particularly in the area of housing and settlement, have taught us that the people themselves know best about what is needed and the variables; the various ways, as well as aspects related to the post-disaster recovery. Inventory of the local capacity can be a starting point for post-disaster recovery that is timely, cost-effective and reaches the intended target. It can also bring benefits that can immediately be felt by the local communities concerned.

The inventory of the local capacity can be followed by the establishment of work skills and practices training or education centers that can teach the local human resources urgent necessities in the post-disaster period, such as home building skills, as well as how to build settlement-supporting infrastructure.
A routine meeting among staff members of BRR’s Deputy for Housing and Settlement and beneficiaries in Calang, Aceh Jaya District. Forums such as this one were effective in handling complaints and identifying their solutions, May 8, 2007. Photo: BRR/Arif Ariadi

This can be done by collaborating with donor institutions, such as the International Labor Organization (ILO). In this way, we can expect capacities to occur and to be inventoried at the local level and enhanced to reach a certain minimum standard.

Siding with the local capacity is not free from risks. The experience of recruiting local contractor partners presented its own challenges. But the benefit gained from this process is far greater than any risk. The sweet result from the people’s direct involvement in the process of rebuilding to become better is what Aceh society can enjoy together later.

Building local strength, especially in the case of contractors, involved the improvement of processes, particularly from the point of view of administrative channels. When Aceh was flooded with waves of humanitarian workers from all over the world in staggering numbers, BRR formed the Integrated Team (Tim Terpadu) to create a leaner bureaucracy so that many processes could occur more smoothly—from visa issuance, to the procurement of other necessary documents, including residence permits. The Tim Terpadu approach can also be implemented to facilitate administrative channel processes for the use of local contractors. Additionally, selection mechanisms and criteria are best implemented in layers so that the contractor evaluating team doesn’t have to interview thousands of individual contractors.
Taking the side of developing local potentials doesn’t mean marginalizing the strength, experience, skills or expertise coming from outside the disaster-stricken region. To result in optimum synergy, the local, sovereign strength should be combined with support from the outside. This can be done through creativity and innovation, for instance by implementing an incentive system for local contractors who employ experts from outside Aceh. This way, we can expect the process of the meeting and melding of different cultures and ethnic backgrounds—all of them positioned in the framework of rehabilitation and reconstruction with local strength as the main controller.

Besides that, BRR’s experience specifically shows that the involvement of government officials at the lowest levels -- villages and sub-districts -- is inevitable in the process of rehabilitation and reconstruction, particularly in the housing and settlement sector.

From experience, institutions such as KP4D or BKM do not need to be present in every village. The forming of those institutions should be entirely up to the local residents. Already existing institutions can be assigned to support the rehabilitation and reconstruction process. The most important factor in relation to these institutions is who is the responsible person.

The main task of officials or institutions at the village level is to help along the process of collecting the data of candidates for aid, and monitoring the execution of the house construction. In the initial phase, the communication and presentation of the format is done by a representative of BRR so that the data collected is standardized.

The information needed in this data collection is primarily the names of the heads of the families or heirs to the candidates for the aid, the names of surviving family members (to avoid multiple reception of aid in that particular family), and the type of aid needed (rehabilitation, reconstruction or relocation), as well as data on the parties that have promised aid, or stated that they could give the aid. The list also includes review data, rechecking and recapitulation. Additionally, a simple, sketched map of the locations of the houses to be built (community land mapping or community house plotting) needs to be made.

The next task for the village-level institutions is to conduct monitoring of the execution of the house constructions so that it is clear at any time how many house have been completed and inhabited, and if there were any problems in the construction. All the data and information gathered at the village level are reported to the sub-district level institutions. Meanwhile, a forum is formed at the sub-district level consisting of representatives of BRR, sub-district government officials, village heads or heads of village institutions, representatives of NGOs and representatives of work units or commitment-making officials. The meetings are held regularly and routinely. At the beginning, they should be held once a week, but once the rehabilitation and reconstruction process runs well, the subsequent meetings can be held every other week or whenever needed.
At the district/city level, a similar forum needs to be formed with less intensive meetings, involving the regent or district officials. Essentially, the institution should be decentralized, but have centralized and integrated directions.

**Gathering External Support**

The Aceh rehabilitation and reconstruction was an eye-opening experience; it was amazing to see and realize the massive extent of the wave of support, attention, assistance and aid coming from various institutions and countries around the world. It was all appreciated and warmly welcomed by the people of Indonesia, especially those living in the post-disaster region.

One of the main lessons learned from the experience of conducting post-disaster housing and settlement rehabilitation and reconstruction is that the various institutions that came to the disaster-stricken region had different levels of capacity and competency. Some had more experience and wider expertise for post-disaster rehabilitation and reconstruction than others. This awareness should be arrived at and taken into consideration from the outset of the rehabilitation and reconstruction program carried out with the various partners in the recovery process. BRR’s experience as coordinator of aid from international, national and local institutions showed the need to inventory the different capacities.

Similar to the argument on previous lessons learned, the potentials of the institutions that gave support to the rehabilitation and reconstruction process needed to be inventoried and taken advantage of as much as possible. This can be done by quickly studying the expertise and competency they bring, and testing them out on the ground on a limited basis, for instance through a pilot project. Results of the lessons learned from the tryout would then be shared widely among the various institutions involved.

Here, the role of a coordinating agency is important, even crucial. The coordinating agency should also continue its roles of replication and multiplication of the best capacities possessed by the highly experienced and highly competent institutions.

In that manner, we expect to have various inter-institution capacities that can be made to reach a certain minimum standard. The choice to rebuild to become better can be accurately done by taking as much as possible advantage of the support from various international, national and local partners.

**Understanding Every Region’s Uniqueness**

Rehabilitation and reconstruction in a post-disaster region, especially for housing and settlement, call for a swift manner in responding to the public needs. BRR’s experience indicates that it is vital to position a coordinating and implementing agency right at the disaster area instead of controlling it from a distance.
In the context of Indonesia, this is the first time an ad hoc agency of the same level as a cabinet ministry has been placed outside the nation’s capital. That step was taken even further by forming several local BRR offices in expansive implementation of the regionalized approach.

Reality has shown us that the many variables both in the societal aspects and the physical conditions in the field will not respond well to just one or two types of approaches.

Whatever the approaches, methods, techniques or alternatives offered, all of them must come in part from a comprehensive and deep understanding of the unique conditions in each region. BRR was able to study this phenomenon up close by establishing a representative office in Nias that was focused in its effort to respond to the aspirations, needs and demands of the local community.

The ability to capture the unique condition of each region would be valuable especially in the effort to build strength of the local community. If this could be followed by creativity and innovation even at the planning phase, then we could come up with five or six or even more approaches that could be suitable to the various needs of the community.
BRR’s experience in conducting housing and settlement rehabilitation and reconstruction indicate two core approaches in building and rehabilitating houses: the “top down” method that was quick but not participatory, and the “top down” method that was community-based but required longer time. If the ability to capture the unique conditions in the field is combined with flexibility and creative power as well as imagination, appropriate approaches for different regions can be achieved.

**Identifying the Beneficiaries**

The data verification of the candidates for housing aid is the first important phase that determines the effectiveness and efficiency of the next stages. From experience, many problems, both technical and non-technical, appeared as a result of inaccurate data verification.

Different from the emergency response period that needed only data on the number of survivors (for the purpose of distributing food, clothes, blankets, etc.), the housing rehabilitation and reconstruction required data on the number of families. The data collecting on the number of families along with their ownership status of the houses and the residential locations prior to disaster must be done as early as possible, i.e. during the emergency response period. During this period, the data survey is done through registration and verification; this can be continued into the rehabilitation-reconstruction period. This was often overlooked since the emergency response period was more focused on the distribution of life saving supplies.

Since it would take a long time to collect data on survivors of such a massive disaster as the one that struck Aceh and Nias, it was imperative to determine and announce first hand, during the emergency response period, the names of the villages struck by the disaster so they could be defined as “disaster villages” and become target sites for rehabilitation and reconstruction. Aid cannot be given to people who, at the time of the disaster, were not residents of the disaster villages.

Aside from that, one of the principles of data base management is the need for a single identity for each beneficiary candidate. In other words, each beneficiary candidate is given a registration number that reflects, among other things, the location where they resided at the time of the disaster. Some data attributes are also entered into the database, such as full name, date of birth, name of mother, name of father, sex, address or village of residence at the time of the disaster, as well as the classification of aid (rehabilitation, reconstruction, relocation, or renter). The data management, from the beginning, had to involve entering the information collected into a computer database in a centralized manner, both for aid directly conducted by BRR and aid given through NGOs.

Additionally, during the data collecting process, the deadlines for the data collection process had to be widely announced through the media. After the data collecting was officially finished, there was no more opportunity for additional beneficiaries to register.
Figure 5.1. Concept of Work Organization with Local Governments

The data that was finalized in the form of a permanent aid beneficiary list (Daftar Penerima Bantuan Tetap, DPBT), then had to be distributed to the local authorities, from the village level to the district/city level. The list would subsequently be a guide for all parties in giving aid.

BRR’s experience showed that the definition of beneficiaries -- their identification and verification -- was one of the key points in the success of the housing and settlement rehabilitation and reconstruction. If this is done effectively and efficiently, the flow of survivors moving from tents to temporary houses and ultimately into the permanent houses will go much more smoothly.

For the handling of survivors in their temporary residences, for instance, the list of beneficiaries should contain everyone who lives in barracks along with their backgrounds. All of this must be put into a computer database, so that the filing system is no longer just manual. Next, the data becomes registered data and verified in order to select who is eligible; who are and who are not tsunami victims.

The allocation of aid will be far more effective and reach its intended targets if the actual victims are known. This will allow relief to reach those who live in barracks. They will also know that they have been allocated some aid so that they can concentrate on  

Consolidated data collecting of beneficiaries at the village level

- Collecting the data on candidate beneficiaries, involving village officials
- Standardizing formats to be filled for the village level, assisted by facilitators and sub-district officers
- After the data is collected, the next task is to monitor the execution so that we can always know how many houses are already built by whom, whether already inhabited, how many not yet built, what obstacles existed, etc.
- Informing on issues in written form (format has been determined) and at the sub-district level forum

Coordination of executors on the ground centralized at district level

- Positioning the sub-district as focal point on coordination in the field.
- All facilitators from various reconstruction/rehabilitation activities are coordinated at the sub-district level.
- Holding routine meeting forums at the sub-district level, chaired by BRR’s representative, attended by the Sub-District Head, and all representatives from on-budget/task force, and off-budget/NGOs.
- Problems that cannot be solved at the local level should be brought to a higher forum (district/city).
their next agenda, such as looking for work, finding schools for their children; also they will no longer have to think about their lost homes because they know that new homes are being built.

If a process of regrouping, or transfer of people from one barrack to a bigger barrack, occurs, those who no longer wish to live in barracks should be listed and entered into a ledger for future purposes.

**Regarding the Operations’ Conception and Organization**

The structure of the organizations or institutions that handle reconstruction in a region massively and extensively damaged by a disaster, such as Aceh and Nias, should include the placement of the unit that handles housing and settlement into a central position. The definition of a central position here is that other areas or sectors, such as infrastructure, education, health, economic aid and economic infrastructure rehabilitation, as well as socio-cultural and women's affairs, need to be well-coordinated with the housing and settlement sector.

The housing and settlement sector is basically a sector covering a basic need, which is also classified as a private possession for survivors. Therefore, development in this sector is very much needed and becomes the foundation for every family that falls victim to a disaster to recover and go back to their normal lives.

Different from other sectors, the housing sector needs a quite long transition, from the tents to barracks to new, temporary shelters to more permanent homes. The survivors have an immediate need for a roof over their heads so they can go on doing their daily activities. However, building permanent homes takes a long time.

After the houses are built and the survivors reside in them, they need the supporting infrastructure and facilities normally found in a settlement area, such as access roads, clean water, good sanitation, electricity, schools, clinics and markets. Economic aid and business should also be focused in the reconstruction and relocation areas where the survivors are concentrated.
Closing Reflection

On the 34th anniversary of the State Company for National Housing (Perumahan Nasional, Perumnas), in 2008, the company’s President Director proudly announced that throughout its 34 years, Perumnas had built 500,000 houses or 14,700 houses on average a year, or 58,800 every four years. On another extreme, a young architect, who was trying to apply his knowledge in building the house of a senior manager, had to surrender in frustration because he deemed that the senior manager was asking too much. In fact, the manager was merely elaborating on what he wanted so that his house would be more suitable to his needs compared to the rented house he had been living in previously.

A home is a personal thing. After clothes, a home is a person’s next protective skin. A home is a symbol for a human being’s existence, it is also an acknowledgement of a person’s independence and reflects the attitude he wants to bring up in his interaction with his neighbors. The number of homes built by Perumnas, the professional home-building organization, reflects an assumption of how many times this intimate dialog has taken place.

Compare this process to that of reconstructing homes in Aceh and Nias. Multiply Perumnas’ achievement of homes twice over. Building 140,304 homes in Aceh and Nias in a post-conflict and post-disaster situation was certainly not easy. The optimism for it went up and down as time progressed and events occurred; What was initially spur of the moment began to take on patterns and substance. For most of the participants -- both the beneficiaries and other parties with interests -- the combination of factors that impeded the housing reconstruction and rehabilitation program were new. Even if some of them had experience, it was not enough to prepare them for the challenges they faced. The challenges came in the scale of the problems or the scope of the issues. It takes courage to start something that will most probably become a breakthrough because the baseline condition is far more inadequate compared to a normal situation.

Would there be another approach taken if similar events and conditions took place again? For those recruited or with the calling to tackle similar problems, wherever they occur, this book will hopefully be useful as a reference on what has been done and what results have been achieved. Some lessons learned have been written here, but the real lessons can only be discovered in the field, in the real contexts.

Maybe what the residents of the Simeuleu islands say about the Acehnese living on the mainland can be something to reflect on: “We are still learning from the tsunami that occurred a hundred years ago, we preserve the lesson in fairy tales and in our behavior. Our yell “smong” that we shout out at the advent of very low tides is the result of that lesson. Hearing it, the people will run to the hills, keeping the number of casualties low. We hope our fellow Acehnese people can learn a lesson from this event for future generations.”

Hopefully all participants in the reconstruction and rehabilitation programs have learned and will continue to learn from the analyses, policies and actions experienced, whether they were successful or still need improvement for application elsewhere in time of need.
# Glossary of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Indonesian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADB</td>
<td>Bank Pembangunan Asia</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>AIPRD</td>
<td>Kemitraan Australia-Indonesia untuk Rekonstruksi dan Pembangunan</td>
<td>Australia-Indonesia Partnership for Reconstruction and Development</td>
</tr>
<tr>
<td>AKA</td>
<td>Asosiasi Kontraktor Aceh</td>
<td>Aceh Contractors Association</td>
</tr>
<tr>
<td>APBN</td>
<td>Anggaran Pendapatan dan Belanja Negara</td>
<td>Government of Indonesia’s National Annual Budget</td>
</tr>
<tr>
<td>ARC</td>
<td>Palang Merah Amerika</td>
<td>American Red Cross</td>
</tr>
<tr>
<td>Asperkim</td>
<td>Asisten Bidang Perumahan dan Pemukiman</td>
<td>Assistant for Housing and Settlement Area</td>
</tr>
<tr>
<td>AusAID</td>
<td>Badan Australia untuk Pembangunan Internasional</td>
<td>Australian Agency for International Development</td>
</tr>
<tr>
<td>Bakosurtanal</td>
<td>Badan Koordinasi Survei dan Pemetaan Nasional</td>
<td>Indonesia’s National Coordinating Agency for Survey and Mapping</td>
</tr>
<tr>
<td>BDL</td>
<td>Bantuan Dana Lingkungan</td>
<td>Environmental Fund</td>
</tr>
<tr>
<td>BDR</td>
<td>Bantuan Dana Rumah</td>
<td>Housing Fund</td>
</tr>
<tr>
<td>BKM</td>
<td>Badan Keswadayaan Masyarakat</td>
<td>Community Self-reliance Board</td>
</tr>
<tr>
<td>BLM</td>
<td>Bantuan Langsung Masyarakat</td>
<td>Direct Community Assistance</td>
</tr>
<tr>
<td>BLOM</td>
<td>Perusahaan Pemetaan asal Norwegia</td>
<td>Norwegian Company-Provider of Products and Services within the Maritime and Land based Mapping Industry</td>
</tr>
<tr>
<td>BMG</td>
<td>Badan Meteorologi dan Geofisika</td>
<td>Meteorology and Geophysics Agency</td>
</tr>
<tr>
<td>BPDE</td>
<td>Badan Pengelola Data Elektronik</td>
<td>National Agency for Electronic Data Management</td>
</tr>
<tr>
<td>BPN</td>
<td>Badan Pertanahan Nasional</td>
<td>National Land Agency</td>
</tr>
<tr>
<td>BPPK</td>
<td>Bantuan Perumahan dan Permukiman Kembali</td>
<td>Housing and Resettlement Assistance</td>
</tr>
<tr>
<td>BPR</td>
<td>Bank Perkreditan Rakyat</td>
<td>People’s Credit Bank; An Indonesian bank</td>
</tr>
<tr>
<td>BPRB</td>
<td>Bantuan Pembangunan Rumah Baru</td>
<td>Allowance to build new houses</td>
</tr>
<tr>
<td>BRR</td>
<td>Badan Rehabilitasi dan Rekonstruksi Wilayah dan Kehidupan Masyarakat Provinsi Nanggroe Aceh Darussalam dan Kepulauan Nias Provinsi Sumatera Utara</td>
<td>Agency for the Rehabilitation and Reconstruction of the Regions and Community of Nanggroe Aceh Darussalam and the Nias Island of the Province of North Sumatra</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Indonesian</td>
<td>English</td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>BSBT</td>
<td>Bantuan Sosial Bertempat Tinggal</td>
<td>Social Assistance for Settlement</td>
</tr>
<tr>
<td>BSPR</td>
<td>Bantuan Sosial Perbaikan Rumah</td>
<td>Social Assistance for House Repairment</td>
</tr>
<tr>
<td>CAP</td>
<td>Rencana Aksi Masyarakat</td>
<td>Community Action Plan</td>
</tr>
<tr>
<td>CCF</td>
<td>LSM yang bergerak dalam bidang perlindungan anak</td>
<td>Christian Children Fund</td>
</tr>
<tr>
<td>CDA</td>
<td>Pendaftaran tanah berbasis masyarakat</td>
<td>Community-Driven Adjudication</td>
</tr>
<tr>
<td>CHF Internasional</td>
<td>LSM Internasional yang Memberikan Dukungan Perbaikan Penghasilan di dalam Masyarakat Berpenghasilan Rendah</td>
<td>Community Habitat Finance</td>
</tr>
<tr>
<td>CRC</td>
<td>Palang Merah Kanada</td>
<td>Canadian Red Cross</td>
</tr>
<tr>
<td>CRS</td>
<td>Catholic Relief Services; Nama sebuah LSM</td>
<td>Catholic Relief Services</td>
</tr>
<tr>
<td>Danramil</td>
<td>Komandan Rayon Militer</td>
<td>Sub-District Military Commander</td>
</tr>
<tr>
<td>DED</td>
<td>Rancangan Teknis Rinci</td>
<td>Detail Engineering Design</td>
</tr>
<tr>
<td>Dinsos</td>
<td>Dinas Sosial</td>
<td>Social Affairs Office; Usually of a province/district</td>
</tr>
<tr>
<td>DIPA</td>
<td>Daftar Isian Pelaksanaan Anggaran</td>
<td>Issuance of Spending Authority</td>
</tr>
<tr>
<td>Ditjen</td>
<td>Direktorat Jenderal</td>
<td>Directorate General</td>
</tr>
<tr>
<td>DMC</td>
<td>Konsultan Manajemen Kabupaten</td>
<td>District Management Consultant</td>
</tr>
<tr>
<td>DPBT</td>
<td>Daftar Penerima Bantuan Tetap</td>
<td>List of Beneficiaries</td>
</tr>
<tr>
<td>ESRI-Shp.</td>
<td>Environmental System Research Institute-Shapefile, File Data dari Program ArcView GIS</td>
<td>Environmental System Research Institute-Shapefile, Data File from ArcView GIS Program</td>
</tr>
<tr>
<td>ETESP</td>
<td>Proyek Sektor Bantuan Darurat Gempa Bumi dan Tsunami yang dibayar oleh Bank Pembangunan Asia (ADB)</td>
<td>Earthquake and Tsunami Emergency Sector Project funded by Asian Development Bank (ADB)</td>
</tr>
<tr>
<td>Fascam</td>
<td>Fasilitator Kecamatan</td>
<td>Sub-district Facilitator</td>
</tr>
<tr>
<td>Fasrum</td>
<td>Fasilitator Perumahan</td>
<td>Housing Facilitator</td>
</tr>
<tr>
<td>Forak</td>
<td>Forum Komunikasi Antarbarak</td>
<td>Inter-barracks Communication Forum</td>
</tr>
<tr>
<td>GAA</td>
<td>German Agro Action-LSM</td>
<td>German Agro Action-NGO</td>
</tr>
<tr>
<td>GIS</td>
<td>Sistem Informasi Geospasial</td>
<td>Geospatial Information System</td>
</tr>
<tr>
<td>GITEC</td>
<td>Dewan Eksekutif Teknologi Informasi Pemerintah (Jerman)</td>
<td>Government Information Technology Executive Council</td>
</tr>
<tr>
<td>GPS</td>
<td>Sistem navigasi satelit</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>ha</td>
<td>hektare</td>
<td>hectare</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Indonesian</td>
<td>English</td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>IFRC</td>
<td>Federasi Palang Merah Internasional dan Komunitas Bulan Sabit Merah</td>
<td>International Federation of Red Cross and Red Crescent Societies</td>
</tr>
<tr>
<td>ILO</td>
<td>Organisasi Buruh Internasional</td>
<td>International Labour Organization</td>
</tr>
<tr>
<td>IMB</td>
<td>Izin Mendirikan Bangunan</td>
<td>Building Permit</td>
</tr>
<tr>
<td>IOM</td>
<td>Organisasi Internasional untuk Migrasi Penduduk</td>
<td>Internal Organization for Migration</td>
</tr>
<tr>
<td>jadup</td>
<td>Jatah Hidup</td>
<td>Living Allowance</td>
</tr>
<tr>
<td>JFPR-SUHA</td>
<td>Dana Jepang untuk Pengentasan Kemiskinan-Perumahan Tahan Gempa di Aceh dan Sumatera Utara</td>
<td>Japan Fund for Poverty Reduction-Seismically Upgraded Housing in Aceh Darussalam and North Sumatra</td>
</tr>
<tr>
<td>JICA</td>
<td>Badan Kerja Sama Internasional Jepang</td>
<td>Japan International Cooperation Agency</td>
</tr>
<tr>
<td></td>
<td>Badan Jepang mengenai Sistem Kerja Sama Internasional</td>
<td>Japan International Cooperation System</td>
</tr>
<tr>
<td>JLT</td>
<td>Sertifikat Kepemilikan Tanah Bersama</td>
<td>Joint Land Titling</td>
</tr>
<tr>
<td>Kades</td>
<td>Kepala Desa</td>
<td>Head of Village</td>
</tr>
<tr>
<td>KAP</td>
<td>Rencana Aksi Kecamatan</td>
<td>Kecamatan Action Plan</td>
</tr>
<tr>
<td>Kapolsek</td>
<td>Kepala Polisi Sektor</td>
<td>Sectoral Police Chief</td>
</tr>
<tr>
<td>Kasatker</td>
<td>Kepala Satuan Kerja</td>
<td>Head of Project Implementing Unit</td>
</tr>
<tr>
<td>Keppres</td>
<td>Keputusan Presiden</td>
<td>Presidential Decree</td>
</tr>
<tr>
<td>Kerap</td>
<td>Komite Rehabilitas/Rekonstruksi Perumukiman</td>
<td>Rehabilitation and Reconstruction Committee</td>
</tr>
<tr>
<td>Kfw</td>
<td>Kreditanstalt fur Wrederaubau adalah Bank Pembangunan Jerman yang berperan sebagai pengelola dana atas nama pemerintah Jerman.</td>
<td>Kreditanstalt fur Wrederaubau is a German Development Bank acting as the funding management manager on behalf of German Government.</td>
</tr>
<tr>
<td>KK</td>
<td>kepala keluarga</td>
<td>head of family, family unit</td>
</tr>
<tr>
<td>km</td>
<td>kilometer</td>
<td>kilometer</td>
</tr>
<tr>
<td>Komvertib</td>
<td>Komite Verifikasi dan Penertiban Perumahan</td>
<td>Committee for Verification and Closure of Housing</td>
</tr>
<tr>
<td>Koramil</td>
<td>Komando Rayon Militer</td>
<td>Sub-District Military Command</td>
</tr>
<tr>
<td>Korwil</td>
<td>Koordinator Wilayah</td>
<td>Regional Coordinator</td>
</tr>
<tr>
<td>KP</td>
<td>Kelompok Pemukim</td>
<td>Community Group</td>
</tr>
<tr>
<td>KP4D</td>
<td>Komite Percepatan Pembangunan Perumahan dan Permukiman Desa</td>
<td>The Village Committee for Housing and Settlement Development Acceleration</td>
</tr>
<tr>
<td>KPA</td>
<td>Kuasa Pengguna Anggaran</td>
<td>Budget Authority Officer</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Indonesian</td>
<td>English</td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>KPPN-K</td>
<td>Kantor Pelayanan dan Perbendaharaan Negara-Khusus</td>
<td>Special Office for State Services and Treasury</td>
</tr>
<tr>
<td>KPR</td>
<td>Kredit Pemilikan Rumah</td>
<td>Housing Loan</td>
</tr>
<tr>
<td>KSF-AP</td>
<td>Kerangka Tata Ruang dan Rencana Aksi Kecamatan</td>
<td>Kecamatan Spatial Framework and Action Plan</td>
</tr>
<tr>
<td>Logica</td>
<td>Pemerintahan Lokal dan Infrastruktur untuk Masyarakat di Aceh</td>
<td>Local Governance and Infrastructure for Communities in Aceh</td>
</tr>
<tr>
<td>LSM</td>
<td>Lembaga Swadaya Masyarakat</td>
<td>Non-Governmental Organization (NGO)</td>
</tr>
<tr>
<td>m2</td>
<td>meter persegi</td>
<td>meter square</td>
</tr>
<tr>
<td>MDF</td>
<td>Dana Multi Donor</td>
<td>Multi Donor Fund</td>
</tr>
<tr>
<td>MK1-BRR</td>
<td>Manajemen Konstruksi dan Rancang-Bangun BRR</td>
<td>Construction and Building Design Management BRR</td>
</tr>
<tr>
<td>Muspika</td>
<td>Musyawarah Pimpinan Kecamatan</td>
<td>The Meeting of Subdistrict Heads</td>
</tr>
<tr>
<td>Musrenbangda</td>
<td>Musyawarah Perencanaan Pembangunan Daerah</td>
<td>Meeting on Regional Development Planning</td>
</tr>
<tr>
<td>NAD</td>
<td>Provinsi Nanggroe Aceh Darussalam</td>
<td>Nanggroe Aceh Darussalam Province</td>
</tr>
<tr>
<td>NGO</td>
<td>Organisasi nonpemerintah/ Lembaga Swadaya Masyarakat (LSM)</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>NPTGA</td>
<td>Bantuan Dana Hibah Jenis Nonproyek</td>
<td>Non Project Type Grant Aid</td>
</tr>
<tr>
<td>P2KP</td>
<td>Proyek Penangulangan Kemiskinan Perkotaan</td>
<td>Poorness Overcoming Project in Urban</td>
</tr>
<tr>
<td>P3</td>
<td>(Direktorat) Prakarsa Pembangunan Partisipatif</td>
<td>Participatory Development Initiative</td>
</tr>
<tr>
<td>P3B-Bappenas</td>
<td>Perencanaan Daerah Yang Berorientasi Penanggulangan Kemiskinan-Badan Perencanaan dan Pembangunan Nasional</td>
<td>Pro-Poor Planning and Budgeting Program-National Development Planning Agency</td>
</tr>
<tr>
<td>P4W</td>
<td>Pusat Pengendalian Program dan Proyek Wilayah</td>
<td>Center of Regional Program and Project Controlling</td>
</tr>
<tr>
<td>PBB</td>
<td>Perserikatan Bangsa-Bangsa</td>
<td>United Nations (UN)</td>
</tr>
<tr>
<td>PCN</td>
<td>Nota Konsep Proyek</td>
<td>Project Concept Note</td>
</tr>
<tr>
<td>Pemda</td>
<td>Pemerintah Daerah</td>
<td>Regional Government</td>
</tr>
<tr>
<td>Perkapabel</td>
<td>Peraturan Kepala Badan Pelaksana</td>
<td>Head of the Executing Agency Regulation</td>
</tr>
<tr>
<td>Perppu</td>
<td>Peraturan Pengganti Undang-Undang</td>
<td>Government Regulation in Lieu of Legislation</td>
</tr>
<tr>
<td>Perpres</td>
<td>Peraturan Presiden</td>
<td>Presidential Regulation</td>
</tr>
<tr>
<td>PHLN</td>
<td>Pinjaman/Hibah Luar Negeri</td>
<td>Foreign Soft Loans/Grant</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Indonesian</td>
<td>English</td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>PIU</td>
<td>Unit Pelaksana Proyek</td>
<td>Project Implementation Unit</td>
</tr>
<tr>
<td>Pj.</td>
<td>Penjabat</td>
<td>Acting Officer</td>
</tr>
<tr>
<td>PJOK</td>
<td>Penanggung Jawab Operasional Kegiatan</td>
<td>Operational Activity Coordinator</td>
</tr>
<tr>
<td>PL</td>
<td>Penunjukan Langsung</td>
<td>Direct Assignment</td>
</tr>
<tr>
<td>PLP</td>
<td>Pusat Layanan Pengadaan</td>
<td>Procurement Center</td>
</tr>
<tr>
<td>PMC</td>
<td>Konsultan Manajemen Provinsi</td>
<td>Province Management Consultant</td>
</tr>
<tr>
<td>PMI</td>
<td>Palang Merah Indonesia</td>
<td>Indonesian Red Cross</td>
</tr>
<tr>
<td>PMU</td>
<td>Unit Manajemen Proyek</td>
<td>Project Management Unit</td>
</tr>
<tr>
<td>PPAT</td>
<td>Pejabat Pembuat Akta Tanah</td>
<td>Land Deed Official</td>
</tr>
<tr>
<td>PPK</td>
<td>Pejabat Pembuat Komitmen</td>
<td>Contract Preparation Officer</td>
</tr>
<tr>
<td>PPT</td>
<td>Panitia Pengadaan Tanah</td>
<td>Land Acquisition Committee</td>
</tr>
<tr>
<td>PQ</td>
<td>prakualifikasi</td>
<td>pre-qualification</td>
</tr>
<tr>
<td>PSD</td>
<td>Prasarana dan Sarana Dasar</td>
<td>Basic Infrastructure and Facilities</td>
</tr>
<tr>
<td>PU</td>
<td>Pekerjaan Umum</td>
<td>Public Works</td>
</tr>
<tr>
<td>Pusdatin</td>
<td>Pusat Data dan Informasi</td>
<td>Center for Data and Information</td>
</tr>
<tr>
<td>Pustu</td>
<td>Puskesmas Pembantu</td>
<td>Auxiliary Community Health Post</td>
</tr>
<tr>
<td>RALAS</td>
<td>Sistem Administrasi Rekonstruksi Pertanahan Aceh</td>
<td>Reconstruction of the Aceh Land Administration System</td>
</tr>
<tr>
<td>RC</td>
<td>Palang Merah</td>
<td>Red Cross</td>
</tr>
<tr>
<td>RDTR</td>
<td>Revision of the Spatial Planning Detail</td>
<td>Revisi Rencana Detail Tata Ruang</td>
</tr>
<tr>
<td>ReKompak</td>
<td>Rehabilitasi dan Rekonstruksi Permukiman Berbasis Komunitas</td>
<td>Community-based Rehabilitation and Reconstruction of Settlements</td>
</tr>
<tr>
<td>RM</td>
<td>Rupiah Murni</td>
<td>Pure national budget, excluding foreign loan/grant</td>
</tr>
<tr>
<td>Rp</td>
<td>Rupiah</td>
<td>Rupiah (Indonesian currency)</td>
</tr>
<tr>
<td>RRHS</td>
<td>Rehabilitasi dan Rekonstruksi Perumahan dan Permukiman di Aceh</td>
<td>Rehabilitation And Reconstruction Of Housing And Settlement in Aceh</td>
</tr>
<tr>
<td>RTRW</td>
<td>Rencana Tata Ruang Wilayah</td>
<td>The Standardized Nomenclature of Spatial Plans in Indonesia</td>
</tr>
<tr>
<td>Satker</td>
<td>Satuan Kerja</td>
<td>Project Implementing Unit</td>
</tr>
<tr>
<td>Satkorlak</td>
<td>Satuan Koordinasi Pelaksana Penanggulangan Bencana dan Penanganan Pengungsi</td>
<td>Unit for Coordinating Implementers of Disaster and Displaced Persons Management</td>
</tr>
<tr>
<td>SBY</td>
<td>Susilo Bambang Yudhoyono; Presiden keenam Republik Indonesia</td>
<td>Susilo Bambang Yudhoyono; The 6th president of Republic of Indonesia</td>
</tr>
<tr>
<td>SCC</td>
<td>Saudi Charity Campaign-LSM</td>
<td>Saudi Charity Campaign-NGO</td>
</tr>
<tr>
<td>SD</td>
<td>Sekolah Dasar</td>
<td>Elementary School</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Indonesian</td>
<td>English</td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>SDM</td>
<td>Sumber Daya Manusia</td>
<td>Human Resources</td>
</tr>
<tr>
<td>SMP</td>
<td>Sekolah Menengah Pertama</td>
<td>Junior High School</td>
</tr>
<tr>
<td>STL</td>
<td>Pemimpin Sub-tim</td>
<td>Sub Team Leader</td>
</tr>
<tr>
<td>TA</td>
<td>Tahun Anggaran</td>
<td>Fiscal Year</td>
</tr>
<tr>
<td>TNI</td>
<td>Tentara Nasional Indonesia</td>
<td>Indonesian National Army</td>
</tr>
<tr>
<td>TPI</td>
<td>Tempat Pelelangan Ikan</td>
<td>Fish Auction Market</td>
</tr>
<tr>
<td>TPK</td>
<td>Tim Pengelola Kegiatan</td>
<td>Activities Management Team</td>
</tr>
<tr>
<td>UKL/UPL</td>
<td>Usaha Pengelolaan Lingkungan/Usaha Pengendalian Lingkungan</td>
<td>Environmental Management Effort/Environmental Management Control</td>
</tr>
<tr>
<td>UMCOR</td>
<td>United Methodist Committee on Relief; Nama sebuah LSM</td>
<td>United Methodist Committee on Relief; Name of an NGO</td>
</tr>
<tr>
<td>UNDP</td>
<td>Program Pembangunan Perserikatan Bangsa-Bangsa</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UNEP</td>
<td>Program Lingkungan Perserikatan Bangsa-Bangsa</td>
<td>United Nations Environmental Program</td>
</tr>
<tr>
<td>UNIMS/HIC</td>
<td>UN Information Management Service/Humanitarian Information Centre</td>
<td>Badan PBB untuk Layanan Manajemen Informasi/ Pusat Informasi Kemanusiaan</td>
</tr>
<tr>
<td>UNORC</td>
<td>Badan Perserikatan Bangsa-Bangsa Koordinator Pemulihan khusus untuk Aceh dan Nias</td>
<td>United Nations Office of the Recovery Coordinator for Aceh and Nias</td>
</tr>
<tr>
<td>US$</td>
<td>Dollar Amerika Serikat</td>
<td>American Dollars</td>
</tr>
<tr>
<td>USAID</td>
<td>Badan Amerika Serikat untuk Pembangunan Internasional</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>UU</td>
<td>Undang-Undang</td>
<td>Law</td>
</tr>
<tr>
<td>WB</td>
<td>Bank Dunia</td>
<td>World Bank</td>
</tr>
<tr>
<td>WFP</td>
<td>Badan Pangan Dunia</td>
<td>World Food Programme</td>
</tr>
<tr>
<td>WIB</td>
<td>Waktu Indonesia Barat</td>
<td>Western Indonesia Time</td>
</tr>
<tr>
<td>WVI</td>
<td>World Vision Indonesia; Nama sebuah LSM</td>
<td>World Vision Indonesia; Name of an NGO</td>
</tr>
<tr>
<td>YIPD</td>
<td>Yayasan Inovasi Pemerintahan Daerah</td>
<td>Center for Local Government Innovation</td>
</tr>
</tbody>
</table>