REKOMPAK

Rebuilding Indonesia's Communities After Disasters

Published by:
The Secretariat of the Multi Donor Fund for Aceh and Nias
and the Java Reconstruction Fund

The World Bank
Indonesia Stock Exchange Building
Tower 2, 12th floor
Jakarta 12910, Indonesia
Tel: (+6221) 5299-3000
Fax: (+6221) 5299-3111

www.multidonorfund.org
www.javareconstructionfund.org
www.worldbank.org

October 2012

REKOMPAK

Rebuilding Indonesia's Communities After Disasters

INDONESIAN DISASTERS 2004-2010

December 2004:
- ***Earthquake & Tsunami***
- 220,000 people perished & missing
- 585,000 people displaced
- Estimated damages: $4.5billion

ACEH

March 2005:
- ***Earthquake***
- 1,000 people perished
- 50,000 people displaced
- Estimated damages: $390million

NIAS ISLANDS

July 2006:
- ***Tsunami***
- 1,000 people perished
- 50,000 people displaced
- Estimated damages: $110million

WEST JAVA

May 2006:
- ***Earthquake***
- 5,700 people perished
- 40,000 people injured
- Estimated damages: $3.1billion

YOGYAKARTA AND CENTRAL JAVA

October - November 2010:
- ***Volcanic Eruptions***
- 300 people perished
- 350,000 people displaced
- Estimated damages: $360million

MOUNT MERAPI

TABLE OF CONTENTS

CHAPTER 4
Building Houses and Community Infrastructure

CHAPTER 5
Cross-Cutting Themes and Implementation Challenges

PART THREE

CHAPTER 6
From Innovations to Good Practice: Sharing Rekompak's Experience

ACKNOWLEDGEMENTS

Rekompak: Rebuilding Indonesia's Communities after Disasters tells the story of Rekompak, Indonesia's innovative community-based model for post-disaster housing reconstruction. Rekompak was created and adapted through the Multi Donor Fund for Aceh and Nias (MDF) and the Java Reconstruction Fund (JRF) between 2005 and 2012. While other books have described the implementation and experiences of the MDF and JRF Rekompak projects in their separate contexts, the intention of this book is to present the bigger story of how the Government of Indonesia boldly recognized the benefits and risks of the community-driven approach, applied, fine-tuned and adapted it over the course of the past seven years, and finally set Rekompak in place as a keystone of its national program for post-disaster reconstruction of settlements. The book aims to tell this story to a wider audience, with the hope that policy-makers and others facing decisions on post-disaster housing reconstruction will consider applying the Rekompak approach which has been so successful in rebuilding communities and lives after disasters in Indonesia.

The book, and an accompanying video by the same name, was prepared by the Secretariat of the MDF and the JRF. The World Bank serves as trustee of both funds. Shamima Khan, Manager of the MDF and JRF, provided general guidance, support and oversight of the entire writing and production process. Anita Kendrick, Monitoring and Evaluation Officer of the MDF/JRF, managed the development of the book from beginning to end, developing the concept, directing and editing the content, and guiding the production process. Helen Vanwel, Consultant, was responsible for researching and writing the text. Shaun Parker, Operations Officer of the MDF/JRF, contributed substantially to the concept, content and design of the book. Kate Redmond edited multiple drafts, and Sharon Lumbantobing oversaw the final layout and production process.

Other members of the MDF/JRF Secretariat team and consultants provided significant inputs to the book on content, design, layout, and production: Safriza Sofyan, Deputy Manager of the MDF, Akil Abduljalil, Dessly Sorongan, Inge Susilo, Puni Indrayanto, Eva Muchtar, David Lawrence, Lina Lo, Nur Raihan, Inayat Bhagawati, Puteri Natalie Watson, and Mary Ann Brocklesby all supported the development of the book and video. Olga Lambey and Amenah Smith provided administrative support. Ola Santo and her team from Studio Rancang Imaji provided the overall design and layout of the

book, and Dian Estey and her team from Mata Hati Productions produced the accompanying video. The World Bank's task team for Rekompak, especially George Soraya and Sri Probo Sudarmo, were valuable resources in providing information on the projects, as well as guiding the concept and providing content for both the video and book.

The Secretariat wishes to thank the Ministry of Public Works for its ground breaking work in developing the Rekompak approach and model, and the project teams who implemented it in the field. Thanks also go to the Governments of Aceh, Yogyakarta, and Central and West Java for their excellent coordination of the reconstruction and willingness to try the Rekompak approach for community recovery under extremely difficult and trying circumstances. Our thanks are also due to the the National Development Planning Agency (Bappenas) and the former Agency for the Reconstruction of Aceh and Nias (BRR) for their leadership and support which allowed the MDF and JRF programs to finance Rekompak. And of course, none of this would have been possible without the generous support of the citizens and governments represented by the fifteen donors of the MDF and the seven donors of the JRF.

Finally, the most important acknowledgements are due to the members of the communities in Aceh, Nias, Yogyakarta, Central and West Java who, in the aftermath of unimaginable events, had the courage, strength, and resilience to join in a partnership with the government in a process that put them in charge of reconstructing their communities and rebuilding their lives.

FOREWORD

Between 2004 and 2010, lndonesia was struck by several devastating natural disasters. A major earthquake triggered a tsunami of unimaginabie scale that leveled much of the heavily populated coastal areas in Aceh and Nias in December 2004. Another massive earthquake, with its epicenter close to the island of Nias, followed in March 2005. While lndonesia was still in the process of rebuilding Aceh and Nias, tragedy occurred again, this time in Java. In May, 2006 the historic city of Yogyakarta and the province of Central Java were struck by an earthquake. Just two months later in July 2006 an earthquake followed by a tsunami hit the south coast of West Java.

The disasters caused massive loss of life and injuries and destroyed hundreds of thousands of homes, infrastructure facilities and livelihoods. In addition, more than one million people were displaced. ln many cases, traumatized survivors were left with only their own inner strength to start the slow process of rebuilding their lives and communities.

The outpouring of solidarity, compassion and support from around the world was unprecedented. Two funds were established to coordinate donor support for the Government of Indonesia's reconstruction efforts. The Multi Donor Fund for Aceh and Nias (MDF) pooled approximately US$655 million from 15 international donors and contributed close to 10 percent of the overall reconstruction funds for Aceh and Nias. The Java Reconstruction Fund received approximately US$94 million from seven donors to rebuild homes, communities and livelihoods in affected areas of Java. The World Bank served as trustee for both funds at the request of the Government of Indonesia.

The Government of lndonesia and development partners agreed that a community-based approach would be used for rebuilding houses and community infrastructure, first in Aceh and later in Java. A community-based approach places the responsibility for the process of rebuilding, including the management of the funds, directly into the hands of household groups in communities affected by the disaster. Initially there were some who had serious doubts that this approach would work. Never before had such large amounts of money been entrusted to beneficiaries, and many wondered if it was prudent to do so, especially when communities had been decimated by natural disasters. To make matters worse, Aceh was in a post-conflict situation as a result of years of internal conflict. Putting beneficiaries in

charge of rebuilding their own homes was a new idea and seemed to carry a much greater risk than the usual approach of contracting the rebuilding of houses through experienced construction firms. After much discussion, it was decided that the potential benefits of using a community-based approach in terms of beneficiary ownership and transparency made the risk worth taking. The MDF Steering Committee approved financing for the Community Settlement Reconstruction and Rehabilitation Project in Aceh and Nias, known as Rekompak, in May 2005.

The risk not only paid off in Aceh but also led to a successful program that has been adapted and replicated in several post-disaster contexts in Indonesia. Involving community members in the process of reconstructing homes and community infrastructure proved to be an efficient and cost-effective way to rebuild, with high levels of beneficiary satisfaction in the product and the process. Perhaps more importantly, this approach helps with the healing process and empowers disaster-affected communities to take responsibility for their own recovery.

Rekompak: Rebuilding Indonesia's Communities after Disasters presents the key elements of this approach. This book relays the experience and lessons learned in the course of implementing and scaling up the Rekompak housing reconstruction efforts in Aceh and Java. Remarkable results were achieved, in spite of the sometimes challenging conditions. These results were possible because the Government of Indonesia, the World Bank, donors, provincial and local governments, other stakeholders and communities worked in partnerships based on trust. This book celebrates Rekompak's achievements and pays tribute to the coordinated efforts of all stakeholders as well as to the strength and courage of the survivors who worked together for the common good to rebuild their homes and their communities.

The goal of this book is to make the Rekompak approach accessible for consideration and adaptation in other contexts. Why? Because the Rekompak model works. It empowers individuals, is cost effective, adaptable, yields quality results, and leads to high rates of satisfaction and community ownership. The pages that follow outline the gradual transformation of devastated communities, shattered and traumatized by their catastrophic experiences, into revitalized, vibrant and viable communities. We hope the

Rekompak experience as documented here will be useful to governments, donors, NGOs and others who want to assist devastated communities to rebuild and recover in the aftermath of natural disasters, in Indonesia or elsewhere.

The remarkable success of Rekompak is based on the partnerships between the Government of Indonesia, in particular the BRR, Bappenas and the Ministry of Public Works, local governments, international donors and the World Bank, and the affected communities. We are grateful to everyone for their unwavering support, mutual trust, hard work, flexibility and persistence in helping to build more resilient communities.

Armida Alisjahbana
Minister National
Development Planning

Stefan Koeberle
Country Director
The World Bank

Julian Wilson
Head of Delegation
European Union

MESSAGE FROM THE MINISTRY OF PUBLIC WORKS

Following the devastating series of natural disasters that affected communities first in Aceh and Nias and later in Yogyakarta, West and Central Java, the Government of Indonesia committed itself to a rapid reconstruction of settlements in disaster affected areas. Domestic and donor-funded initiatives focused on extensive rehabilitation and reconstruction programs for housing, infrastructure and public facilities, and economic recovery.

The Government of Indonesia supported the Rekompak community-based approach for rebuilding houses and community infrastructure in Aceh, Yogyakarta, and West and Central Java. Rekompak was able to establish a platform where disaster-affected individuals, communities and institutions worked together in harmony and unity to rebuild their settlements.

A hallmark of the Rekompak approach is that while the Government of Indonesia and donors contributed towards the overall reconstruction process, the communities themselves were responsible for carrying out the reconstruction and rehabilitation. The Rekompak approach strengthened communities' abilities to rebuild their own housing and infrastructure and improved the capacity of government officials at the district and provincial levels in monitoring the reconstruction process. Rekompak also looked beyond rehabilitation and reconstruction to include increasing communities' resilience to respond to future natural disasters.

Rekompak has proven to be a successful and widely replicable model for disaster response and reconstruction in Indonesia that can certainly be replicated in other countries as well. Not only were homes, communities and livelihoods rebuilt after the multiple natural disasters, but the hopes and dreams of people, and their capacity to achieve them, were restored as well. We are proud to have been partners to the communities in their remarkable achievements.

Budi Yuwono P.
Director General of Human Settlements
Ministry of Public Works

BEFORE AND AFTER

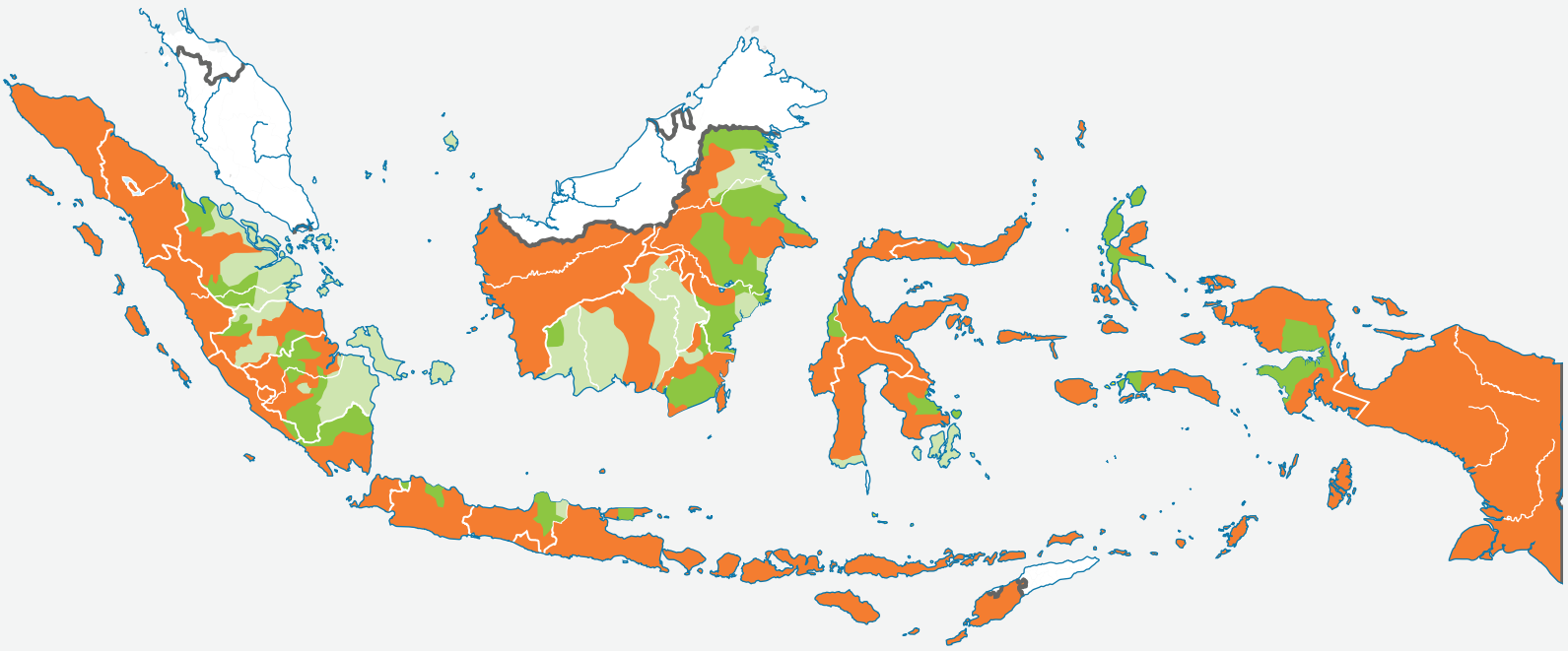
Lambung, Banda Aceh, after the tsunami.

Lambung, Banda Aceh 3 years later.

The village of Lambung, in Banda Aceh, was completely devastated by the tsunami. Three years later, survivors had rebuilt their homes and related infrastructure with the help of the Rekompak project.

Photos:
Rekompak Team

Disaster Risk Map of Indonesia



Disaster Risks

Low Moderate High

Prologue

This map illustrates Indonesia's vulnerability to disasters. While reconstruction programs address the aftermath of disasters, investments in disaster risk reduction and preparedness helps reduce the impact of disasters and save lives when disasters do strike.

PROLOGUE

Indonesia is one of the most disaster-prone countries in the world. It is located at the junction of three tectonic plates and has a high exposure to seismic activity. Indonesia leads the world in many statistics related to volcanoes. It has the largest number of historically active volcanoes (76) and has suffered the highest numbers of eruptions producing fatalities in recorded history.[1] In addition, Indonesia regularly experiences earthquakes and tsunamis, mud and landslides, floods, and wildfires.

A series of such natural disasters besieged Indonesia over the last ten years: the 2004 Indian Ocean tsunami affected the province of Aceh and island of Nias and a subsequent earthquake overwhelmed these areas in early 2005; an earthquake and a tsunami devastated parts of Java in May and July 2006; and in 2010 Mount Merapi volcanic eruptions impacted many communities in Java.

Aceh and Nias Tsunami, 2004.
Early on the morning of December 26, 2004 an unrelenting tsunami struck Aceh and Nias. The giant waves roared into towns and villages bringing millions of tons of ocean water and destroying everything in their path.

Photo:
Antara News Agency

Rekompak: Rebuilding Indonesia's Communities after Disasters is intended to document and share experiences from a series of projects supported by two trust funds which were set up to respond to these specific disasters: the Multi Donor Fund for Aceh and Nias (MDF) and the Java Reconstruction Fund (JRF). At the request of the Government of Indonesia the trust funds were managed by the World Bank.

Rekompak is the name of a community-based approach for large scale reconstruction of homes and community infrastructure pioneered in Indonesia by the MDF and JRF. In Indonesian, Rekompak conveys the meaning of "reunion" -- to increase cohesiveness and become solid again. Rekompak embodies the spirit of the community based approach and captures the essence of the project, the focus of which has been to rebuild lives while rebuilding communities.

Rekompak aimed to empower communities to become leading agents of their own reconstruction and to engage effectively with other stakeholders, in particular with local governments. A community-based or community driven approach to development gives community groups and local governments control over planning decisions and investment resources. While local governments are important partners in a community-based approach, it is necessary to underscore that the approach is primarily a mechanism through which communities are entrusted with funds and authority, and facilitated and empowered to interact with other local stakeholders.

The MDF and JRF Rekompak projects pooled the collective strengths of stakeholders: central government provided policy and guidance; donors provided funds; local governments provided oversight and facilitators; and, crucially, the existing social assets of affected communities were leveraged to manage reconstruction resources.

While dozens of organizations were active in housing reconstruction, this book focuses exclusively on the story of the MDF and JRF Rekompak projects.[2] This book discusses the Rekompak housing and community infrastructure activities in Aceh and in Java, placing them in the context of the overall recovery and reconstruction programs funded by the MDF and JRF.

The MDF was established in April 2005 to support implementation of the government's rehabilitation and reconstruction efforts after the December 2004 earthquake and tsunami that struck Aceh and Nias and another earthquake that hit the region in March 2005. The MDF pooled US $655 million in grant funds from 15 donors (see Chapter 2) and supported 23 recovery projects with the assistance of implementing agencies.

Rekompak in Aceh was one of the 23 projects as was the Kecamatan-based Reconstruction and Rehabilitation Planning Project (KRRP) which provided housing and community infrastructure in Nias through a community-based approach. The MDF program, covering both Aceh and Nias, was wide ranging and comprehensive; it included projects focused on reconstruction and rehabilitation of homes and community infrastructure, recovery of large infrastructure and transport, capacity strengthening of governance, environmental sustainability, and economic development.[3] Rekompak was one of the first projects. It was aimed at restoring housing, an early and immediate priority for beneficiaries and government following disasters.

In response to the May 2006 earthquake in Java and a tsunami two months later, the Java Reconstruction Fund was quickly established. It adapted and refined the pioneering design and administrative structure of Rekompak that had been introduced in Aceh. The JRF covered three projects in the area of housing and community infrastructure, and two projects addressing the recovery of livelihoods. Early support focused on meeting immediate housing needs by providing temporary shelters followed by permanent housing. Because many home-based industries were destroyed along with homes, the early work of rebuilding houses also helped to support livelihood recovery. Subsequent support addressed economic recovery directly, including a focus on the recovery of micro, small and medium enterprises.

The MDF and JRF Rekompak projects are based on two earlier community-development projects active in Indonesia. In 1998, following the Asian financial crises, the Kecamatan (Sub-district) Development Project (KDP) and the Urban Poverty Project (UPP) were established and led by the Government of Indonesia with funding from the government and World Bank.[4] The projects used a community-driven approach for local development. The Government of Indonesia provided block grants to participating communities and the grants were often complemented with local government funds. This gave communities decision making power and the opportunity to manage finances, work with government, monitor progress and ensure transparency and accountability.

The structures, networks, block grant funding flows, and knowledgeable facilitators nurtured and developed by the KDP and UPP were used as the basis for Rekompak's project design. Rekompak built upon the existing mechanisms and expertise and these were scaled up many-fold to meet the reconstruction needs in Aceh following the tsunami. While relying on existing structures and facilitators made for a relatively easy transition, the Rekompak approach can also be implemented in the absence of such stepping stones.

Indonesia, of course, is not the only country that has used a community driven approach for reconstruction following disasters. The approach was successfully used to rebuild approximately 200,000 houses in Gujarat, India following the 2002 earthquake and a community-based reconstruction approach was used in Nicaragua in 1998 following Hurricane Mitch.[5] The UN–HABITAT has long promoted what it calls the "People's Housing Process" and has applied this community-based approach for rebuilding homes in many countries, including in Indonesia after the tsunami. The "People's Housing Process" recognizes that after disasters it is necessary to actively involve the community and "rebuild social capital and not just local infrastructure and physical assets of communities. The 'People's Process' is anchored in the involvement of beneficiaries as active participants. It is the people themselves who lay the foundation for their own future."[6] Each of these experiences have verified and established the importance of this approach in disaster reconstruction.

A new drainage system is being constructed to prevent flooding in Wonokromo, Bantul, in the Yogyakarta Special Region. Projects such as this were identified through a community planning process under Rekompak.

Photo:
Rekompak Team

Rekompak: Rebuilding Indonesia's Communities after Disasters and the accompanying video documentary based on the book provide a synopsis of how a community-based approach can be employed to rebuild homes and communities and in the process leave beneficiaries more resilient and better prepared for future disasters. The lessons and approaches drawn from the MDF and JRF experience in Rekompak on reconstruction of housing, community infrastructure and disaster risk reduction are being mainstreamed in government programs across Indonesia. They are also looked to as a model of good practice for post disaster programs in other contexts around the world.

Rekompak projects in Aceh and Java restored housing, an early and immediate priority for both beneficiaries and government following the disasters. Here the foundation is being laid for a JRF Rekompak house in Pucanganom, Central Java.

Photo:
Purnomo
for Rekompak Team

This book outlines how the Rekompak project was born under unimaginably devastating circumstances and how it evolved as a partnership between the Government of Indonesia, donors, the World Bank, and most importantly, the disaster-affected communities. It tells how the Rekompak approach works and discusses important lessons learned along the way. It's hoped that government officials and decision makers, donors, and post-disaster practitioners will find the lessons and experience conveyed in these pages useful in adapting a Rekompak community-based approach for community recovery in other post disaster and/or post conflict situations in Indonesia and around the world.

Organization of the Book

Rekompak: Rebuilding Indonesia's Communities after Disasters is organized into three parts.

Part One
In Part One, Chapters 1 and 2 provide background information concerning the tragic natural disasters that occurred in Aceh and Java between December 2004 and November 2010. These chapters describe the overwhelming response from the international community, comment on the reconstruction context and discuss how the response was coordinated.



Rekompak helped communities build small-scale infrastructure, with an emphasis on reducing risk from future disasters, as well as rebuilding houses. Here a retaining wall is being constructed in Jiwowetan, Central Java. Retaining walls stabilize the slope behind buildings to reduce the risk of landslides due to earthquakes or heavy rains.

Photos:
Purnomo
for Rekompak Team

Chapter 1 describes the impact of the disasters on the surrounding communities. This chapter discusses the devastation these events left in their wake and describes the scope of the damage, including personal accounts by survivors.

Chapter 2 relates how the Rekompak approach to community recovery evolved, first in response to the enormous needs for rebuilding communities in Aceh and later to meet the housing reconstruction needs in Java following the 2006 earthquake and subsequent disasters. The chapter outlines how assistance was coordinated and discusses the establishment and achievements of the MDF and JRF.

Part Two

Part Two explains how Rekompak works. The three chapters in this section provide some details of the community planning process that precedes the construction of houses and community infrastructure, as well as information on the actual process of building houses. Crosscutting issues and implementation challenges and solutions are also presented.

Chapter 3 discusses how the community-based approach was implemented, including identification of beneficiary communities, the Community Settlement Plan (CSP) process, and funds management. The chapter draws on experience from both Aceh and Java and describes how Rekompak, as it was applied in Java, benefitted from the experience and lessons learned in Aceh.

Chapter 4 describes how beneficiaries rebuilt their homes and community infrastructure. The chapter discusses how technical quality was assured, and looks at the cost effectiveness of local procurement and how it stimulates local economies. The chapter also reviews how Rekompak helped home owners and communities to be better prepared for future disasters.

Chapter 5 features key crosscutting themes that are mainstreamed and integrated into all Rekompak project activities. These are: disaster risk reduction; women's participation; community and individual empowerment; environmental considerations; and capacity strengthening. Implementation challenges faced by Rekompak projects, and how these were handled, are also discussed.

Part Three

Chapter 6 brings to a conclusion the story of the Rekompak experience in Indonesia. This chapter summarizes the project's guiding principles and the key lessons learned. The chapter concludes with a reflection of Rekompak's legacy, the key elements that made the model a success and reflects on possible adaptation of the Rekompak approach in future disasters.

Concrete roads such as this one in Java built under Rekompak increased mobility of villagers and improved quality of life by providing easier access to markets, schools, farmers' fields, and homes of friends and relatives. They also provided faster escape routes in case of disaster.

Photo:
Fauzan Ijazah
for JRF Secretariat

---

1 USGS : http://vulcan.wr.usgs.gov/Volcanoes/Indonesia/description_indonesia_volcanics. html

2 Dozens of international and national agencies, donors and NGOs were active in housing reconstruction in Aceh and Java, and many of these also used a community-based approach. As many as 900 NGOs were reported to have arrived in Aceh to assist after the tsunami, in addition to official support from foreign governments and multilateral organizations. The Government of Indonesia admirably handled the mammoth task of coordinating support offered to Indonesia. See Agusta, Margaret, Ed. 2009. *Housing*. Banda Aceh: The Agency for Rehabilitation and Reconstruction (BRR).p.3

3 See Multi Donor Fund for Aceh and Nias Final Report 2012 and JRF Final Report 2012 for full description of these projects.

4 These projects were later called PNPM Perdesaan and Perkotaan.

5 A successful owner-driven reconstruction approach which shared many features of the community-driven approach was implemented in response to the 2005 earthquake in northern Pakistan.

6 Dercon, Bruno, ed. Anchoring Homes: UN-HABITAT's People's Process in Aceh and Nias after the Tsunami, Nairobi: UN-HABITAT, 2007. 9.

PART ONE

CHAPTER 1

A Series of Disasters

Aceh and Nias Tsunami, 2004.

This village in Aceh Barat, like many other settlements in Aceh, was completely destroyed by the giant waves. The only building that remained after the tsunami swept through this village was the mosque, located approximately 500 meters from the shore.

Photo: Antara News Agency

The story of the remarkable success of the community-based Rekompak housing and community infrastructure projects in Aceh and Java cannot be told without first describing the shattering losses that precipitated the need for the projects. The 2004 earthquake and Indian Ocean tsunami in Aceh, and the 2006 and 2010 earthquakes, tsunami and volcanic eruptions that demolished parts of Java tore apart the lives of survivors. This chapter discusses the devastation these disasters left in their wake and offers personal accounts by survivors to illustrate the scope of the damage. It ends with a brief discussion of the support that poured in from around the world to help Indonesia cope with these disasters.

Aceh and Nias Tsunami, 2004.
Vast amounts of debris had to be removed in Aceh and Nias before access roads to settlements were reachable and before the reconstruction could begin. Every means available was used in this endeavor including heavy machinery and even elephants provided by the Ministry of Forestry.

Photo:
Antara News Agency

TRAGEDY BEYOND BELIEF – ACEH AND NIAS

On the morning of December 26, 2004, a massive earthquake registering 9.1 on the Richter scale struck Indonesia. The epicenter of this earthquake, the third largest in recorded history,[1] was in the Indian Ocean within 150 kilometers of Aceh province, on the northern tip of Sumatra. It was a day few Indonesians or even the world will forget; many remember exactly where they were when they heard the news of the calamitous events that took place that morning.

> *"I am the only survivor. Now I give all my time to my community to make my departed family proud."*
>
> *Tsunami survivor, Banda Aceh*

The Earthquake and Tsunami

The day began like any other. Fishermen were already out at sea. Families awoke, had breakfast, and commenced with their Sunday plans. Just before 8:00 a.m. a devastating earthquake hit Aceh and the island of Nias in the province of North Sumatra. Worse was to come. Before anyone could begin to search for loved ones or consider the losses from the earthquake, a colossal tsunami with billions of tons of displaced ocean water roared in, sweeping away everything in its path. This tsunami was the largest the world had seen in more than 40 years.[2] In minutes, human settlements along the coastline of Aceh and Nias were demolished. People, houses, boats, cars, and buildings were engulfed as the tsunami swallowed everything in its way. Nothing was too large for this mighty force. A major diesel-generating station mounted on a barge offshore near Aceh and weighing about 2,600 tons was pushed more than three kilometers inland destroying houses and other structures along the way until it came to rest on top of collapsed buildings. The Indian Ocean tsunami was so powerful that while Aceh bore the brunt of the destructive forces, the tsunami also caused death and destruction across Southern Asia including Thailand, Bangladesh, Sri Lanka, India, and as far away as East Africa. Hundreds of thousands of people perished.

When the water finally receded survivors were overcome with the horror and scale of the tragedy as they tried to comprehend the catastrophic scenes that stretched out before them. Bodies lay everywhere. Villages were reduced to rubble where minutes before thriving communities had flourished. Many roads, bridges, communications systems, schools, hospitals and clinics had

collapsed or were severely damaged. Eight hundred kilometers of coastline had been swallowed by the sea and most ports were annihilated. There was no electricity or safe drinking water and few had access to food or proper shelter in the days immediately following the tsunami. Fishing boats were smashed to pieces, and much of Aceh's farmland and fish ponds had either disappeared or was rendered unusable. Fishermen, farmers and others lost their livelihoods and many businesses were destroyed or could no longer operate.

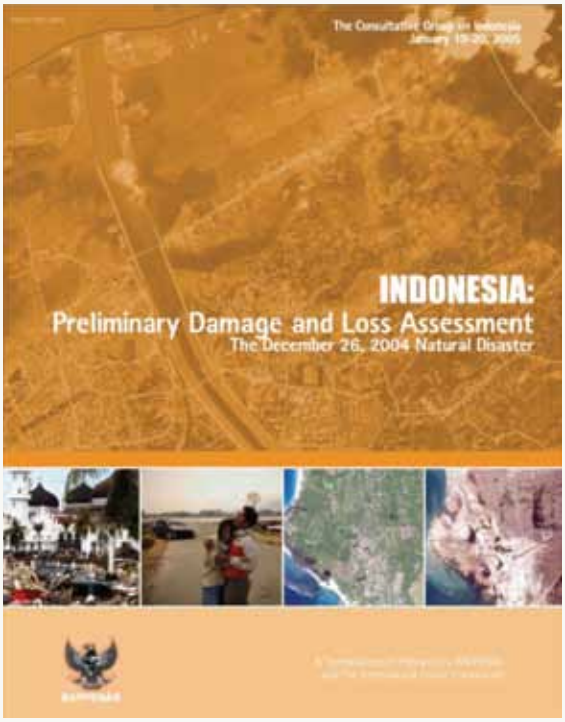
The most horrific shock of all was that in Aceh and Nias alone, an estimated 220,000 people lost their lives or remained missing, and 635,000 people were displaced. Among the injured survivors, some are disabled for the rest of their lives. It was difficult to know where to begin with the rebuilding of lives and settlements. Almost no one in Aceh was untouched by the disasters. Many of those who survived had lost family members, possessions and their means to earn a living. With their communities vanished and survivors scattered to shelter with relatives and friends or in camps, Aceh's already fragile social fabric was largely destroyed. Indonesia's President Susilo Bambang Yudhoyono declared the earthquake and tsunami a national disaster and the Indonesian flag was flown at half-mast for three days. The trauma felt by survivors was palpable; the entire country grieved and the world grieved with it.

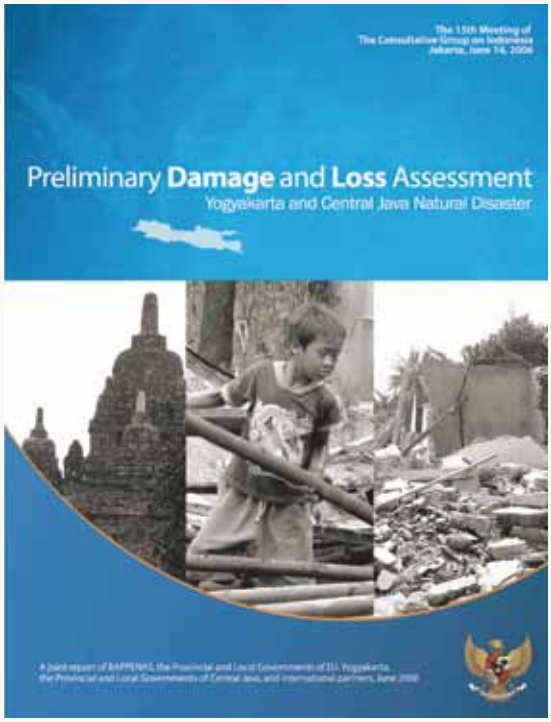
> *"We were terrified. The sea became very strange, with the water receding over 200 meters. Suddenly we saw that fish had been left on the beach, and some people were happy at their luck at finding them. They tried to gather them up, but then we saw a huge wave coming, and people tried to run and save themselves. But many people died because they were not fast enough. It was particularly bad for the children. All the children in this village have died. About half of the 300 people from our village are gone."*
>
> *Two tsunami survivors from Alue Naga village, Aceh*[3]

The Government of Indonesia set up a damage and loss assessment team that began its work within a week of the tsunami and completed a preliminary assessment two weeks later. The National Development Planning Agency

(Bappenas), representing the Government, led the team comprised of several multilateral and bilateral agencies including the World Bank and the United Nations, as well as national and international NGOs, that voluntarily brought their expertise to the effort. The resulting report[4] stated that the 2004 tsunami was the worst natural disaster in Indonesia's history and estimated initial damage and losses at approximately US$4.5 billion[5] (this figure was later revised to $6.2 billion). The report also put forth recommendations for the rehabilitation and reconstruction that was required.

The massive destruction in Aceh seriously affected provincial and local governments already weakened by years of conflict. The tsunami destroyed 21 percent of public buildings and 19 percent of the equipment in these buildings. Approximately nine percent of civil servants perished and at least 21 percent of surviving civil servants were severely affected, impacting their ability to function as a local government. Twenty-seven percent of public records were destroyed. The replacement value of these losses was estimated to be over $81 million.[6]





Within weeks of the disasters in Aceh and Java preliminary damage and loss assessments were completed, with assistance from the international donor community. The assessments were used by the Government of Indonesia as the basis for its requests for financial support and for developing plans for reconstruction.

Prior to the tsunami, governance in Aceh already faced numerous challenges including lack of institutional capacity and inefficient delivery of public services such as health and education, especially in the rural areas. The tsunami exacerbated these challenges to say the least, and the provincial and local governments were not in a position to manage the immense and extensive recovery effort that would be required. The national Government stepped in urgently to take the lead in the reconstruction process.

Aceh and Nias Tsunami, 2004.
The massive destruction in Aceh and Nias seriously affected provincial and local governments already weakened by years of conflict. Offices were destroyed and many precious documents such as land titles were lost.

Photo:
Kristin Thompson
for MDF Secretariat

Another Earthquake

In March 2005, just three months after the December 2004 tsunami, with lives still in turmoil and grief still raw, another massive earthquake measuring 8.6 on the Richter scale struck Aceh and the neighboring province of North Sumatra. This quake devastated the island of Nias, in the province of North Sumatra, located in the Indian Ocean just south of Aceh. The island of Simeulue, part of the province of Aceh off the western coast of the mainland, was also hard hit and suffered enormous damage. The earthquake wreaked more havoc on an already ravaged area. The ground literally buckled and in some places it lifted the earth and toppled structures, while in others the ground was lowered, submerging coastal areas. Approximately 1,000 people died and 47,000 were displaced. Nias and Simeulue were among the poorest areas of Indonesia prior to the disasters and the people could ill afford such a massive setback.

Three Decades of Conflict in Aceh Prior to the Tsunami

The situation in Aceh was complex. Aceh was not only in a post-disaster situation; it was also in the middle of long running conflict. The province had been fighting for its independence since Indonesia's colonial days and had never accepted being part of the Dutch East Indies, ruled by the Netherlands. When Indonesia declared independence from the Netherlands in 1945, Aceh continued to intermittently fight for its own freedom. In 1976 the Free

Aceh and Nias Tsunami, 2004.
Many roads, bridges, communication systems, schools and other infrastructure collapsed or sustained such serious damage that they could no longer be used. Much of the coastline of Aceh was swallowed by the sea and most ports were annihilated.

Photos:
Left: Yan'Ali Zebua
Right: IREP-IRFF Team

Aceh Movement (GAM) declared unilateral independence. This brought Aceh into armed conflict with the Government of Indonesia. Over a period of almost three decades, thousands of Acehnese died, tens of thousands were imprisoned and over half a million people displaced as a result of the conflict. In 2004 when the tsunami struck, the Acehnese were fearful, weary of war, mistrustful of government and of each other.

> *"There are people here from lots of different villages. Many of the village heads have died, and their offices, the sub-district facilities are all gone. But we have organized spokespersons for each village represented in this camp."*
>
> *Survivor in temporary camp in Banda Aceh*[7]

At the time of the tsunami Aceh was under civil emergency rule and had been sealed off from the world for almost two years. Few outsiders had been allowed in during this period, including donors. It was not until a few days after the tsunami that international aid workers were allowed access - initially with the proviso that all foreigners would leave before the end of March 2005. In addition, aid workers could only travel to the two largest centers, Banda Aceh and Meulaboh. The Government of Indonesia stated this was necessary for people's safety because while there was a Cease Fire Agreement in force, the fighting continued. The restrictions were eventually rescinded and aid workers could not only stay but were able to work in all affected areas.

In addition to the damage caused by the disasters, the years of conflict had weakened civil service, undermined infrastructure, and resulted in a population with generally low level skills. The three-decade conflict had led to divided loyalties and a high level of mistrust of the government. Many civilians had been caught in the middle of the two sides to the conflict, which left a deep impact on the Acehnese.

The tsunami jolted the Government of Indonesia and the resistance into recognition that the conflict had to be terminated and peace achieved. Only with Aceh at peace would people have a chance of rebuilding the many shattered communities across the province. The establishment of the Aceh Peace Reintegration Agency (BRA) in February 2006 helped to facilitate implementation of programs geared toward reconciliation and reintegration, and a binding Peace Agreement was signed between the Government of Indonesia and GAM in August 2005.

Recovery

Planning and coordinating the large scale recovery effort required in Aceh was an enormously complex task. The conflict had already shaken the lives of the Acehnese; the disasters further affected every single person in Aceh in one way or another with family members lost, property destroyed, lives torn apart and livelihoods gone.

The reconstruction approach for Aceh would need to incorporate awareness of the depths and layers of damage and trauma that had afflicted Aceh and its people. It required working with a hugely traumatized population and spanning the divides and rifts that existed prior to the tsunami. The reconstruction approach would need to build trust and confidence through a sensitive healing process in order to help nurture and revive fragile social structures. And to accomplish all this along with the urgent need to rebuild homes, damaged infrastructure and a shattered economy, a large amount of funding was required.

Aceh and Nias Tsunami, 2004.
In Aceh and Nias, an estimated 220,000 people lost their lives or remain missing in the aftermath of the tsunami. This small kiosk in Banda Aceh became an information center where surviving family members posted messages hoping to locate missing relatives.

Photo:
Antara News Agency

DISASTER STRIKES JAVA

On May 27, 2006 a 6.3 magnitude earthquake hit the historic Javanese city of Yogyakarta and the densely populated province of Central Java. The earthquake struck early in the morning and exclamations of *Allahu Akbar* (God is great) could be heard as people felt the impact of the tremors and ran into the streets.

The damage from the earthquake was much greater than initially realized. Major buildings were left largely untouched but hundreds of thousands of homes and smaller structures were destroyed. Many houses in the area

Yogyakarta and Central Java Earthquake, 2006.
A young girl stands amidst the rubble of her community that was destroyed by the earthquake.

Photo:
Rekompak Team

had been built without proper reinforcement and with low quality building materials, resulting in more deaths and more damage than would normally be expected from an earthquake of this magnitude. Another factor contributing to the enormous damage was that the earthquake hit at a relatively shallow 33 feet below the surface which meant that the shaking, which toppled houses, was intense.

The earthquake lasted for 52 seconds and resulted in the death of over 5,700 people. Approximately 40,000 people were injured and an astounding 350,000 homes were destroyed.

Many people were trapped and buried beneath their toppled houses and buildings. Of the injured many would be disabled for the rest of their lives, some of them paralyzed. This scene was repeated over and over in villages throughout the special region of Yogyakarta and parts of Central Java.

Java is the world's most populous island and one of the most densely populated places on earth. It is the home of approximately 140 million people

Measuring Damage and Losses

An assessment of damage and losses analyzes three main aspects:

Damage (direct impact) refers to the impact on assets, stock, and property, valued at agreed replacement (not reconstruction) unit prices. The assessment should consider the level of damage (whether an asset can be rehabilitated/ repaired, or has been completely destroyed).

Losses (indirect impact) refer to economic flows that will be affected, such as reduced incomes or increased expenditures over the time period until the assets are recovered. These will be quantified at present value. The definition of the time period is critical. If the recovery takes longer than expected, as in the case of Aceh, losses might increase significantly.

Economic effects (sometimes called secondary impacts) include fiscal impacts and implications for GDP growth. This analysis can also be applied at the sub-national level.

Source: Indonesia, Bappenas, 2006. *Indonesia: Preliminary Damage and Loss Assessment Yogyakarta and Central Java Natural Disaster.* 13

or 60 percent of the population of Indonesia. The majority of Javanese are Muslim. Java dominates Indonesia's social, political, and economic life. Most of the people in the affected area were poor but not extremely so and most shared similar living conditions.

A joint team led by Bappenas, Yogyakarta and Central Java Provincial Development Planning Agencies (Bappeda) and the international community, including the World Bank, Asian Development Bank, *Gesellschaft fűr Internationale Zusammenarbeit* (GIZ),[8] Japan Bank for International Cooperation (JBIC), United Nations Development Programme (UNDP), UN-Habitat and others, prepared the preliminary Damage and Loss Assessment

Surviving the Earthquake

Sulastri Widayati (43), a resident of Wonokromo Village, ran out of her house when she felt the earth and ground move. She saw many houses wobble before they collapsed.

"The roof of my house swayed like waves in the ocean. But the strange thing was trees around my house did not fall down or even move at all," Sulastri said. "We were in a state of panic." She saw a coconut tree in front of her house that had not fallen down. So, she held onto it.

But then, she realized that her husband and children were still inside. She thought that if she went back inside, she would be just another casualty and so she waited outside for the tremors to stop.

Her husband and one of her children were injured from being hit by fragments of the roof that caved in. Her child's back was fractured, while her husband suffered minor injuries. "There was something good behind my selfishness. Allah granted me safety so that I could serve my child, my husband, and other family members recovering from their injuries," Sulastri recalled.

"There was one wall that did not collapse and that is where my injured child was. If that wall had collapsed, my family would have perished," Sulastri said.

The economic losses suffered by Sulastri's family as a result of the earthquake were estimated to be around $8,300.

Source: *Post-Tsunami and Earthquake Community-Based Rebuilding of Settlements and Infrastructure: Experiences of REKOMPAK JRF in the Special Region of Yogyakarta, Central Java and West Java.* Ministry of Public Works, 2010. 24-26

which determined the overall needs for the rehabilitation and reconstruction phase. Total damage and losses from the earthquake were estimated to be around $3.1 billion. The scale of the disaster was on par with the massive earthquakes in Gujarat, India in 2001, and Pakistan in 2005.

> *"With each of several earthquake shocks the houses leaned from left to right and back again. Suddenly they collapsed to the ground and seemed to disappear," recalled Salleh Udden, the head of Jagalan village (in Bantul District, Yogyakarta) where more than 30 percent of the 216 traditional houses were razed to the ground.* [9]

The economic impact of the earthquake was particularly heavy because of the concentration of home-based industries in the areas destroyed by the earthquake. More than 650,000 workers were employed in economic activities directly affected by the earthquake with close to 90 percent of damage and losses concentrated in small and medium enterprises. In the two worst hit districts, Bantul in the Yogyakarta Special Region and Klaten in Central Java, damage to private houses made up more than 70 percent of the total destruction.[10] Many of the home-based industries in the area's important handicraft sector were severely affected. Rebuilding homes would also support recovery of home-based businesses and livelihoods.

Yogyakarta and Central Java Earthquake, 2006.
The Java earthquake which lasted for 52 seconds left 40,000 injured and 5,700 deceased. Approximately 350,000 homes, many of which were also used for home industries, were destroyed by the quake.

Photo:
Rekompak Team

A Mother's Strength

Khulil Khasanah, a resident of Wonolelo Village, was asleep when the earthquake hit. When the earth jolted, she woke up and tried to leave the house. After falling several times, she managed to get out.

"The earthquake was so strong. I tried to get up and run, but I kept falling," she said. Then she remembered that her only child was still in the house and she ran back inside. She grabbed her child and tried to get out of the house, but was unable to do so. She fell, hit her head and her feet became buried in debris. She could not move.

She kept screaming for help and someone came to her assistance after the first tremor stopped. "Thank God my child was safe. Because I hugged him tightly the debris fell on me," the 30-year-old mother recalled. Her back and feet were slightly injured but she and her child were alright.

The rear part of Khulil Khasanah's house was ruined. All of her possessions were damaged, including her motorcycle. The total loss was estimated to be around $4,400.

Adapted from: *Post-Tsunami and Earthquake Community-Based Rebuilding of Settlements and Infrastructure: Experiences of REKOMPAK JRF in the Special Region of Yogyakarta, Central Java and West Java,* Ministry of Public Works: 2010. 26-27

Tsunami in West Java

Two months later, in July 2006 an earthquake measuring 7.7 on the Richter scale struck the south coast of West Java and was followed by a tsunami within twenty minutes. Thousands of people tried to run away in panic. Almost 1,000 people died or remain missing and more than 50,000 people were displaced. Witnesses report that the tsunami waves stood upright like walls and roared thunderously like airplanes, drums, or explosions. In many cases, family members lost their lives trying to return to their homes to save their loved ones. The earthquake also caused profound economic destruction in the fishing villages along the south coast of West Java, where large numbers of fishing boats were lost and the small fishing ports destroyed. Damage and losses were estimated at $112 million.

There was no early warning. People who were on the beach that day found themselves suddenly swept out to sea. Some survivors stated that they hardly felt the earthquake and did not think anything was seriously amiss. The tsunami came quickly, with walls of water six to ten meters high. With few trees and plants to protect the coastline, the tsunami quickly infiltrated the land, destroying everything in its path. Buildings collapsed under the powerful waves that carried cars, boats, houses and other debris many kilometers inland.

The beach area at Pangandaran was popular with locals and tourists from abroad and other parts of Indonesia. Pangandaran's hotels, restaurants, tourist markets and Marine Police station were severely damaged by the disaster. Pangandaran became ground zero; there was almost nothing left of what had once been a thriving community and a flourishing economy.

A Story of Survival from Ground Zero

"Prior to the earthquake and tsunami the sea was unusually calm", says Karim, a Pangandaran village official. He was at the beach to attend a school festival at which hundreds of children were present. "The waves were uncanny. It wasn't high tide; it wasn't low tide either," he says. He felt uneasy and decided to ask the organizers to close the event early and send all the school children home even though prizes for some of the competitions had not yet been given and the final event had not yet taken place. Although the children were disappointed and they didn't understand the reason, they left the beach area. Half an hour later the earthquake struck followed shortly afterwards by the tsunami.

Adapted from: *Post-Tsunami and Earthquake community-based rebuilding of settlements and infrastructure.* Ministry of Public Works: 2010. 12

Mount Merapi Eruptions

In October and November 2010, Mount Merapi, an active volcano near Yogyakarta, erupted not once, but eight times. For two long weeks, the eruptions spewed hot gas and ash into nearby villages and hot lava flowed into the mountain's rivers. Ash rain, which blanketed everything in fine volcanic dust, was found in cities across Java. Air transport was disrupted by the ash as far away as Jakarta. All villages within 20 kilometers of the crater were evacuated. Even in areas that were not evacuated, volcanic ash and dust caused respiratory and other health problems, and those who could fled the area voluntarily.

Mount Merapi volcanic eruptions, 2010.
Located near the border between Yogyakarta and Central Java, Mount Merapi spewed hot gases and ash as far as 5,000 meters into the atmosphere resulting in massive damage and temporary cancellation of air flights.

Photo:
Fauzan Ijazah
for JRF Secretariat

For days, pyroclastic material spewed from Merapi's crater, devastating the surrounding landscape. Clouds of hot ash and poisonous gas, and heat clouds at temperatures of 600 to 800 degrees Celsius, incinerated everything they reached, including livestock, crops and trees that were essential to the livelihoods of evacuees. Those who stayed behind reportedly did so to protect their livestock and other property---and many of them lost their lives as a result.

During and after the eruptions volcanic debris mixed with rain flowed down the slopes of Mount Merapi as massive mud flows. In Java this is known as *"lahar dingin"* or cold lava and is made up of ash and sand from the eruption which when combined with rain turns into thick, slushy rivers of mud that gather up everything in the way. *Lahar dingin* surged down the mountain with a force so strong and a breadth and depth so great that it buried entire villages, farms and fields. Huge boulders, trees, houses, livestock, motor bikes, and cars were carried away by the mud. Bridges were demolished and rivers bursting at their banks were forever altered and widened as the land along the banks was swept away. The eruptions impacted areas in the province of Central Java and the Yogyakarta Special Region, including some of the same communities that had been affected by the 2006 earthquake and were still in the process of rebuilding.

Mount Merapi volcanic eruptions, 2010.
The Merapi eruptions damaged many homes and buildings and poured tons of high temperature ash into communities located in the vicinity of the mountain. Clouds of hot ash and poisonous gas, and heat clouds at temperatures of 600 to 800 degrees Celsius, incinerated everything they reached. Mountains of steaming ash could still be seen in some affected areas almost two years after the eruptions.

Photo:
EJ Heri Wahyudi
for JRF Secretariat

Along with massive damage to local infrastructure, approximately 2,900 houses were destroyed and 350,000 people were displaced and accommodated in evacuation camps. Due to timely evacuation, casualties were limited but still almost 300 people perished and more than 500 were injured.

Responding to Crises

Recovery of communities, including the reconstruction of housing, was the first priority of governments and the affected people. The Government of Indonesia and its partners agreed that the MDF and JRF would support

Mount Merapi volcanic eruptions, 2010.
The eruptions displaced more than 350,000 people. At the request of the government of Indonesia JRF Rekompak responded by providing reconstruction support in affected communities.

Photo:
Fauzan Ijazah
for JRF Secretariat

a community-based approach for rebuilding houses and community infrastructure in Aceh and Java. There was recognition that not only did physical structures need to be rebuilt but communities needed to recover and that this could best happen through an inclusive participatory approach in which the visions and aspirations of the survivors were central. A process evolved which included providing technical support to enable beneficiaries to take full charge of the rebuilding of their own homes, including receiving and being accountable for reconstruction funds. This community-based approach for housing reconstruction was called *Rekompak*.[11]

The numerous disasters since just 2004 are a stark reminder that Indonesia is highly prone to natural hazards. Improvements in early warning systems are expected to save lives as will ensuring that homes and other structures are built to seismic resistant standards. Many of the homes destroyed during the various earthquakes were found to have used poor quality materials and poor building techniques, both of which contributed greatly to the numbers of lives lost and the high level of damage. The Government has taken this

Mount Merapi volcanic eruptions, 2010.
Entire villages, including buildings, infrastructure, vegetation and agricultural crops, were destroyed in the volcanic eruptions.

Photos:
DRR Team

lesson to heart and Rekompak projects have been pro-active in ensuring that disaster-risk reduction measures are integrated into reconstruction of homes and community infrastructure. So important is Disaster Risk Reduction that it became a theme and a set of actions that were mainstreamed into all Rekompak activities. How Rekompak accomplished its objectives and implemented community-based reconstruction is discussed in the following chapters.

> *"Rekompak is the short name for the community settlement project that we started in Aceh and Nias. In Indonesian Rekompak means: unity, cohesiveness and creating a whole – and that's what the project did. It brought beneficiaries and communities together to rebuild their houses and their settlements."*
>
> *Shamima Khan, Manager of the MDF and JRF*

Chapter 1 provided an overview of some of the horrific natural disasters that occurred in Indonesia between 2004 and 2010. It described the reconstruction contexts that faced the Government of Indonesia and those who came to assist with the rebuilding. It described the MDF and JRF trust funds which pooled funding from donors to assist with the recovery. Among the projects supported by the funds were the community-based Rekompak projects which assisted with building housing and community infrastructure in Aceh and Java.

The following chapter discusses determining factors that led to the Government's initiative to use a community-based approach. It covers how assistance was coordinated, which government agencies were involved, and how Rekompak evolved in Aceh and was later adapted in Java.

[1] United States Geological Survey: http://www.earthquake.usgs.gov/earthquakes/world/10_largestworld.php
[2] United States Geological Survey: http://www.soundwaves.usgs.gov/2005/01/
[3] Source: Indonesia, Bappenas, 2005. *Indonesia: Preliminary Damage and Loss Assessment, December 26. 2004 Natural Disaster.* 3
[4] *Indonesia: Preliminary Damage and Loss Assessment December 26, 2004 Natural Disaster*
[5] All dollar amounts refer to US dollars.
[6] *Indonesia: Preliminary Damage and Loss Assessment December 26, 2004 Natural Disaster.* 64
[7] Source: Indonesia, Bappenas, 2005. *Indonesia: Preliminary Damage and Loss Assessment, December 26. 2004 Natural Disaster.* 19
[8] Indonesia, Bappenas, 2006. *Indonesia: Preliminary Damage and Loss Assessment Yogyakarta and Central Java Natural Disaster.* 7
[9] GIZ was formerly known as GTZ (*Gesellschaft fűr Technische Zusammenarbeit*)
[10] Indonesia, Bappenas, 2006. *Indonesia: Preliminary Damage and Loss Assessment Yogyakarta and Central Java Natural Disaster.* xi
[11] The formal name for both the MDF and JRF housing projects is the Community-Based Settlement Rehabilitation and Reconstruction Project (CSRRP). Both the projects and approach are referred to, throughout this book, by the popular name, Rekompak, which is an acronym based on the Indonesian name of the project, *Proyek Rehabilitasi dan Rekonstruksi Masyarakat dan Permukiman Berbasis Komunitas.*

CHAPTER 2

Disaster Response and the Recovery of Communities

The Javanese tradition of *Gotong Royong*, working collectively for the common good, was a good fit with the Rekompak approach. Here construction workers help each other haul cement in Batur, Yogyakarta Special Region.

Photo: Fauzan Ijazah
for JRF Secretariat

Chapter 1 described the heart wrenching devastation in Indonesia following catastrophic natural disasters which included the 2004 Indian Ocean tsunami in Aceh and Nias, the 2006 earthquake in the Special Region of Yogyakarta and Central Java, an earthquake and tsunami in West Java, and the volcanic eruptions of Mount Merapi. The scale of these disasters required a massive reconstruction effort. Not only houses, but entire communities needed to be rebuilt.

Chapter 2 relates how the Government of Indonesia and international donors took the bold decision to put communities in charge of their own recovery in the areas that directly affected them – housing and local infrastructure. This chapter has two sections: the first outlines how assistance for the reconstruction was coordinated following the 2004 tsunami and discusses the establishment of the Multi Donor Fund for Aceh and Nias (MDF); the second relates how the recovery took shape in Java following the May 2006 earthquake and subsequent disasters, and discusses the establishment of the Java Reconstruction Fund (JRF). The critical roles played by the Government of Indonesia and other stakeholders are also discussed. The chapter explains how Rekompak was started to meet enormous needs in Aceh, and how the program was adapted and evolved in Java when tragedy struck there. It concludes with a summary of the remarkable results achieved by Rekompak in Aceh and in Java.

COORDINATING THE DISASTER RESPONSE AND RECONSTRUCTION OF HOUSING IN ACEH AND NIAS

Planning and coordinating the large scale effort to rebuild Aceh and Nias was an enormously complex task. In addition to the monumental loss of life and property resulting from the tsunami, Aceh's post conflict situation had resulted in a weakened civil service, poor infrastructure, low economic growth, and a population with little confidence in government. The Government of Indonesia recognized that not only infrastructure and housing, but trust and good governance needed to be rebuilt. Aware of the urgency, the Government, with support of the international community, acted quickly to begin the mammoth task of assessing losses and devising a strategy for support.

The tsunami that devastated Aceh and Nias on December 26, 2004 was the worst natural disaster in Indonesia's recorded history.[1] The next day, December 27, Indonesia's President, Susilo Bambang Yudhoyono, issued a decree declaring the earthquake and tsunami a national disaster. This meant that the Government of Indonesia, under national law, would be in charge of recovery for Aceh and Nias. The president also issued directives aimed at organizing a coordinated response. A team of 80 specialists led by Bappenas conducted a Damage and Loss Assessment (DaLA) in the record time of two weeks. The DaLA team included representatives from the Government of Indonesia, NGOs and international agencies, including the World Bank and UNDP. Findings were presented on January 19, 2005 at a Consultative Group for Indonesia[2] meeting held in Jakarta. The total damage and losses for Aceh and Nias were initially estimated at approximately $4.5 billion. The assessment, which was later amended to add losses not initially included, was used by the Government of Indonesia as the basis for its request for financial support. The final figure for damage and losses was estimated to be $6.2 billion including inflation.

Government leadership at various levels was critical to the success of both the JRF and the MDF. Here, Government of Indonesia and World Bank representatives discuss the reconstruction of Java at a seminar organized by the JRF.

Photo:
JRF Secretariat

Support from around the World

The stark scenes of devastation and human suffering in the wake of the earthquake and tsunami were broadcast around the world, triggering unprecedented support. The national and international community mobilized quickly to provide help. More than 900[3] international organizations rushed to offer assistance to Aceh, along with many national and international donors. The Indonesian military and some international military units arrived in Aceh shortly after the disaster. The response resulted in a monumental national and international relief effort. The total amount from various donors, humanitarian organizations, and the private sector would eventually reach $6.7 billion committed for the reconstruction of Aceh and Nias.

The Agency for the Reconstruction and Rehabilitation of Aceh and Nias (BRR) leads an MDF Steering Committee meeting attended by the Governor of North Sumatra and Vice Governor of Aceh. The JRF and MDF were each governed by a Steering Committee co-chaired by the Government of Indonesia, the World Bank as Trustee and the European Union, the largest donor for each of the funds. The committees met as needed to allocate funds, monitor progress, and discuss strategy and policy.

Photo:
Inge Susilo
for MDF Secretariat

This significant and generous flow of humanitarian assistance required coordination and the Government of Indonesia took on the task. There was no precedent to follow. It was critical to ensure that aid was more or less equally distributed, including to more remote areas, in order not to exacerbate the existing conflict. Some donors worked more quickly than others and many different methods and approaches were used. Areas that were easier to reach were flooded with assistance while other locations received little or no initial help. Standards for housing reconstruction had to be set so that beneficiaries received houses of similar quality and size. The Government recognized that differences could be perceived as discriminatory and could ignite social discord if not carefully managed and coordinated. It was hoped that with good coordination and involvement of many stakeholders, including the affected communities, the rebuilding process could bring people together.

On April 16, 2005 the Agency for the Reconstruction and Rehabilitation of Aceh and Nias[4] was established by the Government of Indonesia and tasked with coordinating the overall reconstruction effort. This agency, known widely by its Indonesian acronym, BRR, represented the Government of Indonesia in Aceh and Nias and was responsible for the coordination of the overall reconstruction as well as implementation of the Government of Indonesia's own reconstruction efforts. Its mandate was to design policies, strategies and action plans, within an atmosphere of transparency and accountability, and to implement these through effective leadership and coordination of the combined domestic and international efforts to rebuild Aceh and Nias. The agency worked closely with provincial and district governments and promoted equitable reconstruction in all affected cities and districts.

One of the strengths of the BRR was that it was given ministry status and that it was considered to be "outside" of the Indonesian civil service due to the emergency nature of its activities. As a result, it was able to avoid some of the red tape and bureaucracy of regular operations that could otherwise strangle its effectiveness. This resulted in greater efficiency and faster response.

Coordinated Reconstruction Assistance—The Multi Donor Fund

Recognizing the need for a coordinated approach to long term reconstruction and recovery, the Government of Indonesia requested donors to consider pooling their resources. Fifteen donors responded and *The Multi Donor Fund for Aceh and Nias* (MDF) was established in April 2005. The fund pooled approximately $655 million to support implementation of the government's rehabilitation and reconstruction agenda. At the request of the

Government of Indonesia, the World Bank acted as trustee responsible for managing the MDF.

Donor Contributions
The Multi Donor Fund for Aceh and Nias (MDF)

Source	Contributions in US$ million
European Union	271.31
Government of the Netherlands	146.20
Government of United Kingdom	68.50
World Bank	25.00
Government of Sweden	20.72
Government of Canada	20.22
Government of Norway	19.57
Government of Denmark	18.03
Government of Germany	13.93
Government of Belgium	11.05
Government of Finland	10.13
Asian Development Bank	10.00
Government of United States	10.00
Government of New Zealand	8.80
Government of Ireland	1.20
Total Contributions	**654.66**

The MDF was designed to fill gaps in the overall reconstruction as identified by the government, and worked in six outcome areas: (1) recovery of communities; (2) recovery of large infrastructure and transport; (3) strengthening governance; (4) sustaining the environment during the recovery; (5) enhancing the overall recovery process; (6) and supporting livelihoods and economic development. Rekompak contributed to the first outcome, recovery of communities, through rebuilding houses and community infrastructure.

The Multi Donor Fund for Aceh and Nias was based on a partnership between the international community, the Indonesian government and civil society, including the affected communities. It supported the recovery of Aceh and Nias by providing grants for quality investments based on good practice, stakeholder participation and coordination with others. In doing so, the MDF also sought to reduce poverty, strengthen capacity, support good governance and enhance sustainable development.

The Government of Indonesia represented by Sri Mulyani Indrawati, then the State Minister for National Planning and head of Bappenas, made it clear to donors at a Forum on Aid Effectiveness in February 2005 that coordination was essential for the reconstruction in Aceh. Sri Mulyani requested donors to consider financing through the Government's budget. She highlighted the MDF, which was then already being planned, as a good example of coordination among donors and between the government and donors. International experience has shown multi donor trust funds to be an efficient, accountable and transparent way of harmonizing donor inputs and increasing aid effectiveness. They can operate even in situations where government is weak as may be the case in post disaster situations such as in the aftermath of wars or natural disasters.

The MDF was governed by a Steering Committee which included representation from all stakeholders. It included six government representatives, two members representing Aceh and Nias civil society organizations, donors who had contributed at least $10 million and the trustee, the World Bank. All had voting rights. Observer status was extended to representatives from an international NGO consortium and the United Nations (UN). Other international donors active in Indonesia were invited as observers. This resulted in an inclusive consortium that could play a role in policy dialogue. A Technical Review Group was established to prepare the groundwork before a policy or project was submitted for approval to the Steering Committee which resulted in more efficient meetings.

> *"Coordination does not happen by bringing donors together for weekly coordination meetings. It happens by bringing donor funds into the government budget under a recovery and reconstruction strategy."*
>
> *Sri Mulyani Indrawati, former Indonesian State Minister for National Planning*

The BRR was a co-chair of the MDF and responsible for vetting and forwarding proposals for funding to the Steering Committee. At the end of its tenure in 2009, the BRR's coordination role was taken over by Bappenas, which then became a co-chair of the MDF, and the Government of Aceh also became a co-chair. Other co-chairs were the European Union, the MDF's largest donor, and the World Bank as trustee of the fund. The MDF Secretariat reported on the status of achievements to the Steering Committee, donors and the public through its semi- annual and annual reports.

'Build Back Better' and the Reconstruction of Housing

To guide the coordination and implementation of recovery programs in Aceh and Nias, the Government of Indonesia developed a Master Plan based on the Damage and Loss Assessment. The plan was called the *Rehabilitation and Reconstruction of NAD[5] (Aceh) and Nias,* presented in March 2005. The Master Plan was based on the principle "build back better." This allowed the reconstruction to respond to a wide range of needs. Mitigation and preparedness in the event of future natural disasters was highlighted as integral to the reconstruction.

One of the components of the master plan was the *Comprehensive Human Settlements Rehabilitation and Reconstruction Strategy* which provided an overall approach for repair and reconstruction of housing.[6] This strategy and its subsequent revised version, the Action Plan, served as the basis for all housing and small scale community infrastructure programs undertaken by

With supply lines and transportation networks seriously interrupted, food and other essential supplies were not readily available following the tsunami. The MDF assisted with transportation and logistics under a project implemented by the World Food Programme (WFP). The WFP project also supported the shipment of building materials to remote locations unreachable by road.

Photo:
Chris Clark
MDF Photo Competition

various donors. The purpose was to ensure consistency and transparency and to underscore the importance of community participation.

Aceh presented unique challenges as a post-disaster recovery situation within a post-conflict environment. Local government and civil society capacity was low as a result of the years of conflict. Transport, infrastructure, the economy and social services were severely impacted not only by the earthquakes and tsunami but because of neglect during the years of conflict. On top of this the extreme loss of life, extensive injuries, incomprehensible devastation and deep grief of the survivors combined to make the task of rebuilding extremely difficult.

The Damage and Loss Assessment recommended that in addition to houses and markets, social structures needed to be rebuilt and that the affected communities should participate in the reconstruction. Not everyone agreed. From the beginning there were those in favor of a community-based approach that would place beneficiaries in control of the rebuilding process from spatial planning to the actual construction of their homes and small scale infrastructure. But there were also many who believed that such a community-driven approach would not work given the huge scale of needs in Aceh.

(Left Photo) The Indonesian and International Red Cross, and humanitarian aid workers from across Indonesia, the region, and around the world rushed to Aceh and Nias to provide assistance following the disasters.

(Right Photo) The Indonesian military distributes water to survivors. The Indonesian military distributed food, medical and other relief supplies and were involved in many operations such as clearing tsunami debris to open access roads.

Photos:
Antara News Agency

The Birth of Rekompak

In the aftermath of massive natural disasters reconstruction of homes is often completed by experienced builders and professional contractors. Some stakeholders thought this would be the most expedient way to proceed. From the beginning, however, Bappenas and BRR, both representing the Government, championed the community-based approach embedded in two national-level poverty reduction programs, the Urban Poverty Project (UPP) and the Kecamatan Development Program (KDP). Both of these programs were already being implemented on a small scale in Aceh prior to the earthquakes and tsunami. The projects aimed at empowering communities to have a say in their own local development planning, and provided block grants of approximately $30,000 per village to support local development activities prioritized and implemented by the communities. Most of the activities focused on the construction of small-scale local infrastructure such as village roads and bridges, water systems, jetties, or market facilities. The idea of applying this approach to the reconstruction of houses after the disaster, however, meant entrusting communities with up to one hundred times more money than had been the case under UPP or KDP.[7]

Rekompak: What's in a Name?

The MDF housing reconstruction project is formally titled the Community-Based Settlement Rehabilitation and Reconstruction Project, or *Proyek Rehabilitasi dan Rekonstruksi Masyarakat dan Permukiman Berbasis Komunitas.* When the project was being designed an appropriate short composite acronym was sought that would resonate with communities. A few acronyms were proposed and Rekompak was selected.

REKO = **Re**habilitasi dan **Reko**nstruksi
M = **M**asyarakat dan
P = **P**ermukiman
A = Berb**a**sis
K = **K**omunitas

In Indonesian **Rekompak** conveys the meaning of "reunion" and to increase cohesiveness and become solid again – in this case, as a community. The name **Rekompak** embodies the spirit of the community-based approach and captures the essence of this project that works to rebuild lives and communities.

There were experts in a variety of fields who thought a community-based approach would never work. They cited as obstacles to success the possibility of corruption, difficulty in procuring materials, lack of skills, and the complexity of the projects for ordinary citizens not trained in construction. After much discussion a consensus emerged in which stakeholders agreed that it wasn't just houses that had to be rebuilt but communities and livelihoods as well. The Government of Indonesia recognized that this could only happen if the approach was seen as equitable, efficient and truly participatory. It needed to capture the aspirations and visions of the people of Aceh and Nias. The Government of Indonesia led the decision and the World Bank, the MDF and the donors agreed to use a community-based approach. This decision resulted in the project that came to be popularly known as Rekompak.

Community members measuring the foundation of a Rekompak house. Rekompak's community-based approach places responsibility for rebuilding settlements into the hands of the community. Facilitators trained by the Ministry of Public Works provided technical advice and trained beneficiaries who learned new skills in the process.

Photo:
Catrini Kubontubuh
for KRRP Team

The MDF Rekompak project applied the community-based approach employed by KDP and UPP, building on experience and implementation mechanisms such as participatory decision making processes and block grants managed by communities. The MDF Rekompak employed facilitators trained by KDP and UPP as a bridge to scaling up the community-based approach to respond to the massive reconstruction needs in Aceh following the tsunami. Local governments and communities in Aceh were familiar with the objectives and approach of the UPP and KDP projects and this meant it took less time to put together the Rekompak project, which allowed a more rapid response than would otherwise have been the case.

> *"We always stress to the communities that foreign aid is only a tool that helps people help themselves. Rekompak has done that."*
>
> *Bayudono, Government of Yogyakarta*

The Rekompak project, implemented by the Government of Indonesia through the Department of Public Works and the BRR, provided financial and technical support directly to communities and neighborhood groups to reconstruct houses and in the process rebuild their communities. Few villagers knew how to build a house or keep financial records, however. Training and facilitation were crucial to support communities to learn about construction methods, accountability, record keeping, procurement of materials, financing and how to take part in meetings and decision making, all time consuming endeavors. But the Rekompak project has demonstrated that the extra effort results in more than just new houses. The approach empowers communities and individuals and leads to mastery of new skills. It results in beneficiaries' tremendous satisfaction with the process, in transforming their houses into homes, and in creating strengthened communities.

Setting up Rekompak

Rekompak is based on partnerships of trust: the Government of Indonesia, donors, the World Bank, local governments, local stakeholders and communities all worked together during the rebuilding process. The Government of Indonesia led the reconstruction through the BRR and later Bappenas. The Ministry of Public Works liaised closely with local governments and other stakeholders. Trust was placed in communities to

plan and rebuild their homes and local infrastructure. Funds were channeled directly to communities, where housing groups managed and accounted for the funds. The trust fostered through the partnership between government, communities and donors accounts for Rekompak's success in Aceh.

While Rekompak built on the rich experience of the community-driven Urban Poverty Project and the Kecamatan Development Project, the approach had never been tested for large scale reconstruction such as that required in Aceh. The Goverment initiated a pilot of community based housing through the already ongoing Urban Poverty Project under the Ministry of Public Works.

> *The key aspect of the Rekompak model is a partnership between (all levels of) government…through a clear and enabling policy, and the communities as decision-makers, with the facilitators having an intermediate role of promoter and catalyst. Basically the model fully puts trust in the community to take appropriate decisions affecting their daily life and surroundings.*
>
> *Ministry of Public Works, Project Completion Report for JRF Rekompak Project, 2012*

These three photos show Gampong Baro, Banda Aceh, a pilot site used to test the community-based approach for housing reconstruction through the existing UPP project under Ministry of Public Works. The pilot program was successful and lessons learned were incorporated into the design of the Rekompak project.

Photos:
Left & Middle: Kristin Thompson for MDF Secretariat
Right: Rekompak Team

The pilot program was successfully implemented over the course of a year, and lessons learned were carefully captured and used to develop the Rekompak project funded by the MDF which was implemented on a province wide basis. One of the lessons learned was that it is essential to train facilitators, as they are the key to successful reconstruction. Capacity strengthening for government agencies, including local governments involved in implementing and monitoring the project, was also recommended and incorporated. In addition, beneficiaries, community committees and planning groups were targeted for capacity strengthening. To ensure accountability, an anti-corruption plan was prepared and the program put procedures in place to encourage and support women's participation in project activities.

Scaling up efforts to meet the immense needs in Aceh following the tsunami meant facing what at times seemed like insurmountable challenges. These challenges included working with depleted and weakened local governments, motivating seriously traumatized survivors, resolving land issues, and recruiting and retaining an adequate number of facilitators who could support the community-based approach and provide technical advice on construction. Rekompak and other rebuilding projects also had to deal with a lack of building materials as well as price hikes due to scarcity of supplies and increased demand. By working together with beneficiaries and local governments each of the challenges was met and addressed. How this was accomplished is discussed in Chapters 3 and 4.

How the Rekompak Approach Works

The Rekompak community-driven approach places responsibility for rebuilding settlements in the hands of the communities. Groups of 10-15 families were formed to take charge of rebuilding their own houses. The groups decided in what order to distribute funding to each family and all members of the group contributed to the rebuilding process. A key component of the approach is the development of a community spatial plan by each village to serve as the guiding document for rebuilding. Village teams were formed to rebuild priority infrastructure. Facilitators trained by the Ministry of Public Works were assigned to help communities prepare and implement their projects. Grants from the MDF and JRF were deposited directly into community accounts. Funds were released in Installments based on progress as defined by agreed-upon milestones.

COORDINATING RECONSTRUCTION ASSISTANCE AND REBUILDING HOUSING IN JAVA

Indonesia is never far away from the force of natural disasters. In May 2006 calamity struck Indonesia once again when Yogyakarta and Central Java were hit by an earthquake. The number of casualties was fortunately lower than in comparable disasters but because of the damage and losses sustained, this earthquake ranks among the most costly natural disasters in the developing world over the past ten years.[8] Initial damage and losses were estimated at $3.1 billion; the housing sector accounted for more than half of this amount.[9]

Less than two months later, in July 2006 a tsunami occurred in West Java. These events left a path of lost lives, destroyed homes and infrastructure, and hundreds of thousands of displaced survivors. Damage and losses reached an estimated $112 million.

In July 2006 the Government of Indonesia released the *Action Plan for Rehabilitation and Reconstruction for Post-disaster Central Java*. The Action Plan was based on the Damage and Loss Assessments and provided

A beneficiary shows her land certificate to Mrs. Agnes van Ardenne, Netherlands Minister for Development Coorperation, during her visit to Blang Oi, Aceh, in 2006. The Netherlands was one of 15 contributors to the MDF.

Photo:
Kristin Thompson
for MDF Secretariat

guidelines for the overall reconstruction and rehabilitation of the affected areas. Three areas were prioritized: rehabilitation of housing and residential areas, rehabilitation of public facilities, and reactivation of the economy.

The damage and losses in Java were different from those in Aceh in that most of the large scale infrastructure was not damaged and the losses to local governments were minimal. As in Aceh, many homes were destroyed but the situation was much less daunting than had been the case for Aceh and reconstruction was able to proceed more quickly. In Aceh much of the land had simply disappeared into the sea and in many cases communities had to be rebuilt in new locations. In Java, land was mostly intact and property boundaries were in place, which meant that after a cleanup, communities could be rebuilt on the same land.

Coordinating the Disaster Response in Java

The disaster in Java did not lead to a declaration of a national disaster because local and provincial governments were not incapacitated as in Aceh and were able to take charge of reconstruction. The Government of Indonesia's National Disaster Management Coordinating Board, together with provincial and district authorities, led the emergency response. A Presidential decree enacted in July 2006 established a Coordination Team to make strategic decisions on possible obstacles that reached beyond provincial borders. The Chair of this team was the Coordinating Minister of the Economy and the Vice Chair, the Coordinating Minister for People's Welfare. The Steering Committee included several ministries and the governments of Yogyakarta and Central Java.

A National Technical Team (TTN) was set up with members from key government line agencies to support the roles and functions of the National Coordinating Team. The TTN was based in Yogyakarta and was the liaison between the national Coordinating Minister for Economic Affairs and the affected provinces. Its role was to coordinate development of a policy framework, define a strategy for reconstruction, and carry out overall monitoring and evaluation.

At the 15th meeting of the Consultative Group on Indonesia (CGI) held in June 2006, the preliminary Damage and Loss Assessment of the May earthquake in Yogyakarta and Central Java was presented. The Minister of Finance called on donors to mobilize support through a multi-donor trust fund, similar to the Multi Donor Fund for Aceh and Nias (MDF). The aim of this strategy was to build on the positive experience and comparative advantages of the MDF such

as the ability to rapidly develop, finance and implement projects; coordinate international resources around common objectives; avoid duplication of effort; create synergies and reduce transaction costs for both donors and the recipient. In particular, the Government of Indonesia appreciated the flexibility of the funds which could be used to complement its own resources through financing of reconstruction and development activities through government agencies as well as other non-government players.

The Java Reconstruction Fund (JRF)

Once again donors rallied to respond. In October 2006, the Java Reconstruction Fund (JRF) commenced operations with the mandate to support the rehabilitation and reconstruction of housing and livelihoods. Contributions from seven donors totaled approximately $94 million. The JRF worked with and was led by Bappenas, which was responsible for the overall coordination of the reconstruction. As with the MDF, the World Bank served as Trustee of the Fund at the request of the Government of Indonesia.

The JRF mobilized donor resources and provided coordinated financial support for the recovery by channeling assistance for community reconstruction and livelihoods recovery in affected areas. The JRF was initially intended to be in operation from October 2006 to October 2009, and was later extended to December 2011.[10]

Donor Contributions
Java Reconstruction Fund (JRF)

Source	Contribution in US$ million
European Commission	51.17
Government of Netherlands	12.00
Government of United Kingdom	10.77
Asian Development Bank	10.00
Government of Canada	6.53
Government of Finland	1.99
Government of Denmark	1.60
Total Contributions	**94.06**

The JRF's governance structure was modeled on the MDF, with a Steering Committee made up of representatives from the Government of Indonesia and donors. The Steering Committee was responsible for setting strategic priorities, endorsing project financing proposals, and monitoring and reporting on progress. The Steering Committee was supported by a Technical

Review Committee (TRC), made up of representatives from donors and local governments, which provided technical review of project proposals and program activities, monitored implementation progress, and made recommendations to the Steering Committee. A Secretariat supported the Steering Committee and managed day to day operations.

Bappenas co-chaired the Steering Committee, along with the European Union as the largest donor, and the World Bank as Trustee. The World Bank served as partner agency, playing a supervisory and oversight role on all JRF projects.

The JRF adopted a phased approach to reconstruction in line with the Government of Indonesia's strategy. The strategy was aligned with the National Action Plan for Rehabilitation and Reconstruction, and focused on the recovery of housing and public infrastructure, and revitalization of the community and regional economy. Early support focused on meeting immediate shelter, housing and community recovery needs, while subsequent support addressed economic recovery. These needs were supported by separate JRF projects.[11]

Beneficiaries lay bricks for the walls of their new homes. In the Rekompak community-based approach, community members themselves are in charge of rebuilding their houses, leading to empowerment and mastery of new skills.

Photo:
Kristin Thompson
for MDF Secretariat

Housing Reconstruction in Java

Based on the successful implementation of the MDF's housing reconstruction project in Aceh, and at the request of the Governor of Yogyakarta, the Government of Indonesia selected the Rekompak approach for reconstruction of housing and community infrastructure in Java. Lessons learned in the proven mechanism of Rekompak in Aceh were applied in Java to further improve performance and results.

More than $75 million, or 80 percent of JRF funds, were allocated to Rekompak to build earthquake resistant houses and community infrastructure. After temporary shelters were built to provide immediate refuge, the Government of Indonesia's priority was to build permanent houses. Using the Rekompak approach developed in Aceh, local government, partners and volunteers were quickly mobilized to begin the reconstruction process in Java. Disaster risk reduction was included in all activities to ensure homes were earthquake-resistant and communities were better prepared to face possible future disasters (See Chapter 4). The JRF built more than 15,000 earthquake resistant houses in Java.

In addition to the houses and activities supported with JRF grant funds through the Rekompak project, the Government of Indonesia also applied the Rekompak approach more broadly for its overall housing reconstruction program in Java, using the Government's own funds. Through this approach nearly 200,000 houses were rebuilt in Java in less than two years, one of the largest and fastest housing reconstruction experiences globally.

Responding to Mount Merapi Eruptions

Rekompak's work in response to the 2006 earthquake and the West Java tsunami was nearing completion when the Merapi eruptions occurred. The Mount Merapi volcanic eruptions severely impacted areas in the province of Central Java and the Yogyakarta Special Region, including 45 villages where JRF project activities were already being implemented. At the time of the eruptions the JRF program was scheduled to close in December 2011.

The Government of Indonesia requested an urgent meeting of JRF donors to discuss the Merapi disaster. In response to the Government's request, the JRF Steering Committee agreed to extend the JRF's program for an additional year, until December 2012, in order to assist victims of the Merapi eruptions. The Steering Committee allocated $3.5 million of remaining available JRF funds to Rekompak to address reconstruction needs arising after the Merapi

eruptions. Because Rekompak still had activities and facilitators on the ground in the affected area, it was possible to mobilize a quick response and scale up support through the existing Rekompak mechanism. Given this ability to scale up, the JRF was able to provide the first significant allocation for Merapi while other support was being organized.

Adapting Rekompak to the Java Context

The reconstruction of Aceh had proven the value and the efficacy of using a community-based approach. It was clear that when people are empowered to have a say in how their homes and communities are to be rebuilt within boundaries and guidelines, high home owner satisfaction results. On the other hand, when communities are not able to make their own decisions this often results in dissatisfied beneficiaries and homes that are not occupied. The Government made the decision to once again adopt a Rekompak community-based approach for the reconstruction in Java to build simple and earthquake-resistant housing for people who had lost their homes in the earthquake. The Government of Indonesia also expected to see communities rely on their own "resources to continue with their housing rehabilitation efforts so they can build their living environment in the future."[12] This provided the rationale for building core houses in Java that were flexible to individual needs and desires rather than the complete houses provided in Aceh.

> *"People rebuilding their homes are also taking responsibility for rebuilding their lives – a key part of the healing process. Their passion and intense personal interest in rebuilding their homes is also the most powerful tool to utilize for effective monitoring of the flow of funds to prevent corruption and malfeasance."*
>
> *Mid-Term Evaluation of the JRF, April 2009*

Strong commitment from the government resulted in a well-coordinated, swift reconstruction effort. The national government delegated implementation of reconstruction to the two provincial governments which ensured ownership at the local level. It also enabled the provinces to design localized strategies suited to their respective communities. The support provided by the TTN to the National Coordinating Team to

coordinate the reconstruction was crucial to the speed and effectiveness of the reconstruction process. The TTN brought together various stakeholders at monthly coordination meetings until its closure in 2008, when Bappenas took over the coordination role. The international community also played an important role in strengthening the government's effort and those of national civil society groups in emergency response.

Chapter 2 provided information about how the disaster response in Aceh and Java was coordinated and the roles played and contributions made by the Government, donors, the MDF, and the JRF. It explained how the MDF and JRF were established and how the stage was set for implementation of the Rekompak projects. This concludes Part 1 of the book.

Part 2 focuses on how Rekompak works. Chapter 3 relates how the project is organized at field level - how community planning is done, how housing groups and other committees are formed, and how funds are managed by the community groups.

[1] Indonesia, Bappenas. *2005. Indonesia: Preliminary Damage and Loss Assessment, December 26. 2004 Natural Disaster.* Foreword.
[2] The Consultative Group for Indonesia (CGI) was set up by the Government of Indonesia and The World Bank to work together with international donors from 1992 to 2007 to alleviate Indonesia's foreign debt and support Indonesia's development.
[3] Sudiatmo, Bambang; Susilo Kasru; Sarosa, Wisnubroto. *The Executing Agency of Rehabilitation for Aceh and Nias* (BRR NAD-NIAS), 2009. 3
[4] BRR: Badan Rekonstruksi dan Rehabitlitasi Nanggroe Aceh Darussalam-Nias or the Agency for Reconstruction and Rehabilitation of Aceh and Nias
[5] NAD stands for Nanggroe Aceh Darusalaam which was the formal name of Aceh province at the time of the tsunami.
[6] In July 2007 BRR presented the Action Plan, a revised version of the Master Plan.
[7] The UPP and the KDP projects evolved into *Program Nasional Pemberdayaan Masyarakat (PNPM Mandiri) Perdesaan and Perkotaan,* the Government of Indonesia's premier cluster of programs for community-based poverty reduction.
[8] *Preliminary Damage and Loss Assessment Yogyakarta and Central Java Natural Disaster.* June 2006. Executive Summary.
[9] *Preliminary Damage and Loss Assessment Yogyakarta and Central Java Natural Disaster.* June 2006. 12, 15
[10] The JRF was again later extended to December 2012 in order to respond to the eruptions of Mount Merapi.
[11] See Java Reconstruction Fund Final Report 2012.
[12] *Living in Disaster Prone Area,* TTN 2007. 44 (as quoted in Mid-Term Evaluation (MTR) of the Java Reconstruction Fund (JRF), April 2009).

PART TWO

CHAPTER 3

Planning and Organizing for Community-Based Reconstruction

A Rekompak facilitator points out housing options at a community meeting for villagers affected by the Merapi eruptions in Cangkringan, Yogyakarta Special Region.

Photo: Fauzan Ijazah
for JRF Secretariat

The previous chapters discussed some of the major natural disasters that befell Indonesia between 2004 and 2010, how the Government of Indonesia responded with the assistance of national and international organizations and citizens, and how the reconstruction efforts were coordinated. Chapter 3 describes the planning and set up required to implement a program like Rekompak, based on how the program developed in Indonesia.

The chapter is divided into two sections. The first part describes the preparation and planning process for community-based reconstruction of housing. It discusses briefly how beneficiary communities were identified, the setting up of local operating procedures and systems and the roles of different levels of government in setting the scene for Rekompak to be implemented. The second section discusses how Rekompak projects were established including processes associated with the implementation of the program, the process of preparing Community Settlement Plans, and how funds were managed and disbursed. The descriptions in this chapter draw on experience from both Aceh and Java. Rekompak, as it was applied in Java, benefitted from the experience and lessons learned in Aceh. Therefore, the examples used are often based on project implementation in Java.

THE REKOMPAK APPROACH

In the Rekompak community-driven approach the beneficiaries are at the center of the action. All decisions are made by the community members themselves: confirming who is eligible for assistance, how the community will be planned, what types of houses will be built, the community infrastructure that is needed and how maintenance will be handled.

The Rekompak approach requires homeowners to be in charge of the reconstruction or rehabilitation of their homes. This leads to higher levels of both quality and satisfaction as compared to other approaches to reconstruction of housing after disasters. Under the Rekompak project, disaster-affected communities were given the opportunity to rebuild their homes and community infrastructure with funding channeled directly to them through the government's budget in the form of block grants. Homeowners could reconstruct the houses by themselves, together with their neighbors, or with the help of hired laborers under the supervision of the homeowner. Facilitators provided technical assistance and supervision. Beyond the core requirements of quality and standards, the approach

allowed flexibility in applying individual preferences and personal style to housing design, resulting in high beneficiary satisfaction.

Rekompak is based on the principles of transparency and participation. Beneficiaries take part in planning the reconstruction of their communities, making decisions through a participatory process regarding who is eligible to receive benefits, where, what and how to rebuild, and how the money is spent. They are involved in all aspects of the construction process and oversee fund management. All transactions and records are open and transparent. Effective complaint handling mechanisms help ensure accountability and deter corruption.

The Rekompak approach empowers communities to make decisions and to organize their own settlement recovery, giving them a sense of control of their future after emerging from a past beyond human control. With its basis in mutual cooperation, Rekompak at the same time supports survivors in the healing process. When the rebuilding activities begin, beneficiaries are often still traumatized by the horrific events they have survived, the loved ones they have lost, or the injuries they have suffered. Working together with

Rekompak facilitators and members of a World Bank supervision mission discuss layout, progress, and challenges of a community settlement plan.

Photo:
JRF Secretariat

The Rekompak Objective is to increase the ability of communities to restore adequate living conditions, by building seismic-resistant houses and organizing settlements. This is accomplished by increasing community capacity to:

- construct seismic-resistant houses;
- include disaster risk reduction in Community Settlements Plans (CSP); and
- develop neighborhood infrastructure in disaster affected areas based on the Community Settlement Plan (CSP).

family members and/or neighbors to reconstruct their communities has a restorative effect on the spirit, and the aspect of neighbor-helping-neighbor is integral to the approach. Rekompak is designed to empower devastated communities to initiate - and themselves direct - the process of rebuilding

Detailed models of different housing types and a contour site model, based on a Community Settlement Plan (CSP), depicting the proposed layout for a community being relocated away from Mt. Merapi's danger zone. The community settlement planning process supports social accountability, transparency, and effective targeting leading to strong community ownership.

Photo:
JRF Secretariat

their lives and their homes. Seeing their homes and communities slowly but surely take shape as a result of their own efforts helps beneficiaries envision a future beyond the tragedy they have experienced.

> *"Most of the time we look at the victims of disaster as helpless people with no capacity, in need of some sort of charity. Rekompak believes the other way around. Rekompak believes that these people have capacity, that they do want to be participating in the reconstruction."*
>
> *George Soraya, World Bank Indonesia, Team Leader for Rekompak*

The Rekompak approach is effective for in situ reconstruction as well as for situations that require communities to move to new locations. In Aceh, hundreds of miles of coastline that had supported thriving communities simply disappeared into the ocean. Survivors from these communities had to move to other locations - to land they owned or land granted by provincial or local government. Other communities in Aceh were able and chose to rebuild in the exact locations where their homes had been before the tsunami. After the earthquake in Central Java, housing reconstruction was simpler because most people could rebuild in the exact location where their former homes had been, without requiring complicated land acquisition and relocation issues. Response to the volcanic eruptions of Mount Merapi, however, resulted in the relocation of several communities. These communities were located within the "red zone," an area deemed unsafe for human settlements because it is in the direct path of possible lava flows or exposure to poisonous gases when the highly-active Merapi volcano erupts. Voluntary relocation was offered to these communities. A community-based, decision-making process was followed to decide where they would relocate, and this process took some time. The challenges presented by the varying requirements of the different disasters cannot be underestimated.

Rekompak is a constantly evolving and flexible approach that can be adapted to meet conditions in a variety of contexts and environments. In Indonesia, the Rekompak approach has been successfully used in situations devastated by tsunamis, earthquakes and volcanic eruptions. In Aceh, it worked in an environment that was not only a post-disaster situation but also a post-conflict situation.

Posters Disseminating Project Information

Good communications is a key factor in the success of community-based reconstruction programs. Posters such as these disseminate information on topics such as disaster risk preparedness, transparency and accountability, and anti-corruption in the Rekompak program.

Source:
Rekompak Team

STEPS FOR IMPLEMENTING THE REKOMPAK APPROACH

Housing Reconstruction within the Overall Reconstruction Framework

Immediately after a disaster some kind of preliminary damage and loss assessment is usually prepared determining losses and assessing needs. This document typically serves as the basis for the reconstruction plan and funding requests. The emergency response phase that covers the first several months following a disaster is of a relief nature, and meets emergency medical needs, provides temporary shelter, food water, and sanitation facilities, clears debris, and salvages what remains of homes and assets. Psychological and social services are provided for survivors and assistance is given to locate missing family members and to bury those who did not survive. Various levels of government perform different roles with support from humanitarian agencies. During this phase, initial funding for reconstruction is secured, needs are identified in greater detail, and the planning for rebuilding begins. Communities also start to come together during this phase to think about how they can rebuild their homes, their communities, and their lives.

The Government of Indonesia released its Master Plan for Rehabilitation and Reconstruction of Aceh and Nias based on the Damage and Loss Assessment in March of 2005, three months after the tsunami. The Plan included details of the reconstruction required in Aceh, but it was not a blue print for how to go about rebuilding. The principle of “build back better” was included in the Master Plan and this became the slogan for reconstruction activities in Aceh and Nias.

Indonesian Levels of Government

Indonesian	English
Nasional	National Government
Provinsi	Provincial
Kabupaten atau Kota	District or City
Kecamatan	Sub-District
Desa	Village
Dusun	Sub-village

In April 2005, the Government of Indonesia established the Agency for the Rehabilitation and Reconstruction of Aceh and Nias (BRR) to coordinate and oversee the rebuilding of Aceh, as described in Chapter 2. The Multi Donor Fund (MDF), which pooled donor financing, was established around the same time and worked closely with the Agency for Reconstruction. The Rekompak project was approved by the MDF Steering Committee in May 2005. By that time the Rekompak approach was already being piloted by the Ministry of Public Works in collaboration with the Government's on-going Urban Poverty Program in one of the worse-hit villages in Banda Aceh, Gampong Baro. By December 2005, the Government had identified the communities that would receive assistance through Rekompak. The next step was to set up operations at the local level.

Housing group members in Aceh meet to discuss and monitor progress. Rekompak contributed to viable and sustainable communities by empowering beneficiaries to make decisions regarding their future.

Photo:
Kristin Thompson
for MDF Secretariat

The immediate response to the Java disaster was different to that in Aceh, given the scale, type of destruction, and the lessons learned during the Aceh experience. At the national level, the Government of Indonesia established a National Coordinating Team for Reconstruction and Rehabilitation of earthquake affected areas in Java – this was significantly different to the special ministerial level agency (BRR) set up under the Aceh reconstruction efforts. The National Coordinating Team for Java was made up of representatives from existing government agencies and included the Ministry of Public Works, the Coordinating Ministry for Economic Affairs, the National Development Planning Board, the provincial governments of Central Java, West Java, and Yogyakarta, and the Ministry of Finance. The team served as the policy-making and advisory body for the Rekompak project in affected areas of Java.

At the provincial level, a provincial government-appointed Project Implementation Unit was set up for each of the three affected provinces (Yogyakarta Special Region, Central Java and West Java). The role of the implementation unit was to provide coordination between different reconstruction entities, thereby supporting a coordinated reconstruction effort.

The Government of Indonesia released a plan modeled after Aceh's Master Plan for Rehabilitation and Reconstruction, in this case called the Action Plan for Rehabilitation and Reconstruction, following the earthquake in Yogyakarta and Central Java. The Action Plan was released on July 17, 2006, the same day that a tsunami struck the south coast of West Java. The Government of Indonesia, represented by Bappenas, drafted the general guidelines on reconstruction and rehabilitation. The provincial governments of Central and West Java and Yogyakarta Special Region drafted detailed plans for reconstruction and rehabilitation of their respective areas, which became annexes to the main Action Plan.

The Government of Indonesia and the Governor of Yogyakarta, Sri Sultan Hamengkubuwono X, were keen to use Rekompak's Aceh experience in the reconstruction of housing in Java and specifically requested for Rekompak to be implemented there. Again, the Ministry of Public Works piloted the Rekompak approach under existing projects as a bridge while institutional arrangements were being set up to implement the program in Java. The JRF Steering Committee approved the Rekompak project in November 2006.

The Java Action Plan emphasized that disaster risk mitigation required special attention through identification of risks, strengthening of institutions and policies, and through educating and building capacity of communities. This emphasis later led to a stronger disaster risk reduction component in the Rekompak activities implemented in Java than had been the case in Aceh.

Challenges in Defining Reconstruction Policy

Policy Making Challenge	Advice to Policy Makers
The reconstruction policy will inevitably be a work in progress that will need to be updated as more information becomes available.	Avoid announcing the details of assistance schemes before collecting relatively reliable data on the households affected, to avoid unmanageable expectations by making commitments to the affected community that may become difficult to keep for logistical or financial reasons.
Affected communities and other stakeholders will need to be consulted about the parameters of the reconstruction policy before those parameters are finalized. Insufficient consultation can establish a dynamic of mistrust that will be difficult to overcome later.	Avoid presenting the reconstruction policy as final before a substantive dialogue concerning reconstruction has taken place with stakeholders.
Decisions made early in the response may affect how reconstruction can be carried out.	Realize that early shelter decisions may affect the options available later in the reconstruction program and think carefully about the longer-term implications of short-term solutions. A decision to move the entire population to camps, as opposed to providing in-situ transitional shelter solutions, for example, could disperse an affected community to such a degree as to make a community-led reconstruction approach nearly impossible.
Announcing the assistance scheme before assessments are conducted may create an incentive for homeowners to damage their houses in order to receive the announced benefit, and result in multiple assessments and extensive processing of grievances.	Conduct at least an initial census and housing damage assessment before announcing housing assistance schemes.

Source: *Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters*, The World Bank, Washington DC, 2010. 30- 31

Temporary Housing

Immediately after a natural disaster, there is a need for temporary housing while permanent housing is being reconstructed. Temporary housing provides a habitable living space for those whose homes have been destroyed while they wait for permanent homes to be rebuilt. The planning process and construction of new permanent housing can sometimes take years rather than months, depending on the scale of the disaster and factors that complicate decision-making, such as land acquisition and deciding whether or not to relocate communities in disaster-prone locations.[1]

Following the tsunami in Aceh, transitional shelters were provided by the Government of Indonesia and national and international humanitarian agencies to families who had lost their homes in the disaster. The Government recognized that due to the scale and complexity of the disaster, housing reconstruction would take a long time. In fact, few permanent houses were completed during the first two years. Rekompak focused its efforts on supporting communities to rebuild permanent housing and therefore did not provide transitional housing in Aceh. The houses provided by Rekompak were completed between two and four years following the tsunami.

In Java, many national and international organizations, as well as the government, provided families with transitional shelters while permanent homes were being constructed. By closely coordinating with relevant

Approximately 7,300 transitional shelters were constructed by JRF through Rekompak and two other projects after the 2006 earthquake. These structures were highly valued by beneficiaries as a means to start rebuilding their lives after the disaster.

Photo:
Kristin Thompson
for JRF Secretariat

stakeholders and implementing agencies, displaced families in Java were provided with adequate shelter while their permanent homes were being rebuilt. The Java Reconstruction Fund (JRF) built nearly 7,300 transitional shelters in Yogyakarta and Central Java under two specific projects as well as through Rekompak.[2]

The provincial governments of Yogyakarta and Central Java, together with the UN-led Early Recovery Cluster, developed a joint strategy to accelerate the reconstruction process. This strategy addressed the need for temporary housing, while adhering to the government's plan for permanent housing reconstruction. Permanent housing construction got underway and was completed much more quickly in Java than had been the case in Aceh, due in large part to the lessons learned from the experiences in Aceh. In fact the housing reconstruction process in Java proceeded so much more quickly than initially expected that the number of transitional houses needed was reduced.

The temporary shelters did not go to waste. Some beneficiaries used their temporary shelters as an extension to their house, for example as a kitchen, storage place, or small shop. Others used some of the materials, especially roofing, for their permanent homes.[3]

Housing Assessments and Identifying Eligible Communities

Data collected during early assessments provide critical evidence for establishing the reconstruction policy. However, it is highly likely that not all the necessary information will be available when the early rapid assessment is carried out. Thus a subsequent housing damage assessment is needed to more accurately estimate the specific housing recovery needs and to identify which communities are eligible to receive assistance in reconstructing or repairing their homes. Identifying which communities or households are eligible for housing reconstruction assistance is a sensitive challenge. In order to prevent tensions and possibly conflict, a transparent process and clear criteria must be employed.

The Damage and Loss Assessments completed following the disasters in Aceh and Java were used to help determine which communities were eligible for reconstruction. Criteria considered included:

- degree of physical damage to houses and infrastructure
- size of population remaining
- willingness of community to implement community-based settlement rehabilitation and reconstruction

- willingness to enter into an agreement with local government
- reconstruction commitments by other NGOs or donors
- number of housing units in need of reconstruction or rehabilitation that do not have rebuilding commitment from another donor
- ease of accessibility and coordination, and
- availability of funds.

In Aceh, after the Government determined the affected areas that would be eligible for reconstruction by donors, villages to be covered by MDF Rekompak reconstruction were assigned. In December 2005, the Government selected 100 urban and 100 rural villages[4] in Aceh from among the most severely affected by the tsunami and earthquakes for MDF Rekompak reconstruction or rehabilitation.

In Java, due to the nature of the earthquake damage, the Government made housing its highest priority for rehabilitation and reconstruction. Given the importance of home-based industries in the region, the assumption was that the more quickly people could move back into their newly constructed or rehabilitated homes, the swifter the impact on the economic sector would be. Rekompak started with a pilot implemented through the ongoing Urban Poverty Program, through which the poorest households in the hardest-hit urban communities were selected. Once the reconstruction was underway, for every house with medium to heavy damage, the owners were eligible for Government assistance with rebuilding. Rekompak agreed with the Government to focus its housing reconstruction in two districts: Bantul in Yogyakarta, and Klaten in Central Java.

Land Use Planning

Sorting out land ownership and land titles is a sensitive process that precedes rebuilding, taking into consideration governing laws, regulations and property rights.[5] This process depends on the existing legal and institutional frameworks as well as the actual capacity at the local government level. Where land and property markers have been destroyed, and when people have to be relocated because the land they previously inhabited is considered unsafe, community land adjudication processes are required. A community-based approach to land adjudication has many benefits.

In Aceh, government capacity was already low prior to the tsunami due to many years of conflict. During the tsunami some land was washed away and many land offices and deed titles were destroyed. In the worst affected areas the force of the tsunami had been so powerful that property boundary

markings were no longer visible or the land itself had disappeared. The MDF supported the *Reconstruction of Aceh Land Administration System Project* (RALAS), which assisted the Government in the reconstruction of land property rights, land titles, and community land adjudication processes.

In Aceh, much of the land had been passed down to heirs through traditional systems, often without formal land titles. In these cases, neighbors were called on to verify land ownership. If the process was satisfactorily completed, land deeds were issued. Because so many people had perished, sometimes owners or their heirs could not be found. Aceh developed a unique community adjudication process to deal with such situations.

A Rekompak beneficiary in Sigli, Aceh, displays her land certificate which entitles her to build a home on the property. Land records in many parts of Aceh were destroyed in the tsunami. The MDF-funded Reconstruction of Land Administration System (RALAS) project distributed more than 220,000 land certificates in Aceh using a community adjudication process to determine land ownership.

Photo:
Kristin Thompson
for MDF Secretariat

The Reconstruction of Aceh Land and Administration System: Three Steps to Land Tenure Security

Step 1: Community Driven Adjudication (CDA)
Community members participate in creating a map identifying land boundaries and ownership.

Step 2: Measurement and Mapping
Based upon maps created through the CDA process, the National Land Agency (*Badan Pertanahan Nasional* or BPN) creates a community land map, allows communities to comment, and settles objections or issues through village discussions or a provincial complaints team.

Step 3: Issuance of Certificates
The BPN issues land certificates naming owners or joint owners. In special circumstances (when the land had to go to an underage heir, or an heir had not yet been identified), temporary land documents could be issued.

Adapted from: *Housing: Roofing the Pillars of Hope. BRR Book Series* (BRR NAD-Nias. Banda Aceh, 2009). 44-45. Citing the National Land Agency Decree No. 114-II.2005, regarding the Manual for Land Registration in the Post Tsunami Areas, pages 1-27.

Investing in Facilitators

Communities devastated by disasters cannot simply reconstruct homes and infrastructure on their own. They need help in organizing themselves and need technical assistance to build their skills and to ensure high quality results. As in any program, key staff must be trained and in place before Rekompak can start implementation. Good community development field workers, called facilitators, are critical to the process. They provide the technical and organizational support to empower communities to take charge of their own recovery and are a key component of the Rekompak approach.

The Kecamatan Development Project and the Urban Poverty Project, the Government of Indonesia's community driven development programs on which Rekompak was modeled, relied on facilitators to work with communities. Rekompak drew from these experiences and good facilitators have proven to be integral to successful implementation of Rekompak projects and all community-based programs. Recruitment, training, and retention of quality facilitators was therefore a high priority throughout the life of Rekompak.

Facilitators were responsible for ensuring that beneficiaries understood the Rekompak objective, including what benefits they would receive and their responsibilities as Rekompak participants. In addition, facilitators provided coaching and on-the-job training on damage assessment, procurement, seismic resistant house construction, good construction practices, financial management, complaint handling, social dimensions and other aspects of project implementation. The facilitators helped beneficiaries organize themselves and carry out community mapping and planning. They provided advice and technical assistance at every step of the reconstruction process. Perhaps the most important role of the facilitators was to empower beneficiaries to take charge of the rebuilding by increasing their confidence, capacity, and knowledge of construction. Without the facilitators playing these important roles, a community-based approach would not have been possible.

Rekompak facilitators discuss a village map with local officials in Pante Cermin, Aceh. Well trained, skilled, and committed facilitators are a key component of successful Rekompak implementation.

Photo:
Haikal
MDF Photo Competition

Key Features of a Good Community Facilitation System

Feature	
Recruitment	Facilitators were chosen from people who had qualifications in one of the following areas: engineering or construction, finance, and community development or organizing. All facilitators needed to have practical skills, as well as the ability to work with communities to empower them to carry out their role in reconstruction and to manage community expectations. The selection process for facilitators was managed by an outside consultant, and included a written application and an interview. Because community-based projects were a major source of post-disaster construction financing, the compensation offered to facilitators reflected no more than the market rate for their level of training and experience so that the hiring of community facilitators would not contribute to a post-disaster escalation of salaries in the market.
Training	Candidates who passed the recruitment process received approximately three weeks of training in two components as follows: **Basic.** All candidates received the same basic training, during which time they were still being evaluated. The trainers explained the facilitation process and the "people skills" that were required. Facilitators were taught that the building of houses is the entry point that gives them the opportunity to organize the community, but that the process they were facilitating is about community mobilization and empowerment, not just housing construction. **Technical.** Each facilitator that passed the basic training was then assigned to one of three roles: community development; technical (construction); or finance - for additional training. In this component of training, they received instruction on training community members in the procedures of the project. For instance, finance facilitators were taught how to train community members to manage project finances.
Assignment	Facilitators were organized into teams of nine people, consisting of two community development facilitators, two engineering facilitators, one finance facilitator, and four construction inspectors (called building controllers). This team provided support to a community of approximately 275 households over a period of six months.

Oversight	Oversight of facilitators was provided through weekly visits by financial, community development, and technical experts to each project, where they identified problems specific to a particular community, as well as general problems within the program. When general problems were identified, facilitators were called together for additional training or problem solving. Facilitators' log books were reviewed by the experts during their visits. Facilitators were evaluated on the quality of the results in the community, and their salary could be held back if project standards and milestones were not met.

Source: World Bank. 2010. *Safer Homes, Stronger Communities. A Handbook for Reconstructing After Natural Disasters.* By Jha, Abhas, et al. The World Bank: Washington DC.

Human resources were stretched thin in Aceh due to the huge staffing needs of the overall reconstruction. This resulted in a shortage of good facilitators in Aceh, and even more so in Nias. This was one of the most significant on-going challenges faced by Rekompak during reconstruction. Based on the links seen in Aceh between the quality of the individual facilitators and the quality of the Rekompak results at village level, more emphasis was placed on ensuring that facilitators had the necessary skills when Rekompak was implemented in Java, so as to ensure higher quality. This was done through providing additional training to facilitators and also hiring additional technical supervisors, with vocational school backgrounds in construction, to support the facilitator teams in the field.

> *"It was difficult at first because most people did not know how to manage the construction of a house. But with the support of Rekompak's facilitators and consultants, everybody eventually got very enthusiastic. It was truly a team effort that made the program work in our village."*
>
> *Munazir, a carpenter in Gampong Baro village, Banda Aceh*

COMMUNITY SETTLEMENT PLANNING: THE HEART OF REKOMPAK

The Community Settlement Planning process is the heart of Rekompak. Beneficiaries are the experts in terms of knowing what their community was like before the disaster and the reconstructed community they envision. This is one of the reasons a community-based approach works so well, resulting in high satisfaction and sense of ownership. The planning process is inclusive, aiming to involve all community members, including women, giving them a role and voice in planning and decision-making.

Rekompak's Community Settlement Plans are spatial plans that are developed by beneficiary communities through a participatory process over many meetings and with much discussion. The preparation process allows beneficiaries to plan their future living space taking into consideration natural hazards, environmental safeguards, and the need for common social spaces and facilities. The Community Settlement Plan begins with land mapping and includes the location of houses, public spaces, community roads, drainage systems, water supply, and electrical circuits.

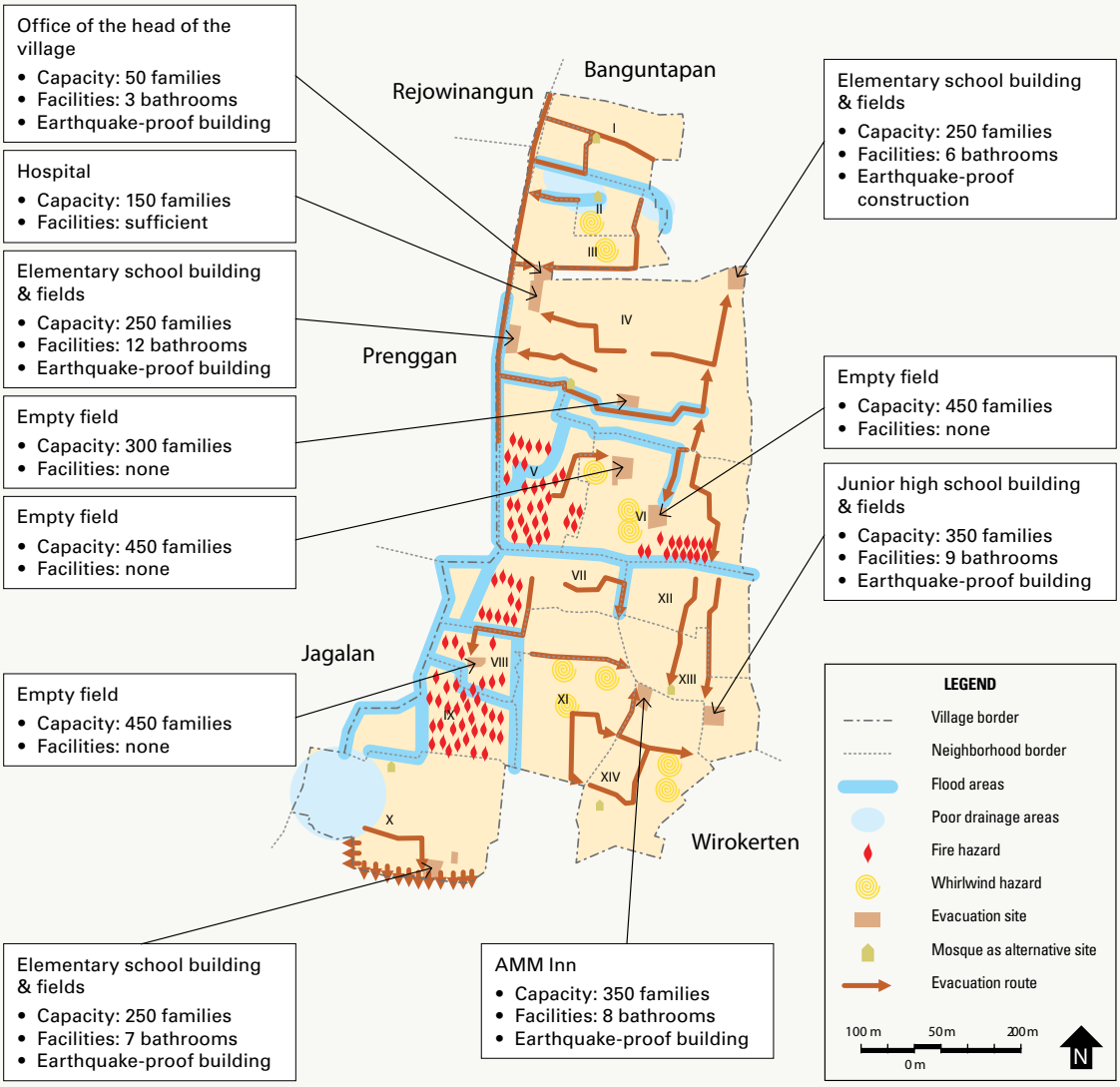
Community Settlement Planning (CSP) is an inclusive process that encourages greater involvement of marginalized groups in the reconstruction. For example, women and the poor are given greater voice in identifiying and prioritizing projects that impact the whole community as a result of their involvement in the planning process. CSP has also led to a higher degree of beneficiary satisfaction and community ownership of the planning process and new assets. A broader range of community members are exposed to disaster preparedness strategies through the planning process, which also contributes to the project's aim of rebuilding stronger and more resilient communities.

The process begins with dissemination of information followed by a survey, the results of which will be used as a basis for planning. Information sessions are conducted by facilitators with expertise in construction and community development. They provide general information about Rekompak and about the survey and answer any questions. This is to ensure that beneficiaries understand how to conduct such surveys which will be used to develop the Community Settlement Plan.

Community Settlement Plans take time and require consensus. Every home, property line, location of access road, and placement of homes has to be agreed upon by all. This approach is intended to prevent future conflicts by ensuring that the process is cohesive and not divisive. If there are disagreements during the process, negotiated solutions are found and decisions are made in the best interest of the community as a whole.

Village Spatial Plan – Map of Evacuation Sites and Routes

Purbayan Village, Kotagede Sub-district, Yogyakarta



The Community Settlement Plan (CSP) helps communities identify their own needs and incorporate disaster risk reduction and management strategies into their own spatial plan. Here, a village spatial plan shows evacuation sites and escapes routes for Purbayan Village in Kotagede sub-district, DIY. The Community Spatial Planning process under the CSRRP/Rekompak project has helped more than 265 villages to assess risks and prepare for potential disasters.

Steps in the Community Settlement Planning Process

The Community Reconstruction Planning process involves a range of activities that include dissemination of information about Rekompak activities, setting up of beneficiary groups and supervisory committees and preparation of a Community Settlement Plan. When plans have been completed and approved the final step of the process leads to disbursement of the first tranche of funding so that the rebuilding can begin. Below is a brief explanation of a Rekompak community planning process used in Indonesia. It should be noted that the process continually evolves and must be adapted to specific situations. Some steps may take place concurrently and in most cases include housing and community infrastructure.

1. Information Dissemination

Information dissemination and awareness building for affected communities was organized by village trustee boards with assistance from facilitators. In Indonesia, village trustee boards were initially set up by the Urban Poverty Program, and Rekompak relied on these existing bodies for information dissemination where they existed. Using existing mechanisms allows for more rapid and efficient project implementation. Other village management/ leadership structures may also be used or a new body can be set up when existing structures are weak or unavailable.

2. Formation of Volunteer Committees

In Indonesia, volunteer committees included a Planning Committee, an Implementation Committee, and an Operations and Maintenance Committee. The committees were not necessarily set up at the same time and were phased in as required. Other committees, such as a Procurement Committee, were also set up as needed. Volunteer community representatives served on and led the committees.

3. Community Surveys

Community representatives conducted housing and infrastructure self-surveys with assistance from facilitators and in coordination with local government. Surveys included identification and verification of beneficiaries and finalization of the list of beneficiaries. Land ownership was also confirmed at this time and land deeds were provided by the relevant government agency. The findings were presented to the village trustees and community to be agreed upon before the physical rebuilding process began.

4. Formation of Housing Groups and Committees

Rebuilding under Rekompak was organized by community housing groups composed of approximately 10 families living in close proximity. Members of the group were usually neighbors or relatives who were willing to work together to rebuild their settlement. Volunteers from the group formed a committee composed of a chair, a secretary, a treasurer and household representatives, usually one per household. Together with its household members, the committee decided on investments, procured materials, controlled funds, assisted with construction, supervised accounts for funds expended and reported on progress. Each committee reported to the village trustees.

5. Community Settlement Plans Prepared

The Community Settlement Plan developed through a participatory process became the guiding document for how physical rebuilding took place. Spatial plans were prepared and communities agreed on priority village infrastructure and facilities to be rebuilt. Systems and procedures for operation and maintenance were also established. The Plan identified areas prone to potential hazards so that action could be taken to avoid, or at least mitigate, possible future disasters. If land and property demarcations had to be established as was the case in some areas in Aceh and Java, this was also included in the planning process. Every Rekompak village had its own Community Settlement Plan, based on its unique needs, conditions and potential. Rekompak facilitators provided assistance in all aspects of developing the plans.

6. Community Settlement Plans Submitted for Approval to Village Trustees

Once completed, Community Settlement Plans were submitted for approval to village trustees. After the facilitators and trustees verified and approved the plans (there could be revisions required at each stage), the plan was submitted to the Project Management Unit (PMU) for approval. Once plans were approved, funding to proceed was provided. Building began when the first funding tranche was disbursed. This launched the process that eventually led to the homeowner receiving approval to occupy his or her home.

Facilitators' Roles in Community Settlement Planning

- Dissemination of information about the Rekompak project
- Assistance for beneficiaries to establish household groups eligible for Rekompak assistance
- Training for community volunteers in damage assessment methodology and sound seismic-resistant construction practices
- Facilitation for development of Community Settlement Plans
- Technical assistance to ensure construction of sound seismic-resistant homes
- Assistance with proposal writing for funding for community infrastructure
- Dissemination of information about funding sources
- Technical assistance for rebuilding infrastructure with disaster risk reduction built in
- Facilitation of community discussions, ensuring all voices and minority opinions are heard, and mediating when required
- Training beneficiaries in administration, bookkeeping, reporting and asset maintenance
- Reviewing all plans and financial statements and providing recommendations as required
- Monitoring construction quality and recommending disbursement of funds when standards are met

What is Included in a Community Settlement Plan?

The Community Settlement Plans take into account a number of social and environmental concerns and focus on increased disaster preparedness. Below is an example of some of the activities involved in preparation of these plans:

- Prepare village profile including population, education levels, residents' occupations, village borders, land use, and land titles
- Conduct self-mapping including potential resources, potential problems, and government plans
- Analyze potential resources, problems and solutions
- Prepare disaster mitigation plans
- Check references such as land use maps, network maps, economic zone maps, and maps of disaster-prone areas
- Prepare a spatial plan, including houses, community infrastructure, facilities and evacuation routes.

In Indonesia, Community Settlement plans are embedded in government's regular (3-5 year) midterm plans and synchronized with programs of neighboring villages.

Adapted from: *Post-Tsunami and Earthquake Community-Based Rebuilding of Settlements and Infrastructure*. 126

Community Settlement Plans: The Building Blocks for Resettlement

The Community Settlement Plan is a comprehensive spatial plan used to design and agree on the social and physical environment as desired/ required by a community. It can include measures to mitigate against possible future disasters by rehabilitating and/or (re)constructing community infrastructure. A Rekompak Community Settlement Plan usually includes:

- maps of existing conditions
- damage mapping
- land allocation plan mapping
- housing and infrastructure plan
- facilities and utilities plan
- environment and social management plan
- regulations and agreements on community settlement program; and
- an action plan for each program priority.

Two members of a housing group committee in Wonorejo village, Yogyakarta, Central Java display a completed Community Settlement Plan (CSP) document. Housing groups developed each CSP with the assistance of facilitators.

Photo:
Christiani Tumelap
for JRF Secretariat

ENTRUSTING FUNDS TO COMMUNITIES

One of the principles of community-based reconstruction is that beneficiaries are in charge of all aspects of rebuilding including how funds are spent. Often beneficiaries do not have experience in the financial aspects of community projects, so technical assistance and capacity strengthening and training must be provided for beneficiaries and local governments responsible for oversight. Setting up transparent financial systems is also of key importance.

How Do Funds Reach Beneficiaries?

Rekompak placed the funds for reconstruction directly into the hands of community members with each responsible for building his or her own houses. The project made use of existing government mechanisms to transfer funds directly to community accounts. Upon endorsement of the local government project officer, funds were transferred from the national treasury to local level accounts in the names of village trustees and community groups. In this way, funds bypassed multiple layers of government bureaucracy and reduced the potential for misuse and corruption. This diminished bureaucratic delays and gave communities clear oversight of the funds for which they were responsible.

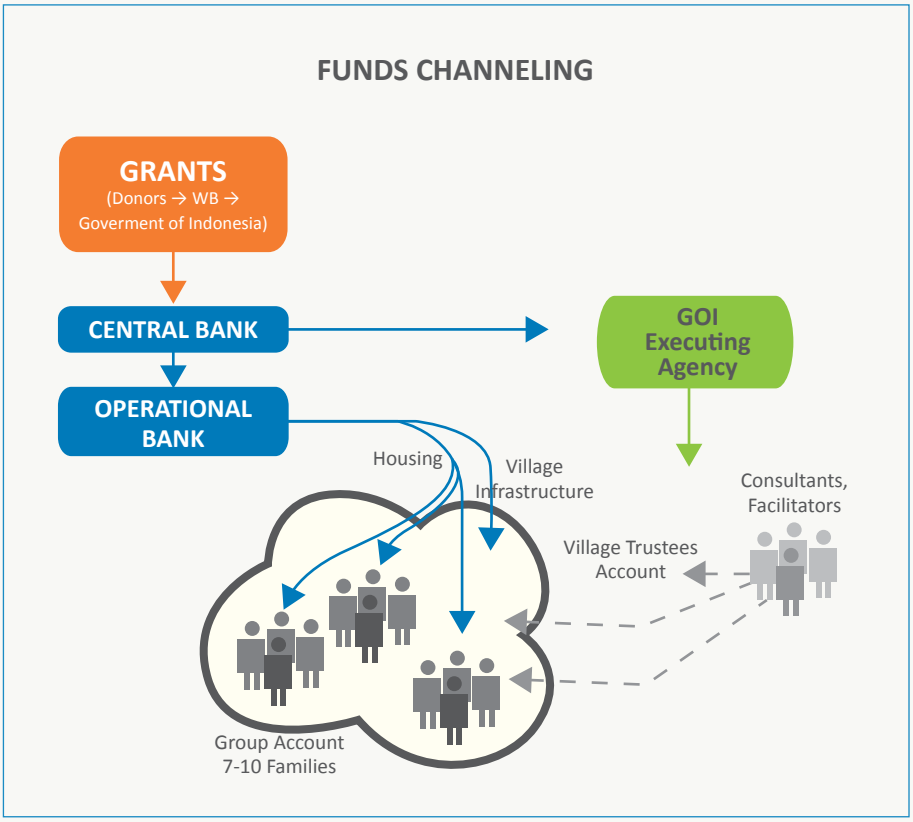
1. Setting Up Community Accounts

In both Aceh and Java, funds were disbursed by commercial banks to community group accounts. A minimum of three signatures was required to open accounts and withdraw funds. To ensure financial accountability and the commercial bank's obligations in case of lapses, the commercial banks signed an agreement with the World Bank, which acted as trustee for donor funds provided through the MDF and JRF Trust Funds.

2. Disbursing Funds to Communities

- **Housing Grants**

Block grants from MDF and JRF donor funds were channeled through Rekompak directly to communities so that eligible members could rebuild or repair their own homes. Grants were disbursed from the project budget to housing group accounts, and the group leaders then transferred funds to eligible members of the group. Grants were disbursed in three tranches, and were replenished according to verified progress made by housing groups consistent with agreed upon implementation plans. The housing



facilitator validated and signed off on disbursement requests which were co-signed by the housing group and witnessed by another facilitator. Upon receipt of the signed forms by the Field Operational Manager (a government employee from the sub-district staff), the request was submitted to the bank for disbursement.

Housing construction costs were much higher in Aceh than in Java. In Aceh, reconstruction grants were $5,900 per home. Rehabilitation grants were for $1,700 per home. Housing construction costs escalated as the reconstruction got under way. Aceh is in a more remote part of Indonesia than the affected areas in Java and the cost of transporting materials combined with scarcity of materials, increased the price. As prices escalated, the number of homes that could be built with the same amount of funds decreased and housing targets had to be adjusted accordingly.

In order to reduce the impact of escalating prices on project outcomes, in Java it was decided to provide beneficiaries with a “core house.” In Aceh, commitments had been made to provide recipients with a house complete

with all finishes, including paint and trim. In Java, each Rekompak housing beneficiary received $2,200 for construction of a core house.[6] Core houses included seismic resistant structure and roof, together with basic services (electricity and water). Finishes, such as paint, plaster and tiles, were not included, as these were expected to be covered through contributions by the homeowners themselves with their own funds. Finishing could be done immediately or at some point in the future as funds became available. In the meantime, the households could move out of temporary shelter and occupy their new homes.

Eri Indriastuti (left), a Rekompak housing beneficiary, with her father (right) in front of their home in Wonokromo, Yogyakarta. Ibu Eri served as treasurer for a household group of ten families who rebuilt their houses with support from JRF Rekompak.

Photo:
Fauzan Ijazah
for JRF Secretariat

Homeowners had some flexibility in the design of their houses. In Java they could choose between a 24 square meter house with more finishes or a 26 square meter house with less finishes included. Homeowners could salvage materials from their damaged homes to use in construction, allowing savings on materials and more design variations. Allowing for individualizing the houses decreased inefficiencies and increased the sense of ownership. Floor plans were flexible. For example, beneficiaries could decide on where bedrooms, kitchens and other rooms would be located and where partitions would be placed.

> *"People aren't just handed the key to a house. Because they have been involved in every step, I think the sense of belonging is greater. Participation also prevents corruption and abuse because people can observe and monitor every aspect of construction. They know how much materials cost."*
>
> *Pak Surianto, a Rekompak volunteer from Jambu village, Yogyakarta Special Region*

- **Community Infrastructure Grants**

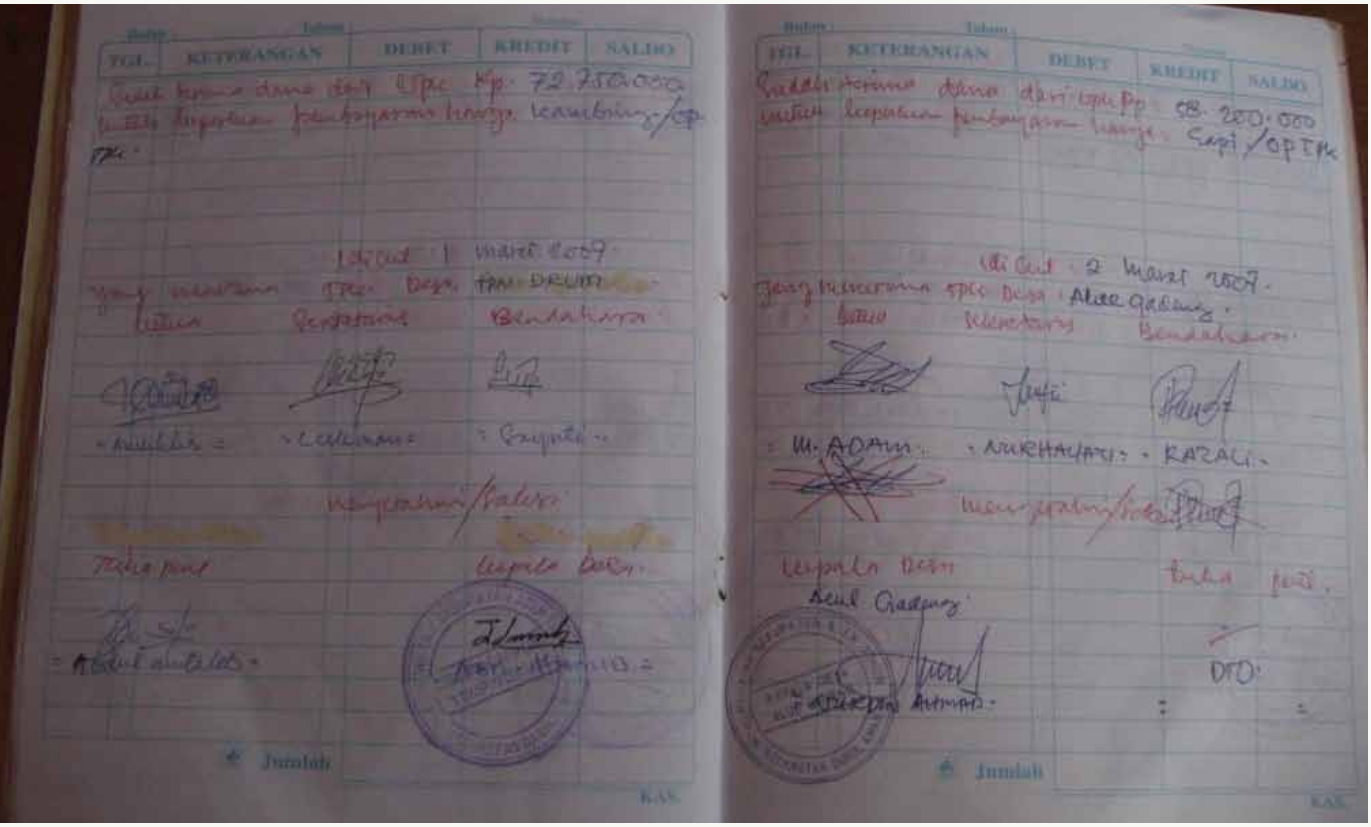
In addition to housing grants, block grants were available for the rehabilitation of small-scale community infrastructure. Based on the completed Community Settlement Plan, Rekompak communities applied for block grants according to prioritized needs. Implementation focused on disaster mitigating structures, and the objective to "build back better." Funds were disbursed to the committee in charge of infrastructure through a process similar to the disbursement of housing grants.

TRANSPARENCY AND ACCOUNTABILITY

Community driven development rests on the principles of transparency and accountability in project implementation. This is achieved through participatory processes, good communications and information flow, and transparent structures. Rigorous and accessible complaints handling mechanisms are another essential component of successful community-based reconstruction.

Rekompak promoted good governance through ensuring transparency and accountability. Information about the project, its activities, and funding were widely publicized and highly visible. Rekompak maintained websites listing the details of every house and every beneficiary for all to see. Facilitators, village committees and local governments regularly monitored progress and disbursement and expenditure of funds.

The complaints handling mechanisms established by Rekompak projects were very effective in promoting transparency and accountability. This included 24-hour hotlines through which stakeholders, particularly beneficiaries, gave feedback, asked questions and made complaints regarding project activities. In addition, all complaints and queries including follow up actions from project teams were documented and could be publicly accessed through the Rekompak website. These mechanisms were continually monitored to



Accounts journal of a community group in Aceh. Rekompak placed funds for reconstruction directly in the hands of the community. Rekompak facilitators provided training in basic bookkeeping and housing groups were required to keep accurate financial information. These records were public information and open for inspection by all stakeholders including beneficiaries.

Photo:
Geumala Yatim
for JRF Secretariat

ensure that complaints or queries were appropriately brought to closure. The process strengthened the demand for good and accountable service delivery at grassroots levels and empowered community members. Peer pressure was also a factor. If one of the beneficiaries in a household group did not meet agreed upon quality standards at the agreed upon time, funding for the entire group could be held up until the problem was fixed. If the problem was not resolved, the entire community could have funding suspended until the problem was satisfactorily corrected.

The Community Planning Process is at the heart of Rekompak and is an essential element of the community rebuilding process. This chapter described the planning process, the role of facilitators and funds disbursement, all of which need to be in place before the actual rebuilding can begin.

Chapter 4 relates how beneficiaries proceeded with the physical rebuilding of homes and communities. The chapter discusses the technical assistance provided by facilitators who supported all aspects of the rebuilding process, and looks at the cost effectiveness of local procurement and how it stimulates local economies. Specific technical issues, quality control and information on making homes seismic resistant are included. The chapter closes with a look at how Rekompak builds disaster risk preparedness into its community infrastructure program.

[1] World Bank. 2010. *Safer Homes, Stronger Communities. A Handbook for Reconstructing After Natural Disasters.* By Jha, Abhas, et al. The World Bank: Washington DC.

[2] The International Organization for Migration (IOM) and the Cooperative Housing Foundation (CHF) International both operated in earthquake affected areas and shared the objective to provide safe and durable shelter to eligible earthquake-affected families.

[3] Refer to the JRF Transitional Housing Projects under IOM and CHF.

[4] The number of villages was reduced to 130 from the initial target due to rising construction costs.

[5] World Bank. 2010. Safer Homes, Stronger Communities. A Handbook for Reconstructing After Natural Disasters. By Jha, Abhas, et al. The World Bank: Washington DC.

[6] Beneficiaries affected by the volcanic eruptions in the Merapi area received Rp 30 million per house ($3,300) because costs had increased in the intervening three years and damage to houses was greater than inflation.

CHAPTER 4

Building Houses and Community Infrastructure

Ongoing house reconstruction in Sleman, Yogyakarta for survivors of the 2010 Merapi volcanic eruptions. Based on the Rekompak experience in Aceh and Java, the rebuilding in the areas affected by Merapi quickly got underway.

Photo: Fauzan Ijazah
for JRF Secretariat

The previous chapter described the steps in setting up a community-based program for reconstruction of housing and infrastructure. It explained, in particular, the community facilitation process and how Community Settlement Plans are created, and how funds are channeled directly to community groups to be used for rebuilding their homes. Chapter 4 relates how beneficiaries themselves can rebuild homes that meet seismic-resistant standards when adequate assistance is provided, including financial assistance and support from facilitators. Community infrastructure and the focus on disaster risk reduction measures are also discussed.

COMMUNITY-BASED RECONSTRUCTION OF HOUSES

The MDF Rekompak project rehabilitated or reconstructed a total of approximately 15,000 houses using a community-based approach in Aceh. When an earthquake hit the island of Java a little more than a year after the Rekompak program had started in Aceh, the Government immediately identified the Rekompak model as its main vehicle for delivering housing assistance.

The lessons learned from Rekompak in Aceh informed the design of the project in Java, adapting existing project design and organizational structure to specific local needs. In this way, JRF Rekompak evolved to become more efficient in delivering reconstruction support, with a streamlined approach that enabled speedier implementation.

The combined efforts of all agencies involved in Rekompak type reconstruction in Java resulted in approximately 150,000 permanent houses within a year after the disaster, which was unprecedented in terms of speed and coverage. Two years after the disaster, the number of completed houses reached 300,000, making this one of the fastest housing reconstruction projects in the world.[1]

Community-based reconstruction can be implemented in different ways with varying control exercised by beneficiaries and communities from project to project. In some cases, housing designs and materials may be provided and laborers may be employed by the agency in charge. In MDF and JRF Rekompak

"Rekompak is a community driven approach and differs from approaches in which contractors are hired to do the rebuilding. For example, say we were building 15,000 houses. One option would be to get 15 contractors and for each of them to build 1,000 houses. In that case there would be 15 contractors as active participants of reconstruction and 15,000 passive beneficiaries. In the Rekompak approach that is not the way to do it. The best thing is to have 15,000 people, each one of them working on their own home. That is Rekompak."

George Soraya, World Bank Task Team Leader




The MDF and JRF Rekompak projects rehabilitated or reconstructed more than 30,000 houses using a community-based approach in Aceh and Java.

Photos:
Rekompak Team

projects, communities managed the entire housing reconstruction process with the support of facilitators. Some advantages of this approach include:

- social cohesion is fostered when people from different communities work together to organize relocation and reconstruction (particularly helpful in post-conflict contexts);
- high levels of flexibility and accountability control for owners over reconstruction; and
- the project may contribute more strongly to reactivation of the local economy.[2]

Targeting Beneficiaries: Who is Entitled to Receive a House?

Correctly targeting beneficiaries is one of the main challenges in any housing reconstruction project. Determining who is entitled to receive a house depends on a number of factors, including property rights, circumstances, need, and resources. Mistargeting of housing is one of the most common reasons for complaints and dissatisfaction with housing reconstruction projects and can lead to conflicts within communities. In Aceh, there were initially some challenges with mistargeting, but these issues were resolved through open and transparent information dissemination and effective complaint handling mechanisms. In Java, these mitigating measures were included from the start, and consequently, there were few problems reported in connection with targeting in the JRF Rekompak.

Identification and selection of beneficiaries through a community-based consultation process is one of the core principles of the Rekompak approach and a key factor in its success. In Aceh and Java, communities needing

Damage Categories for Houses

One criterion for determining beneficiaries was an assessment of damage to their homes using the following categories:

- **Severe damage**: collapsed houses or houses that are no longer habitable because the structure was damaged beyond repair. Such houses cannot be rehabilitated, they must be reconstructed.
- **Medium damage**: houses with significant damage that can be rehabilitated because the structure is intact and safe for habitation.
- **Slight damage**: houses with small cracks in the walls but the buildings are still intact and structurally safe.

assistance to rebuild houses were identified through government-led assessments. Under Rekompak, specific beneficiaries within these communities were identified and selected through a community consultation process, based on a clear set of criteria.[3]

The task of deciding who should receive funding to rebuild a house is complex and involves weighing many factors. It is important that eligibility policy is clearly stated and that the beneficiary community has a say in who receives a house. To avoid social conflict, the policy must be objectively and transparently implemented. A transparent community-led process for determining who would receive a house helped to ensure equity and accuracy in targeting, and higher rates of satisfaction with the process than in non-participatory approaches. The rights of poor and marginalized households who are less able to advocate for themselves need to be safeguarded in this process.

A temporary facility in Banda Aceh used to process Rekompak housing grants. The banner explains eligibility criteria, including proof of land ownership and proof of residence in the community where the house is to be built.

Photo:
Rekompak Team

Deciding on the eligibility criteria is extremely complex and depends on the local situation and resources available for reconstruction. In Aceh and Java, prior to the disasters there were different kinds of tenancy categories. There were those who owned their own homes, those who rented from a landlord, and people who occupied land or houses without having a formal arrangement for doing so. In some places in Aceh, there were so few survivors it wasn't clear at the beginning if anyone would come back to the former community site to rebuild. Some survivors didn't want to return. There were questions about whether heirs of deceased homeowners should receive a house. All of these decisions had to be balanced against the financial resources that were available for rebuilding houses. Under Rekompak, these difficult issues were addressed by the communities themselves.

Rekompak Eligibility Criteria for Households

- Able to provide documented or community-based evidence of having lived in a disaster affected area prior to the disaster
- House located within the geographic area covered by the project
- House either entirely destroyed (eligible for reconstruction) or partially destroyed but not safe for habitation (eligible for rehabilitation-Aceh only) as verified by a technical damage assessment
- Households did not receive/will not request similar assistance from another donor
- Able to prove access to land, either through community-based mechanism or documentation
- Willing to join with other beneficiary households of their choice to form a neighborhood group to implement project activities.

Rekompak's selection process was transparent and open. A list of eligible beneficiaries was compiled based on assessments carried out by facilitators and community volunteers. The initial list was posted in strategic public places for ten days. During this time, a community meeting was held to discuss the list and to hear any complaints or disputes. Requests for assessment of homes that should have been on the list but were not, if any, could be submitted. An additional five days of consideration was granted if issues arose at the village meeting so that these could be resolved among community members with the guidance of the facilitator team. After this period, a final list of beneficiaries was created and verified by the Housing Task Force team and the eligible beneficiaries. Complaint handling mechanisms were in place at project level to address questions and issues as they arose.

Housing groups of a maximum of 15 beneficiary households were then formed as described in Chapter 3. Each household group opened a bank account and with the guidance of facilitators, developed a building plan and an implementation schedule. The plans were used to verify construction phases for grant disbursement.

Putting Beneficiaries in Charge of Reconstruction

One of the factors that makes Rekompak unique is that beneficiaries are in charge of reconstruction of their homes. Rekompak doesn't use a "cookie cutter" approach where everyone ends up with exactly the same house. There are, of course, minimum requirements which include earthquake-resistance and other quality standards that must be met.

> *"We had choice.....we could design the house ourselves, add to it if we wanted to and had the money. Rebuilding the house was like rebuilding our lives. The houses were better, they were stronger, we were stronger."*
>
> *Rekompak beneficiaries in women's focus group, Central Java*

Community Self-Help Traditions

The Javanese cultural tradition of *gotong royong* – working collectively for the common good of the community - provided fertile ground for Rekompak's community-driven approach. In times of need, people readily help each other and lend a hand in the spirit of cooperation. Neighbors work together and neighboring villages and communities come to each other's assistance. The spirit of *gotong royong* is well suited to a community-based approach; it helped communities in Java work together and pick up the pieces after the disaster. The survivors showed great resilience and community spirit. In the aftermath of the disasters, communities across Yogyakarta, Central and West Java supported each other in rebuilding their lives and their communities. Some survivors even donated personal resources and property for the greater good of the community. Even in strife-torn areas, such as Aceh which had experienced years of conflict, the community based approach was successful in bringing communities together to build a better future.

In Aceh, a wide variety of approaches to housing reconstruction were adopted by different NGOs and other agencies which had come to assist. In some projects there was a "contractor knows best" approach which did not allow the beneficiaries to give input into the design or construction of their homes. In another common approach, some agencies implemented the housing reconstruction directly by providing the building materials, supervision, bookkeeping and funds disbursement for construction. With Rekompak, housing groups and individuals handled the funds, made the decisions and could be paid a daily wage for their work, whether they worked on their own houses or on the houses of others in the group or community.

Cheerful Colors Adorn Rekompak Beneficiaries' Houses

After facing the hardship of losing their homes and loved ones, beneficiaries of the Java Reconstruction Fund in Bantul regency have moved on with their lives, often with a touch of style. In the villages of Sabdodadi and Sitimulyo, many newly-constructed houses are brightly painted in cheerful tints of pink, yellow, green, blue, orange and red.

Tito Judi, 47, owns a house painted with so many eye-catching colors that locals refer to it as a kindergarten. This makes him proud. Tito has lived alone in his new house since early 2008. He lost his son in the earthquake that shattered his former house and his wife fell ill and died the following year. "The cheerful colors help to lift my spirits," Tito said.

Dukuh Mujiyem, 30, talks about the color of her house. "I like pink, so do my two children. I had the freedom to color my home. Our 30 square meter house may be small and humble, but what's more important to us is that it is comfortable to live in, quite nice-looking and bright," she said.

Her neighbor Heri Pranot, 51, stated that the colorful houses are a clear sign of change. "This is quite different from the past. The colors of the houses here used to be boring white or cream," said Heri. He was paralyzed when he was pinned down by the walls of his house during the earthquake. Heri admits he had to argue with his teenage children to get the colors that he wanted for the house. "But we finally agreed that they could paint their bedrooms as they liked, while I chose the dark orange color for the living room," he said. Heri also decided to decorate his veranda with green bathroom tiles despite his children's accusations that he was being untrendy.

Beneficiary satisfaction with the Rekompak approach is high. Housing recipients liked the approach because they could provide inputs and make changes in the design of the house. They were involved in procurement and quality control as well as supervision of the construction.[4] Respondents to a European Commission survey stated that the quality of the Rekompak houses was better than many of those provided by other agencies and they appreciated being able to supervise, make adjustments, and even work as laborers on their own houses.[5]

Beneficiaries in front of their new house, Yogyakarta. Many newly-constructed houses under the JRF are painted in cheerful colors by homeowners who individualized their "core houses".

Photo:
Rekompak Team

Supporting Beneficiaries with Quality Technical Assistance

One of the most common doubts about whether villagers could actually take responsibility for rebuilding their own houses after the disasters in Indonesia was how to ensure quality standards. Were ordinary villagers, many of whom were farmers or fishermen with little education, really capable of constructing a house to adequate quality standards? Rekompak put this to the test in Aceh, and the results proved that it was not only possible, but that the quality of beneficiary-constructed houses was often better than those built by contractors.

Of course, not all villagers had the technical skills to build a house. Facilitators helped fill the knowledge gap. With the support and assistance of housing facilitators, beneficiaries with little or no knowledge of construction were able to actively lead the reconstruction of their homes and their communities. Facilitators ensured that seismic-resistant standards were met and that disaster risk reduction measures were included in community infrastructure. In the process, beneficiaries learned quality reconstruction methods and how to build better houses so that they would be safer should another disaster occur.

A facilitator inspects the quality of the construction of this bridge in Gayamharjo, Sleman. | Photo: Rekompak Team

Facilitators worked in Task Force teams. Each team was responsible for about six villages and a total of 250 houses. Technical facilitators helped organize the community to manage the planning and implementation of the project at the village level, and they also provided technical skills and expertise and oversaw the quality of materials and construction. The facilitator teams reported to the District Management Consultant who provided additional guidance and oversight regarding technical monitoring of construction. A typical Task Force team consisted of:

- 2 technical experts, usually engineering or architecture students
- 1-2 social facilitators, one of whom was a community development specialist
- 1 financial specialist with a bookkeeping/budgeting background
- 4 construction supervisors.

Earthquake Resistance and Construction Quality Standards

The commitment to "Build Back Better" in Aceh and Nias included the introduction of earthquake resistant construction methods. Rekompak required that all houses rebuilt with project funds meet certain minimum specification for seismic resistance.

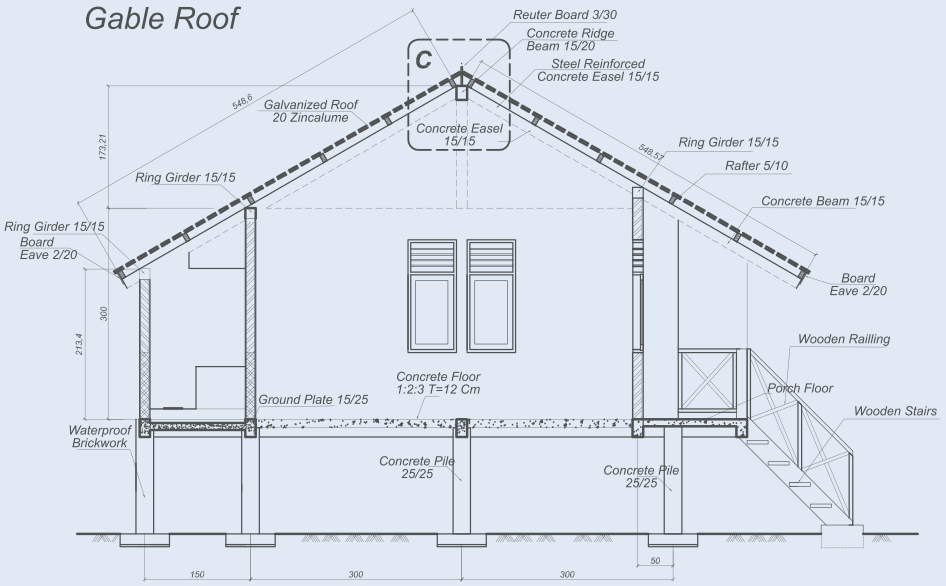
The Java earthquake in 2006 demonstrated that even more emphasis was needed on disaster risk reduction. Many homes - and lives - could have been saved in Java if basic anti-seismic measures had been used in construction. Poor construction methods without adequate reinforcement left brick and cement walls and heavy clay tile roofs to crumble down on occupants. As a result of this experience, both Rekompak and the Government's overall reconstruction in Java set stricter seismic-resistant building standards in place for all reconstructed houses. Two prominent universities in Java, Diponegoro University in Semarang and Gadjah Mada University in Yogyakarta, were commissioned by Rekompak to inspect every house built under the project and provided certification that 96 percent of the houses met the standards for earthquake resistance. Rekompak's commitment to building safer houses helped to reduce vulnerability and spread awareness and skills in earthquake resistant construction methods to reduce the impact of similar disasters in the future.

A Typical Rekompak House

The maximum size of a house provided by Rekompak was 36 square meters. Beneficiaries could choose their own configuration. Sample house sizes included: 6 m by 6 m, 5m by 7m, or 4m by 9m. Beneficiaries could build a larger house at their own expense provided that all additions met seismic-resistant standards. Complete houses with all fixtures and finishes were provided as in Aceh. In Java, core houses were provided and beneficiaries used their own funds to complete finishes. Some beneficiaries in Java built smaller homes and used "savings" for finishes, such as paint or tile floors. Providing core houses rather than complete houses meant that funding was available to assist a greater number of beneficiaries.

In the Aceh, "complete" houses with all the finishes were provided. This house is typical of those built in Aceh. When the photo was taken, the familiy had already moved in and enhanced the environment with potted plants and flowers.

Photo:
Rekompak Team



Adapted from Rekompak construction drawings.

In Java, Rekompak built “core” houses. These houses are structurally complete and safe and beneficiaries used their own funds to complete the finishes. The house above is typical of those built in Java.

Photo:
Rekompak Team

Technical Issues and Quality Control

Checklist for Building Seismic-Resistant Houses

- ☑ The building lay-out should be simple, symmetrical, integrated and uniform in order to eliminate the possible effects of torsion.
- ☑ Building structural elements (foundation beam, support columns, tie beams, etc.) must be strongly and solidly connected to each other.
- ☑ The foundation must be built on firm, stable soil and must be rigidly bound with a foundation beam.
- ☑ Buildings must have supporting columns (beams, reinforced concrete and steel) for every 12-square-meter wall. Supporting columns must be bound to the foundation beam and tie beams.
- ☑ Buildings must be made of good quality bricks/concrete bricks.
- ☑ Columns must be anchored to the foundation beam or to the foundation.
- ☑ Walls must be anchored to the surrounding columns and beams, using 6-millimeter anchors with a length of 50 centimeters. The spacing between the anchors must not exceed 30 centimeters.
- ☑ Gaps in walls for windows and doors are better when symmetrical and not too wide.
- ☑ Mortar must be of the correct ratio of cement, sand and water.
- ☑ A precise ratio of cement, sand and pebbles must be used for all concrete elements in the building, with appropriate reinforcing.
- ☑ Wooden, concrete or steel tie beams must be properly tied to the columns.
- ☑ Roof structures must be made of dry wood, and use correct and strong joint construction.
- ☑ Roof coverings must be made of light materials.

Adapted from: *Post-Tsunami and Earthquake Community-Based Rebuilding of Settlements and Infrastructure*. 108

"We were given a detailed guidebook and the facilitators offered advice and assistance. For example, we learned what size iron bars should be used for rebuilding. If the bars were even one millimeter smaller, we rejected them. Now we know we have good quality houses because we've been involved in constructing them from the beginning to end."

Abdul Wahab, Rekompak beneficiary, Banda Aceh

We Sell JRF Bars

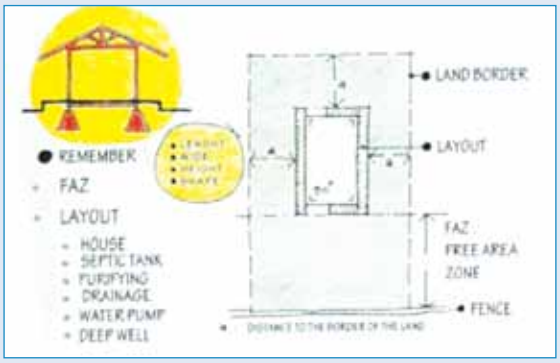
In Bantul village, Java, the message about quality materials that meet seismic-resistant standards was widely understood. Before JRF Rekompak came to the village many people had used 8 or 10 millimeter reinforcement bars for their homes instead of the 12 millimeter bars required by Rekompak. One local shop, sensing a marketing advantage, hung a banner outside stating "We Sell JRF Bars." While it certainly wasn't the intention of organizers to use the JRF as a brand, it was a good indicator that the beneficiaries understood the importance of buying the correct size reinforcement bars. It was also a sign that the procurement process had not been co-opted and that the beneficiaries themselves were making the purchases.

a. The wire mesh that will be used to strengthen the walls is measured out and cut to size.
b. The plastering on the wall that is to be strengthened is chipped to provide a key for the next layer of plaster that will be applied.
c & d. The wire mesh is fixed to the wall using nails to keep it in place.
e &f. The mesh reinforcing is applied to both interior and exterior walls. The walls are plastered to cover the mesh, and then finished with paint.

Photo:
Rekompak Team

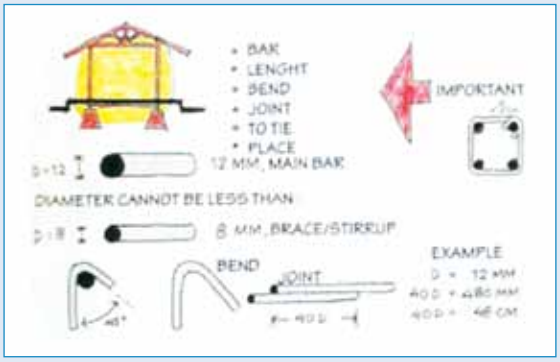
Twelve Important Rules on Housing Construction

1. MEASUREMENT

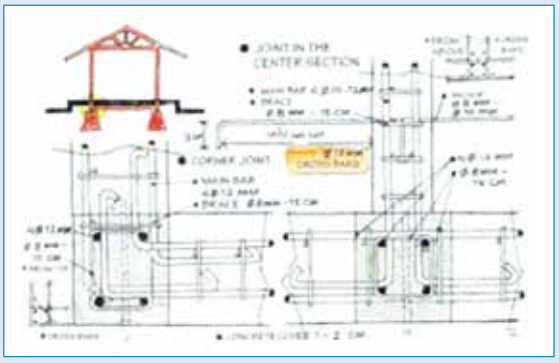


2. THE MAIN MATERIALS

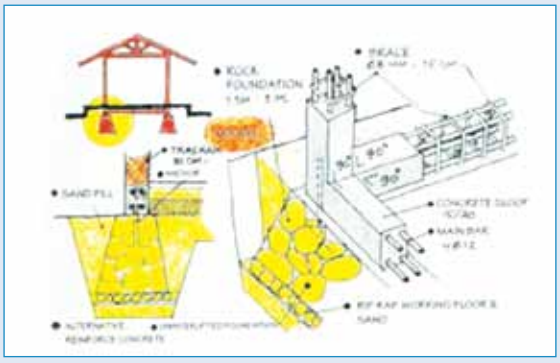
3. REINFORCEMENT



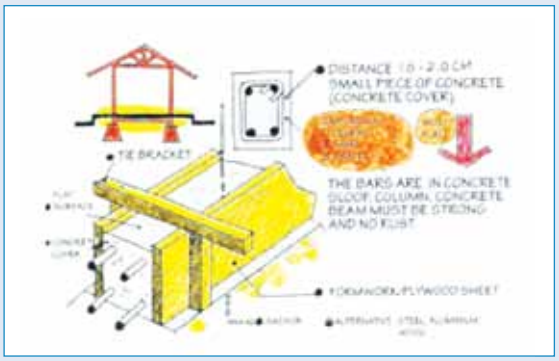
4. JOINING THE BARS



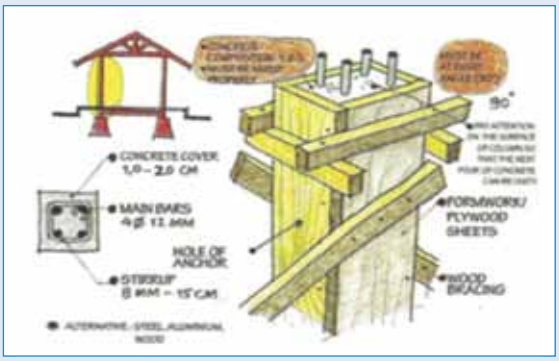
5. FOUNDATION



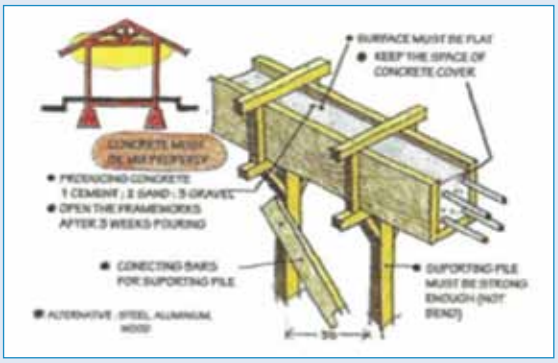
6. CONCRETE SLOOF



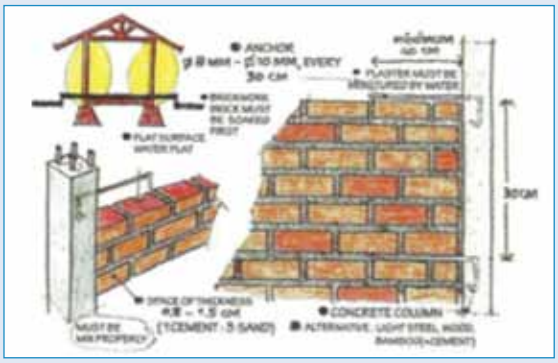
7. CONCRETE COLUMN



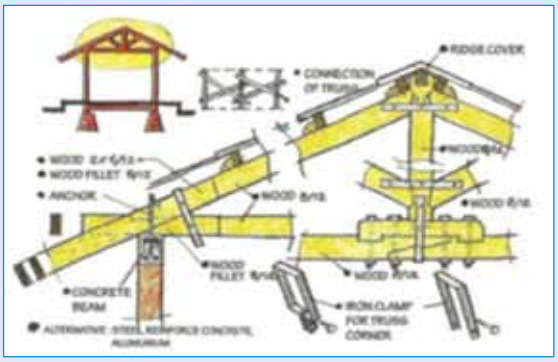
8. CONCRETE BEAM



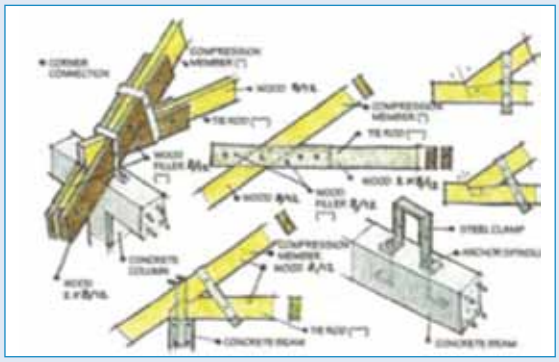
9. BRICK WALL



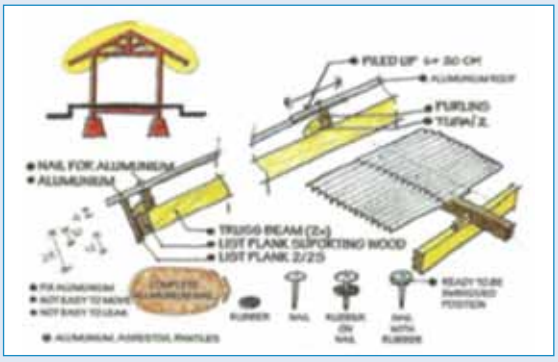
10 a. ROOF TRUSS



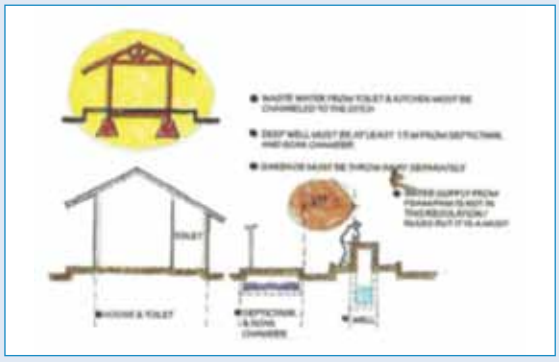
10b. FRAME OF TRUSS



11 COVERING/ROOF



12. WATER SUPPLY & SANITATION



Source: Hartmann, Ekart and Heinz Unger, *Picture Book: the Good & the Bad Infrastructure vol. 4 House Construction*. Jakarta: The World Bank.

Economic Benefits of the Rekompak Approach

Local Procurement

Rekompak had a positive impact on local economies. In contrast to projects implemented by contractors (who often ordered materials and employed workers from outside the province in order to guarantee supply flows, benefit from bulk purchases, and avoid labor problems), Rekompak encouraged local procurement and kept funds circulating in the local economy at village and subdistrict levels. Standard Operating Procedures were made more flexible to allow procurement of local contractors and materials. Beneficiaries received wages to work on their own and their neighbors' homes. Purchasing supplies locally and providing residents with paid work and money to spend on daily expenses helped to stimulate local economies, revitalizing village economic life. In Aceh, approximately 60 percent of Rekompak project funds (equivalent to $51 million) and in Java about 70 percent of project funds ($41.02 million) were spent locally. There were large savings in procurement because communities bought in bulk, sometimes together with household groups from other communities.

Construction of a Rekompak bridge in Central Java. The banner over the construction site announces that through the Rekompak project the community is reducing the risks of disasters. Rekompak's innovative community-based approach resulted in safer and more resilient communities.

Photo: Rekompak Team

Cost Effectiveness

Rekompak is cost-effective and implementation of the Rekompak approach resulted in substantial cost savings as compared to other approaches to rebuilding housing. A 2007 study[6] and a project-commissioned beneficiary satisfaction survey conducted in 2008 showed that Rekompak delivered quality housing at up to 40 percent lower cost than projects that did not use a community-based approach. For houses with identical specifications, Rekompak house costs were 30 percent less expensive. This was partly because of the high level of voluntary labor contributed to Rekompak by residents, and the fact that they recycled building materials from the debris and what was left of their former homes to supplement the building grants from Rekompak. For infrastructure, it is estimated that in Java households contributed up to 20 percent of the cost of a project (excluding land cost).

BUILDING COMMUNITY INFRASTRUCTURE

Rebuilding community infrastructure was an important focus for Rekompak projects and was implemented in phases. The first phase involved rebuilding critical facilities, such as roads and bridges, to enable access to affected areas. Following the disasters in Aceh and Java, Rekompak made funds available to reestablish basic infrastructure. In Java where Rekompak was already in operation, block grants were quickly issued and this benefitted reconstruction activities.

This village road and drainage channel in Yogyakarta was one of many such roads built under Rekompak. Projects such as these were identified using a participatory planning process and were based on community needs and priorities.

Photos:
Rekompak Team

After housing was completed, the next phase of infrastructure rebuilding began. Infrastructure rebuilding often begins with reconstructing what existed prior to disasters. In the process of rebuilding, the importance of including disaster preparedness became clear to Rekompak stakeholders. Through the community planning process described in Chapter 3, infrastructure projects were identified and implemented, with a focus on activities that increased disaster preparedness. Examples of community infrastructure built include village roads and footpaths, retaining walls, evacuation routes and signage, water supply, sanitation facilities, and irrigation and flood control structures such as dams.

Increasing the seismic resistance of houses by applying wiremesh to interior and exterior walls required additional costs but resulted in higher quality houses.

Photo: Rekompak Team

The Government acknowledged the urgent need for disaster preparedness in Indonesia and passed a law on disaster management in 2007, requiring local governments to draft disaster preparedness and mitigation plans. In addition, a World Bank midterm review that included Rekompak activities in Java pointed out that Disaster Risk Reduction required greater attention. Rekompak answered with action that once again demonstrated its ability to evolve and respond to local needs.

More funding and resources were made available and the Rekompak project focused on community infrastructure that would leave target communities in Java better prepared to face future disasters. The project provided capacity building not only for communities, but also for local government officials. Rekompak communities engaged in dialogue on Disaster Risk Reduction policies with regional and local governments, and community infrastructure plans were developed with the guidance of local governments and integrated with regional plans.

Social and environmental concerns were considered in the process of identifying and implementing activities. Inclusive community involvement resulted in high beneficiary satisfaction with the infrastructure assets provided. Local governments in Java expanded community settlement planning through Rekompak using their own resources under a "replication" phase.

> *"Now we all know the evacuation route, so when there is danger we know where to run. Also, with the walkie talkies Rekompak provided, we can communicate which areas are dangerous and in which directions we should run in case of disaster."*
>
> *Robiso, Rekompak beneficiary in Java*

The creation of safe communities is essential in a country like Indonesia where various types of natural disasters occur every year. The involvement of local governments is a key to success in developing and implementing Disaster Risk Reduction plans. The Community Settlement Plans integrated disaster risk reduction plans and communities in Java learned to identify potential disasters that could affect their settlements. Beneficiaries learned how to review previous village development plans and develop new ones with appropriate facilities that would lead to safer communities.

More than 300 Javanese villages built disaster-mitigating infrastructure such as retaining walls and evacuation routes with help from Rekompak. Local governments are now better equipped to support the spatial planning process and extend that support to other communities. In addition, national and local governments have improved disaster risk reduction planning and management skills.

Communities affected by the Mount Merapi volcanic eruptions demonstrated that they are better equipped to respond to the frequent disasters to which Java is all too susceptible. In October and November of 2010, Mount Merapi's volcanic eruptions disrupted life in the region, forcing thousands of people to flee their homes. Three active JRF projects assisted local government and civil society in those affected areas. Community infrastructure constructed under the JRF Rekompak project had earlier set up evacuation routes and assembly points and these were used by many people affected by the eruptions. Previously conducted evacuation drills ensured that communities had a better knowledge of evacuation procedures than was the case during the 2006 earthquake. These outcomes of Rekompak's interventions helped to lessen the impact of Mount Merapi's eruptions in many places. The disaster also highlighted that further work on disaster risk reduction and preparedness is still needed.

This chapter has shown that the Rekompak approach – in which communities and government work in partnership – can achieve results that are transparent, cost-effective, and of good quality. As reported, beneficiary satisfaction is high when beneficiaries are directly in control of the quality of construction and design of their homes and community infrastructure.

Chapter 5 describes the cross cutting themes that are integrated in all Rekompak activities. It also discusses some of the implementation challenges faced by Rekompak and suggests resolutions.

[1] George Soraya, World Bank Task team leader as quoted in an interview in May 2012. The Rekompak project built about 15,000 houses in Java with funding from the Java Reconstruction Fund. In addition, the Government of Indonesia adopted the Rekompak approach for its overall housing reconstruction program in Java, and more than 300,000 houses were built using this approach, using resources from the Government and other donors.

[2] These approaches are mentioned in Abhas Jha's *Safer Homes, Stronger Communities: A Handbook for Reconstructing after Disasters.* The World Bank, Washington DC, 2010

[3] For more information, see Abhas Jha's *Safer Homes, Stronger Communities: A Handbook for Reconstructing after Disasters.* The World Bank, Washington DC, 2010. Chapter 4: Who Gets a House? The Social Dimension of Housing Reconstruction

[4] Collier, Dr. William, (Team leader) Mid-Term Evaluation of Re-Kompak (CSRRP) Aceh.

[5] Collier, Dr. William, (Team leader) Evaluation of Re-Kompak (CSRRP).

[6] *Findings of Post Construction Economic Impact Analysis Study for CDD Programs.* 2008.

CHAPTER 5
Cross-Cutting Themes and Implementation Challenges

Community-based reconstruction projects such as Rekompak encourage and facilitate the participation of women. Holding separate meetings for women helped ensure that women's voices were heard.

Photo: Kumala Sari
for Rekompak Team

The previous chapters discussed the organization and establishment of Rekompak community-based reconstruction projects, including both the community planning process and the physical construction of houses and community infrastructure.

Chapter 5 discusses the key cross-cutting themes that were mainstreamed and integrated into all Rekompak project activities. The chapter ends with a troubleshooting section that shares how some of the implementation challenges that faced Rekompak projects were handled.

CROSS-CUTTING THEMES

The Rekompak approach resulted in more than rebuilt houses: the process also contributed to longer term outcomes that improved governance and sustainability of communities. The approach integrated safeguard and empowerment concerns such as disaster risk reduction, community and women's empowerment, environmental sustainability and capacity development into project activities. Attention to these areas served the projects as a means to an end, and just as importantly served the communities and the beneficiaries as an end in itself. Incorporating these safeguard and empowerment concerns ensured that while critical needs for housing reconstruction were met, the process also strengthened the social fabric of communities, enhanced the capacity of individuals and local governments, and helped communities become more resilient to future disasters and more capable of planning for their own futures.

Disaster Risk Reduction and Management

In the aftermath of a disaster when the reality of the destruction is still tangible, development partners, governments and communities are keenly aware of the need to include disaster risk reduction measures in reconstruction. This was painfully clear following the Java earthquake in 2006, when the direct links between poor construction and substandard building materials and the loss of life and property were only too obvious. To save not only property but lives, it is important to incorporate risk reducing infrastructure, emergency preparedness, and seismic resistant standards.

The challenge is to ensure that disaster risk reduction principles and practices are included in the reconstruction process and continue under community management after reconstruction projects close. This involves raising awareness of risk reduction among communities and providing individuals and local governments with the capacity to plan for and manage sustainable and resilient communities.

As the overall reconstruction of Aceh unfolded following the tsunami, there was an increasing recognition that the reconstruction should "build back better,' which also meant safer. To this end, Rekompak developed a disaster risk reduction strategy and began to incorporate earthquake-resistant building standards into housing and community infrastructure. This focus was later expanded and further scaled up in Java. Disaster risk reduction techniques to safeguard beneficiaries from future disasters are now integral components of Rekompak's work in Indonesia. Disaster risk reduction awareness was introduced in the community planning process and covered in capacity building components. Houses rebuilt and rehabilitated through Rekompak projects were certified as earthquake-resistant. Beneficiaries were trained in anti-seismic construction methods so that future construction would also be safer.

A disaster response drill in Yogyakarta in 2012. The Rekompak Projects successfully integrated disaster risk reduction and preparedness into local level recovery, leaving communities better prepared and more resilient to disasters.

Photo:
Fauzan Ijazah
for JRF Secretariat

Building awareness and preparing for future disasters starts with the community planning process. Rekompak's Community Settlement Plans included hazard mapping of risks such as landslides, floods, fires, earthquakes, tsunamis, and volcanic eruptions. The planning process included establishing emergency procedures and creating escape routes, emergency assembly points, and procedures for raising community awareness about emergency procedures. Risk mitigating infrastructure was incorporated into the community infrastructure component of Rekompak.

As the Rekompak program evolved, disaster risk reduction took on an increasingly important role. In response to requests by local governments, even greater emphasis was placed on incorporating disaster risk reduction into the community planning process in Java. More funds were invested in disaster-mitigating infrastructure and training on disaster preparedness and management for communities and local governments. Community plans that prepare for disaster were put in place for more than 300 villages in Java through Rekompak and supplemented with disaster-mitigating infrastructure. Retaining walls to prevent landslides, drainage channels for flood control, and community roads and bridges that serve as evacuation routes were identified through the community mapping and planning process and constructed with Rekompak project funds. The success of these measures and disaster response training provided by Rekompak projects was demonstrated when Mount Merapi erupted. Affected communities used evacuation routes, facilities and evacuation procedures provided under the Rekompak project. Newly acquired technical and management skills were put to use during the evacuation. Lives were saved because people knew what to do and where to go for safety when the eruptions occurred.

To support the strengthening of local disaster risk reduction institutions, Rekompak teams worked with local government agencies such as the newly-formed Provincial Disaster Management Agency (BPBD[1]) and provided technical assistance, training and support for institutions tasked with disaster risk reduction and preparedness throughout project implementation. As a result of these capacity building efforts, Indonesian national and local governments have improved institutional capacity. Programs are in place for both disaster response and prevention. Local governments are equipped to support the community-level spatial planning process and extend that support to other communities. It is important that training and upgrading is maintained. In this way, the post disaster reconstruction efforts will continue to have impact even after reconstruction is over and the Rekompak project activities have been completed.

The Tsunami and Disaster Mitigation Research Center (TDMRC) in Banda Aceh was set up with MDF support to ensure that research into

disaster risk reduction continues. The Center serves as a “think tank” on disaster risk reduction and management for the government of Aceh and provides resources and services both nationally and internationally. It has established a wide range of partnerships with government, media, NGOs and academia and is fostering ownership of the disaster risk reduction agenda with provincial agencies. In close collaboration with Syiah Kuala University, the Center offers a multi-disciplinary post graduate program in disaster risk management which covers natural disasters, health, economics and the environment. Most of the students are government officials who work in Disaster Management Agencies throughout Indonesia.

An escape route sign placed near the village road built through Rekompak in Ciamis, West Java, under JRF. Disaster risk reduction measures were an integral part of Rekompak’s community planning process.

Photo:
Rekompak Team

Community and Individual Empowerment

Rekompak is grounded in a community-based approach that responds to the needs and aspirations of communities with which it works. Rekompak successfully involved beneficiaries in all aspects of the rebuilding process, including beneficiary selection, planning the layout of communities, and the actual rebuilding. Communities were supported by trained community facilitators to give them the best chance for effective, truly participatory reconstruction.

> *"Initially when the Rekompak project started, people were suspicious of each other. But as the project went on, they started to trust each other as they sat to discuss the rebuilding. They learned financial planning and how to prioritize. Even with a great deal of project money in the community account there was still trust. These are the kind of communities that were rebuilt through this program: communities with confidence and a feeling of ownership. Why? Because they were involved from the very beginning until the houses were completed. This is where the satisfaction comes from."*
>
> *Monhilal, Head of Project Management Unit, Rekompak Aceh, Department of Public Works*

Rekompak contributed to viable and sustainable communities by empowering housing groups to make decisions regarding the future of their communities. As a group and as individuals, beneficiaries learned how to work with local governments, how to prepare budgets, how to ensure transparency and how to rebuild their communities. Rekompak improved the capacity of participants to plan and supervise construction, which helped build self-confidence and promote self-reliance. Beneficiaries were empowered by taking on important responsibilities and by the results of their efforts. They learned that working together as a community enabled them to accomplish more than if they worked alone.

Rekompak is inclusive by design, and all beneficiaries including the most vulnerable were encouraged to participate. Facilitators ensured that everyone was included in information sessions and rebuilding activities. They provided information on all aspects of the rebuilding process as well as technical assistance. For those unable to participate themselves (for example, orphans), representatives were appointed, usually a close relative who acted on their behalf. Activities such as community social mapping for the purpose of putting together and confirming the list of eligible beneficiaries, preparing the Community Settlement Plan and assisting with construction helped to build skills and develop a shared community agenda. Through these capacity building efforts, Rekompak beneficiaries were empowered to play a strong role in the overall reconstruction of their communities.

Housing group members were trained in conflict resolution and consensus building to facilitate decision-making and promote peace. The training helped members decide on priorities and reach decisions on housing and community infrastructure facilities to be built. It strengthened collaborative attitudes and practices within the housing groups and the wider community. Promoting peaceful solutions to conflict was especially important in Aceh's

A couple with documentation for a housing grant provided by Rekompak in Aceh. Beneficiaries were selected by their communities through an open and transparent process.

Photo:
Kristin Thompson
for MDF Secretariat

post-conflict situation following the 2004 tsunami. The collective spirit with which Rekompak communities made decisions resulted in a general feeling that funds, land and assistance were distributed to those who were entitled. In this way, the sense of competition amongst villagers that often accompanies distribution of aid at the local level was mitigated. The participatory Rekompak approach to distributing resources without causing discord was a clear benefit in areas familiar with violent conflict such as Aceh.

Women's Participation

The impact of natural disasters on women is often greater than on men due to such factors as socio-economic conditions, women's traditional roles as caretakers of children and the elderly, as well as their physical strength and capacity. Women represented close to 70 percent[2] of fatalities after the 2004 tsunami in Aceh. Illnesses that frequently follow natural disasters, such as cholera, also take a greater toll on women - not least because of their responsibility to care for the sick.[3] These are all compelling reasons why women need to be involved in decisions concerning the reconstruction of their homes and their settlements including disaster risk reduction activities and emergency preparedness.

> *Following a natural disaster, men's and women's roles are equally essential to the survival and growth of households, communities and societies. Yet, too often women are not effectively engaged and represented in post-disaster recovery and reconstruction initiatives.*
>
> *Making Women's Voices Count*[4]

Rekompak has specifically sought the participation of both women and men for reconstruction projects, recognizing that women's participation especially helps lead to thriving, sustainable communities. In some urban and many rural parts of Indonesia, men are considered to be the heads of households, charged with decision-making within the family and outside the home in the community. Women often take a backseat role. Many women participants in the Rekompak projects had never experienced participating in important community decisions and did not feel comfortable speaking out in public forums. Given these prevailing cultural roles and traditions, women's voices

and needs may be overlooked when limited reconstruction resources are allocated through village-level community processes unless active efforts are made to ensure women participate fully in decision-making.

Promoting women's involvement in the reconstruction was a cross-cutting concern for MDF/JRF Rekompak projects. Like other community-driven development projects implemented under the MDF, Rekompak actively encouraged and facilitated the participation of women in the reconstruction process. Targets for the percent of women attending meetings were put in place. This participation positively affected the experience of many women beneficiaries. Some women, for example, built their own homes, participated in village meetings and were elected to project committees. Despite targets and good intentions, however, both the quality and quantity of women's participation was less than optimal in many communities.

MDF and JRF Rekompak projects promoted women's empowerment and participation in all aspects of community planning and decision making. Here a group of women discuss a model for the proposed reconstruction of their settlement based on the Community Settlement Plan (CSP), which they helped their community develop after the eruptions of Mount Merapi.

Photo:
Rosaleen Cunningham
for JRF Secretariat

It is important that women's voices are not just heard, but that they count. In Rekompak projects women were encouraged to actively participate in the community planning process. The intent was to focus on some of the key challenges faced by women during post-disaster reconstruction and on their needs especially in relation to housing and community infrastructure. Rekompak facilitated and encouraged meaningful opportunities for women to be involved in discussions and decisions. Ensuring full participation of women and meeting their needs was more successful in some cases than in others. Factors contributing to how successfully women were involved included whether women had a role in community decisions prior to the disaster and whether or not women's opinions were already valued by a particular community. Support in terms of gender expertise and funding to promote and implement gender considerations in post-disaster reconstruction should be included in all aspects of disaster response and recovery beginning with the damage and loss assessment.[5]

Recognizing the limited role that women traditionally play in community affairs, Rekompak aimed to involve women from the outset. Progress was measured by average participation rates for women in community planning and representation rates of women as committee members. Holding some separate formal and informal meetings for women ensured women's

A group of women workers from local villages in the Yogyakarta area participating in a house reconstruction. These workers were not only paid a daily wage, they also learned how to build a house.

Photo:
JRF Secretariat

Women Actively Participated in Rebuilding their Homes

Prior to the tsunami, Ibu Zubir and her husband Pak Zubir owned a house located in Blang Gelinggang Village in Aceh. Their home was one of many destroyed by the tsunami in 2004.

When it came time for Ibu Zubir and her family of four to rebuild their home, Rekompak was there to assist them. The family actively participated in community preparation activities that led to the formation of a household group. The group of nine included four women who made up 44 percent of the group, a much larger percentage than the usual 10 – 20 percent.

Labor supply was a persistent problem in the construction of houses in the village. The women in Blang Gelinggang understood the serious implications this posed in terms of the housing group's ability to finish their houses on time, and they filled in for the limited supply of workers. Ibu Zubir, who is in her forties, quarried sand and carried construction supplies such as bricks and sand from pile to pile within the construction site. She stated that this involvement in the physical construction allowed her to personally supervise and check on progress. The savings generated by doing simple construction chores herself were utilized to purchase other materials for her house.

Adapted from: *Aceh After The Tsunami Rebuilding Houses And Communities*, Project Management Unit, Rekompak Aceh, Ministry of Public Works, December 2007. 27

opinions were recorded and considered in project implementation. This is important in situations where women are traditionally unlikely to state their opinions and ideas if men are around, as was the case for some of the Rekompak villages. Engaging women in decision-making processes is a challenge that requires continuous emphasis and effort. Regular monitoring and evaluation is also required and if targets are not reached, it is important to be flexible in trying out and implementing different approaches.

Rekompak trained and used women facilitators in order to include gender sensitive considerations in project implementation. Women facilitators were welcomed by female beneficiaries who felt that women better understood issues of concern to them. The facilitators encouraged women to participate in the construction and design of their own homes and the layout of their communities. Some women beneficiaries provided active oversight, rather than building their own homes, but ensured that the homes being built

Women in Pangandaran Village are Committed to Reducing Disaster Risks

With the help of the Community Settlement Planning process, women in Pangandaran village, West Java, played an active role in preparing for possible future disasters. Of the 30 volunteers chosen to participate in the Disaster Risk Reduction planning in each neighborhood, 20 were women. According to Ibu Sri, one of the beneficiaries, the reason so many women became involved was because they had become aware of the higher risks facing women. Of the more than 650 tsunami fatalities in Pangandaran, a disproportionately high number were women and children. A number of the small kiosks on the beach were run by women, and many women were in their homes near the beach when the waves came. Ibu Sri knew a number of the women who died and this was one of the driving forces for her to get involved. She and her group of volunteers spend their spare time spreading the message of disaster-preparedness. "We're everywhere! Village meetings, public gatherings at the mosque, we are there with our campaign materials," she said proudly.

This pro-active attitude led her to approach the Ministry of Forestry and advocate for the planting of trees along the coastline to act as a natural barrier. "The Ministry people told us they had trees but no budget to plant them. We said, 'We'll do it!' We planted over 500 trees within a few days."

were of good quality. They learned about bookkeeping, procurement of construction materials, and construction quality standards and supervision – activities previously mostly handled by men. Comprehensive gender training for all facilitators is recommended for reconstruction projects.

> *"During the (Rekompak) project we learned how to build a house. Now we know what to do. We didn't know before and certainly never thought it possible. Imagine, women like us — housewives — can learn how to build a house. It's usually a man's job."*
>
> *Women from Kebon village, Klaten, Central Java*

Labor was in short supply in most villages and the work contributed by women positively influenced home and community infrastructure construction progress. In most cases, the reconstruction of communities would not have been finished as quickly without the assistance of women. Women who had never picked up a construction tool stepped in and cleared rubble, hauled heavy wheel barrows, and laid crushed stones and sand in preparation for building roads. Women served on committees and wrote reports. They supplied much needed additional labor, and were empowered to take part in decision making. Some managed this more successfully than others but for many women this level of participation opened a pathway to greater self-reliance.

Environmental Considerations and Safeguards

Environmental sustainability was an early concern for Rekompak and remained an essential focus throughout project implementation. Guidelines were developed and monitored to ensure that there was minimal effect on the environment as a result of the reconstruction activities. Issues considered included: sanitation, waste management, the use of building materials such as timber, and the role of communities and government in environmental management. When large scale reconstruction is required, as was the case in Aceh and Java, locally sourced building materials such as wood must be carefully managed to assure minimal environmental damage.

Aceh is rich in biodiversity, including extensive old growth forests, and the protection of these forests was a critical consideration for the MDF. Extensive discussions took place among key actors in reconstruction on how to ensure that forests were not in peril. The MDF set up the Aceh Forest and Environment Project with the specific aim of protecting Aceh's forest resources during the reconstruction.

Because so many buildings had to be rebuilt after the earthquake and tsunami, wood not only became scarce but the price soared dramatically and there was fear that the huge volume of timber needed for the reconstruction could result in destruction of Aceh's forests. Rekompak addressed these environmental concerns by putting in place strategies for reducing the use of timber by, for example:

- using light weight steel for the roof trusses of houses and schools
- reusing existing timber as much as possible
- using scaffolding made of bamboo and
- providing routine supervision on the use of timber.

In Nias as well, people worried that the amount of timber needed for rebuilding could destroy the island's forests. Nias is more isolated than Aceh and the cost of transporting materials from the mainland of Sumatra was even more costly than for Aceh. The strategies that had been applied in Aceh to reduce the need for timber were also used in Nias. In addition, through the MDF's community-based housing project implemented in Nias,[6] reforestation was promoted and trees were planted along community roads and outside homes, schools, and other village structures.

In Java, timber sourcing was much less of an issue than in Aceh or Nias. Nevertheless, mitigating efforts were implemented to prevent negative environmental impacts. When trees needed to be removed to accommodate widening of roads and pathways or for drainage, for example, one locally available tree was planted for each tree removed.

In cases where communities needed to relocate, proper environmental and social safeguard procedures based on World Bank standards were followed to ensure that no adverse impacts occurred. Relocation sites of more than five hectares were required to undergo an environmental impact analysis to ensure proper land usage of the sites and suitable construction methods. In both Aceh and Java, some communities chose to relocate either because their previous settlement sites were wiped out, as in parts of Aceh, or because sites were deemed too dangerous for people to live in, as in the Merapi "red zone" and landslide-prone areas in Java.[7]

A roof being installed on a house in Aceh. Using lightweight steel for roof trusses reduced the need to use timber which was in short supply. Using steel instead of wood helped safeguard the environment as there was concern that using wood for large-scale reconstruction could lead to the destruction of the forests in Aceh and Nias.

Photo:
Fakhrurrazi
MDF Photo Competiton

Building Capacity

Implicit in the Rekompak approach is the notion that sustainability of project outcomes rests with beneficiaries and local leadership. By strengthening capacity of individuals, communities, and local governments and supporting government at all levels during project implementation, Rekompak aimed to contribute to long-term positive impacts. Achievements at the time of closing indicate that the prospect for sustainability of Rekompak project outcomes is good.

Capacity strengthening was incorporated into all project activities. Communities were educated on disaster preparedness and the importance of high quality, seismic-resistant construction. Through the preparation of Community Settlement Plans, communities developed skills in needs assessment, community mapping and planning. Training was also provided to build community capacity to operate and maintain assets created by the project and to ensure that community user contributions were sufficiently large to cover operation and maintenance expenses. Communities were made aware of potential sources of funding for operation and maintenance and information about obtaining access to such funds was provided.

Rekompak contributes to future local development through the cadre of skilled community workers it trained and employed as facilitators. The project was a training ground for facilitators to learn the Community Driven Development approach, appropriate construction techniques and productive interaction with communities. Some former Rekompak facilitators have become civil servants with a store of practical experience working with communities.

Rekompak invested in capacity strengthening at every level of government from local to national to ensure sustainability of achievements and proper maintenance of project assets. Rekompak teams worked with local government agencies such as the Provincial Disaster Management Agency (BPBD[6]), providing technical assistance, training and support for institutions tasked with disaster risk reduction and preparedness throughout project implementation. Community planning processes strengthened the capacity not just of communities but also of local governments to engage in and support community-level planning. Project management units in government gained experience in new ways of operating, such as direct grant channeling to communities, as well as in transparent information systems and complaint handling. At the national level, the Ministry of Public Works has developed a model housing reconstruction program recognized nationally and internationally through its direct hands-on experience implementing Rekompak in Aceh, Java, and other locations across Indonesia.

Preserving Cultural Heritage during Reconstruction

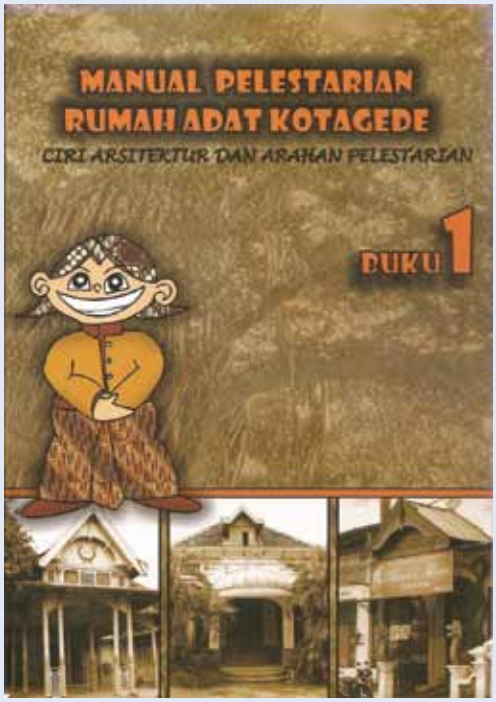
The May 2006 earthquake on Java left an enormous trail of destruction in which thousands of people perished and the homes of survivors lay in ruins. In many villages, historic homes built in the traditional Javanese architectural style were destroyed. These traditional houses, with handmade terracotta roof tiles and intricately carved wooden doors and windows, are a distinctive cultural feature of Yogyakarta and Central Java. In some cases, rehabilitation and reconstruction lead to replacing these traditional homes with modest, contemporary houses, significantly affecting the cultural heritage of the area.

Rekompak demonstrated its flexibility in responding to local needs by addressing the wishes of communities that wanted to preserve their traditional architecture and cultural heritage in the context of rehabilitation and reconstruction. Rekompak initiated a sub-component aimed at preserving the heritage of cultural assets such as homes and public facilities in six urban and rural Javanese communities.

As the location of an ancient city with high heritage value, the community of Kota Gede in Yogyakarta served as a model for Rekompak's heritage preservation efforts. Initial steps addressed the community's priority to preserve its unique cultural heritage. Through the CSP process, the community mapped and inventoried existing heritage buildings, prioritizing rehabilitation and reconstruction based on finding a balance regarding the need for traditional homes, public heritage facilities and neighborhood infrastructure. Tourism and public accessibility of buildings were also taken into account.

Along with the actual construction of traditional buildings, Rekompak has contributed to the preservation of cultural heritage in other ways. The project helped create a synergy between government, civil society (including local NGOs and CSOs), and the communities themselves. Rekompak provided facilitators to increase capacity of the community and government related to the organizational, managerial, economic and technical aspects of preservation and heritage management in the area.

Community heritage management organizations helped to awaken community awareness of the importance of heritage preservation. They also help to increase and maintain community knowledge and skills in preservation techniques and heritage asset management.



Rekompak provided manuals to communities on preserving cultural architectural heritage.

Source:
Rekompak Team

The Rekompak approach is flexible to adapt to local needs and contexts, such as helping communities rebuild traditional architecture that was a distinctive feature of the Kota Gede neighborhood in Yogyakarta.

Photo:
Rekompak Team

RESOLVING IMPLEMENTATION CHALLENGES: SOME COMMON PROBLEMS AND SOLUTIONS

The Rekompak approach is a continiously evolving process. The basic model must be regularly adapted to suit local circumstances. Adjustments based on lessons learned were continually incorporated for improved performance. As with any large-scale project, many challenges arose during day-to-day implementation that were not foreseen at the design stage. Quick action is required in a post disaster context and the urgency to respond to people's needs has to be weighed against the time required for the detailed pre-project assessment and preparation that can mitigate implementation problems. Following a natural disaster, the response must be fast and efficient, able to address reconstruction on a large scale, able to provide good quality homes and able to ensure transparency and accountability in financial transactions. Each of these requirements presents challenges. Below are some of the challenges faced during Rekompak implementation in Indonesia and the solutions that were applied to them.[8]

Facilitator measure the strength of the house beam in Lasikin village, Aceh.

Photo:
Rekompak Team

CHALLENGE:

Beneficiaries with inadequate knowledge of construction methods. In addition to the trauma they had just experienced, most homeowners had never built anything and were not familiar with construction techniques. The community-based approach makes use of mostly unskilled local labor and often the owners themselves rebuild their houses. Rekompak relied on construction supervisors and community facilitators to provide technical expertise and quality control. During early implementation in Aceh, there was a shortage of trained facilitators due to the stiff competition for high-quality community workers to support the general reconstruction effort. Thus field support, quality control, and monitoring of construction were often inadequate owing to the lack of skills and high turnover among facilitators. In some communities this resulted in insufficient community understanding and preparation which delayed construction of housing and led to weak quality control.

SOLUTION:

Provision of continuous and close supervision by well-trained field staff to ensure timely completion of houses of acceptable quality. An adequate number of trained facilitators must be available to provide technical assistance and construction supervision. The community-based approach is management intensive and requires strong and sustained dedication and commitment from project managers and facilitators. To improve the quality of facilitators in the field, senior facilitators were assigned to lead and support three or four junior facilitators. In addition, facilitators were supervised by a District Management Consultant. Capacity building in the form of on-the-job training and coaching was provided to facilitators to ensure more effective preparation and implementation of the program.

CHALLENGE:

Inadequate seismic-resistant structural quality. Maintaining good quality construction is a major challenge in any post disaster situation. This is particularly true in situations where skilled labor and quality materials have become relatively scarce because of the simultaneous implementation of various housing projects. The rush to implement quickly can compromise construction quality. Ensuring that the houses under construction were of adequate quality and met minimum standards was a constant concern in Rekompak. The most common construction problems were: (a) reinforcing bars that were not bent properly to ensure strong connection between columns and beams; (b) low concrete strength due to inappropriate mix of cement, sand, gravel and water; and (c) lack of anchoring between roof and beams to ensure storm and earthquake-resistant houses.

SOLUTION:

Provision of trained technical facilitators in the field and implementation of a system for auditing construction quality. Supervision by an adequate number of well-trained technical facilitators during the building process is of key importance. Civil engineers were included in the Facilitator Task Forces that oversaw construction quality. There was a direct correlation between the quality of the facilitators and the quality of reconstruction. Rekompak increased technical training and supervision of facilitators in order to improve the quality of their work in the field. In addition, random quality tests (technical audits) were conducted on houses being constructed and on those completed. Using state of the art testing equipment, including a hammer test, scan test and densitometer, is critical. For those houses found deficient, quality improvements were immediately undertaken under a special quality enhancement program, using wire mesh, for example, to fortify walls. Such retro-fitting required additional costs but resulted in better quality houses and more satisfied beneficiaries. In Java, houses were tested and certified by external experts.

CHALLENGE:

Weak and improper financial management. Financial management of block grants was less than satisfactory during the early stage of project implementation in Aceh because communities were often unable to comply with guidelines. Those related to the safekeeping of cash, bookkeeping, and the dissemination of financial reports were especially problematic. In the beginning, there were cases of fund mismanagement and misuse by some household groups that were uncovered by Rekompak accountability mechanisms such as complaint handling. These findings resulted in suspension of construction activities until the problems were resolved. Financial mismanagement cases generally fell into two categories: (a) funds used for purposes other than housing (usually to address urgent family concerns such as health care); and (b) design modifications (usually house expansion) undertaken by the owner without having sufficient personal funds. Such problems were most pressing in the early stages of implementation, when it was difficult to find qualified facilitators to supervise construction.

SOLUTION:

Linking fund release to physical progress and effective complaint handling mechanisms. Independent reporting by trained facilitators also helped as did peer pressure exerted by affected group members. Under Rekompak rules, if one household in the group misused the housing funds, disbursement to the whole group was suspended with the next funding tranche not disbursed until the problem was resolved and the misused funds reimbursed. Under this system community pressure forces those who have misused funds to pay back or otherwise settle the issue as soon as possible. As implementation progressed, project and community-initiated checks and balances were implemented, such as complaint-handling mechanisms and a “hotline” for reporting suspected misuse. These mechanisms proved effective. Learning from experience in Aceh, Rekompak made disbursements in three tranches rather than in two tranches in Java, requiring certain physical progress milestones to be met by all members of the household group before the next tranche was released. Complaint handling systems were immediately set in place in Java to promote accountability and transparency. Because the early problems were mostly resolved, final reckoning showed that only a very small percentage of Rekompak Aceh funds were misused, amounting to less than one percent of project funds.

CHALLENGE:

Inaccurate targeting of beneficiaries. Inaccurate targeting and unclear eligibility requirements are the most common reasons for dissatisfaction among housing beneficiaries. In a few cases, questions arose over eligibility. Some of the selected beneficiaries were individuals who were employed full-time outside the project area. Some had permanent residences elsewhere and their claim to a Rekompak house was through inheritance. To be successful, the community-based approach requires that beneficiaries are actively involved in the construction of their own homes, and participate in community planning and financial management. When that is not the case, the quality of construction suffers, so absentee owners would impact the success of the project.

SOLUTION:

Strict and transparent application of agreed upon criteria for selecting eligible beneficiaries. Rekompak beneficiaries were required to be permanent residents of the target area and willing to fully participate in community planning, managing funds, and supervising the construction of their houses. Information on eligibility criteria needs to be widely distributed and clearly explained by facilitators in community information sessions.

Rekompak promoted transparency through clear communication and widely distributed information. This banner asks the public to help supervise JRF community grants, stating that no bribes are to be paid and that there is to be no collusion or nepotism. Phone numbers are provided in case of complaints.

Photo:
JRF Secretariat

CHALLENGE:

Double dipping or one beneficiary claiming more than one house. Determining who is eligible to receive a new house is one of the most difficult aspects of any housing reconstruction program. Fairness issues can doom a program to failure if beneficiaries do not accept the targeting and eligibility decisions. There were some early cases in which some beneficiaries received more than one house from Rekompak, contrary to project policy. In other cases, owners were reported to get funding for reconstruction of one house and rehabilitation of another.

SOLUTION:

Closely involving the community and local leaders in targeting of beneficiaries and in gathering facts to facilitate problem-solving and decision-making. Cases in which eligibility was questioned were checked and confirmed by field inspection. There were cases in which an individual owned two or more houses destroyed in the tsunami, but under Rekompak rules, each household was entitled to only one house from Rekompak, regardless of how many he or she may have owned prior to the tsunami. Through feedback from the community and local government leaders, alleged cases of "double houses" were identified, analyzed and categorized. The Project Management Unit and the community together, through a consultative process, came up with options on how to address these cases. The role played by the local governments through the sub-district and village heads was helpful in resolving disputes.

Issue	Solutions/Options
• Beneficiary owns two houses destroyed by tsunami.	• Son was made beneficiary of the second house which he received as an inheritance. This legitimized the claim for assistance for each of the two houses.
• Beneficiary has two houses, one he owned prior to the disaster and the other he inherited from parents after tsunami.	• Beneficiary legally transferred ownership of one house to another sibling who then became the qualified beneficiary.
• Beneficiary legally owns only one house but received assistance for more than one by falsifying data.	• Beneficiary returned the money used for reconstructing one of the houses.

Source: *Aceh after Tsunami Rebuilding Houses and Communities.*

CHALLENGE:

Escalating costs of materials and labor in large scale reconstruction. As a result of the huge demand for building materials and labor as reconstruction began in Aceh, construction costs almost doubled within the first year. The Government had initially set the unit cost for house reconstruction at $3,300 but by the time that MDF Rekompak started rebuilding, the unit cost had increased to more than $6,000. For MDF Rekompak this meant building fewer houses than initially planned, revising targets, and working in 130, rather than in 200 communities.

SOLUTION:

Provision of core houses rather than complete houses. Rather than build fewer homes in fewer communities as in Aceh, JRF Rekompak changed its approach in Java. Instead of providing a complete house, Rekompak committed to rebuild earthquake-resistant core houses. Owners were encouraged to contribute their own funds to provide finishes on the basic structures. Another option was for owners to build a slightly smaller house than the standard 36 square meter house and use the "savings" for making the house complete. Other options included reusing materials from temporary shelters, and the owner supplying most of the labor him or herself. By building core houses that provided adequate earthquake-resistant shelter instead of complete houses, funding was leveraged so that the project's available resources could be used to assist more households.

Rekompak facilitators test the side and upper beam of the house walls to ensure the strength. Lasikin village, Aceh, 2009.

Photo: Rekompak Team

CHALLENGE:

Fewer women than men participated in Rekompak activities. Ensuring equal participation of women in Rekompak reconstruction remained a challenge in both MDF and JRF Rekompak. Rekompak required 30 percent participation of women at meetings and representation on village boards and Rekompak committees. Meeting the 30 percent quota was difficult and as a result it became mandatory to include at least one woman on Rekompak committees. Even when women attended meetings, they did not always participate at the same level as men, partly because a number of women were not used to giving their opinions, and because even when they did speak, their opinions were not always valued and did not carry as much weight as the opinions of men.

SOLUTION:

Seek specific solutions that promote the participation of women. Rekompak projects adapted their consultative processes to include separate formal and informal forums specifically for women in environments where they would feel comfortable to give their opinions and inputs. With these changes, women's participation in Rekompak activities improved but was not optimal in all beneficiary communities. While it is important to acknowledge the progress made and the achievements of the women themselves, it is also important to acknowledge that ensuring the equal participation of women presented challenges. Allocating sufficient resources to gender mainstreaming activities, including gender training for facilitators, is advised for future Rekompak project implementation.

CHALLENGE:

Houses with incomplete infrastructure and lack of access to services. In Aceh, not all Rekompak houses were outfitted with connections and access to water and electricity. These services were to be provided by other agencies or local governments. In cases where access to services was not provided, the houses sometimes remained unoccupied until the services were provided.

SOLUTION:

Ensure close coordination to avoid delays in provision of electricity and water facilities. Coordination between those responsible for providing services and the housing project should aim for completion of the water and electricity services at the same time as houses are completed so that delays in occupancy can be avoided.

A local worker installs reinforcing steel bars for columns and beams for a new house in Java. Rekompak beneficiaries were required to adhere to seismic-resistant standards and construction techniques in building their homes.

Photo: Rekompak Team

Chapter 5 described the cross-cutting themes that are woven into all Rekompak activities: disaster risk reduction, community empowerment, women's participation, environmental safeguards and capacity strengthening. Examples of implementation challenges and how these were handled by Rekompak were also discussed.

The following chapter, Chapter 6, brings to conclusion the story of the Rekompak experience in Indonesia.

[1] *Badan Penanggulangan Bencana Daerah*
[2] Making Women's Voices Count. Integrating Gender Issues in Disaster Risk Management Overview and Resources, The World Bank, 2012. 2
[3] Making Women's Voices Count. Integrating Gender Issues in Disaster Risk Management Guidance Note 1, The World Bank, 2012. 2
[4] Making Women's Voices Count. Integrating Gender Issues in Disaster Risk Management Guidance Note 5, The World Bank, 2012. 1
[5] For more information see Making Women's Voices Count: Integrating Gender Issues in Disaster Risk Management Guidance Note 5, The World Bank, 2012.
[6] The Kecamantan-based Reconstruction and Rehabilitation Planning in Nias Project (KRRP), funded by the MDF.
[7] For additional information on environmental considerations see Jha, Abhas, *Safer Homes, Stronger Communities, a Handbook for Reconstructing after Natural Disasters,* The World Bank, 2010. Chapter 9 Environmental Planning
[8] Several of the issues and solutions mentioned in this section were adapted from *Aceh after Tsunami Rebuilding Houses and Communities*. 49-59

PART THREE

CHAPTER 6

From Innovations to Good Practice: Sharing Rekompak's Experience

Communities took the lead in reconstruction of housing in Rekompak villages in Aceh and Java. This photo shows newly constructed houses in Lambung, Banda Aceh.

Photo: Tarmizy Harva
for MDF Secretariat

Part One of *Rekompak: Rebuilding Indonesia's Communities After Disasters* provided background information concerning the tragic natural disasters that occurred in Aceh and Java between December 2004 and November 2010. Chapters 1 and 2 described the scope of damage and the overwhelming response from the international community. The chapters outlined how assistance was coordinated and discussed the establishment and achievements of the MDF and JRF.

Part Two explained how Rekompak works. Chapters 3, 4 and 5 in this section provided details of how the community-based approach was implemented, including identification of beneficiary communities, the Community Settlement Plan (CSP) process, and funds management. The chapters discussed how technical quality was assured, and looked at how local procurement stimulates local economies. This section featured key cross-cutting themes that are mainstreamed and integrated into all Rekompak project activities: disaster risk reduction, women's participation, community and individual empowerment, environmental considerations, and capacity strengthening. Implementation challenges faced by Rekompak projects, and how these were handled, were also discussed.

Chapter 6 summarizes the project's guiding principles and the key lessons learned. The chapter concludes with a reflection on Rekompak's legacy, the key elements that made the model a success, and possible adaptation of the Rekompak approach in future disasters.

REKOMPAK'S GUIDING PRINCIPLES

In seven years of operation, the MDF and JRF Rekompak projects evolved to meet the housing and community infrastructure needs of some of the largest post-disaster community-based reconstruction efforts ever attempted. Over the years, Rekompak introduced many innovative processes and activities to ensure success as measured by quality seismic–resistant construction, disaster risk mitigation and beneficiary satisfaction. This was possible because the projects were flexible and continually evolved based on lessons learned, solid partnerships and implementation of best practices.

The Rekompak projects leave a rich legacy in their wake. While implementation was not always smooth and there were many challenges,

the results made the efforts worthwhile. Key Rekompak project principles or characteristics that contributed to success are listed below.

- **Self-Reliance and Empowerment**

Rekompak beneficiaries were empowered to manage resources for the activities in their communities. This included fulfilling criteria for receiving grants, making grant applications, planning their homes and communities, ensuring construction quality, and taking responsibility for their own collective actions including disaster management. Beneficiaries rose to the expectation that they were capable, rather than helpless victims, and showed that they had within them the resilience and tenacity to succeed in the face of great hardship and tragedy. This level of self-reliance and empowerment helped with the healing process. The high levels of community involvement led to excellent beneficiary satisfaction rates and enhanced community ownership in the reconstruction process.

A new cement village road built by Rekompak in Wonoharjo village in Ciamis, West Java, as part of the disaster risk reduction program. The road provides easier access to evacuation points for these school children and their families should disaster strike the area.

Photo:
Rekompak Team

- **Inclusive Decision Making**

Each decision was made through a democratic process that included: community mapping and planning, house and community infrastructure construction, and use of funds. The community planning process encouraged involvement of marginal groups in reconstruction decisions. Efforts were made to ensure everyone in the community had a voice (for example, holding separate meetings for women beneficiaries) so that their opinions were heard, documented, and considered in decision making.

- **Transparency and Accountability**

Rekompak demands transparency in all transactions. The bank account for each community was opened and maintained by housing groups. All financial records and transactions were openly shared and subject to review by group members. Measures such as counter-incentives to discourage misuse of funds, follow up on reported cases of fraud, suspension of funds if agreed-upon conditions were not met, and the use of complaint reporting channels

JRF Rekompak's website being accessed from a personal computer. Clear, accessible and transparent communication was a key component in Rekompak's success.

Photo: Christiani Tumelap for JRF Secretariat

helped to promote accountability and deterred corruption. Information about these mechanisms was widely disseminated through posters, the media and websites.

- **Seismic-resistant Quality Construction**

To ensure that future disasters would result in fewer fatalities, Rekompak required strict adherence to seismic resistant construction standards. Technical audits and monitoring and evaluation activities were carried out at all stages of the reconstruction process. Technical assistance and frequent monitoring by facilitators as well as regular supervision by partner agencies helped to ensure consistent quality. Funding for the construction was disbursed in tranches and if one or more of the households in a housing group was not compliant with the standards required, release of the next tranche of funding was suspended for the entire group until the problem was fixed. As a result, household group members and neighbors supported each other to ensure that all met the required standards. Raising community awareness on the importance of construction quality was also a key design feature.

- **Culturally Appropriate Solutions for Local Problems**

Household groups must reach consensus on many decisions. Members have to agree, for example, on who will be selected as a Rekompak beneficiary, the location of homes, and the type of community infrastructure to build. At times conflicts arise. Existing local social structures for resolving disputes often have culturally sensitive and locally appropriate means of coming to consensus. Using these creates an environment of trust and enables finding culturally appropriate compromises beneficial for the common good. Managing differences in priorities and perspectives and finding acceptable solutions are important skills in binding communities together.

- **Supporting Local Economic Recovery**

Rekompak supported local economic recovery by channelling funds directly to communities. The project encouraged local procurement of construction materials and created jobs at a time when there were few available in devastated communities. Purchasing building materials and supplies locally and hiring local laborers circulated money in the community which helped to stimulate local economies.

- **Building Disaster Risk Reduction into Design and Implementation**

Disaster risk reduction interventions in Rekompak projects resulted in communities that are resilient and better able to withstand future disasters. Rekompak helped villages to develop Community Settlement Plans with an emphasis on disaster-risk reduction. Community infrastructure such as bridges, roads, retaining walls, evacuation routes, and irrigation and drainage

channels, were identified and built. Disaster risk awareness was included in capacity building components of all Rekompak projects. Residents of Rekompak villages are aware of what they need to do and where they need to go for safety if a natural disaster strikes. Local governments have enhanced capacity to manage risk reduction and evacuation when a disaster occurs.

- **Flexibility and Adaptability**

Projects that implement reconstruction activities following disasters need to be flexible. Reconstruction needs vary greatly depending on the scale and scope of a disaster and the local context. It is not always possible to know immediately following a disaster exactly what the needs are and how they might best be met. In both Aceh and Java, Rekompak was flexible and responded to evolving priorities. The projects adapted to changing contexts as the reconstruction progressed. Midway through the Rekompak project in Java, a midterm review stressed the need for greater disaster risk reduction and Rekompak responded by scaling up disaster mitigating activities. In villages where homes with unique and historic architectural style were damaged by the earthquake in Java, Rekompak was adapted so that this important cultural heritage could be preserved. The Rekompak approach has proven its adaptability: it has been used successfully in Indonesia in situations devastated by different types of disasters, including tsunamis, earthquakes, and volcanic eruptions. The approach was used successfully through different implementation arrangements in an extremely remote and difficult environment on the island of Nias under the MDF's KRRP project.[1] Rekompak's success in Aceh also proved that the community-based approach to housing reconstruction can work in a post-conflict situation as well as in post-disaster settings.

> *"Rekompak was the successful partnership of the Government of Indonesia, local governments, donors, beneficiaries and their communities, and the World Bank. Each partner in this relationship of trust needed the others to succeed in the successful rebuilding of sustainable communities. Not one of the partners could have accomplished the reconstruction by themselves. Unity of thought brought unity in action."*
>
> *George Soraya, Rekompak Task Team Leader, World Bank*

- **Partnerships Based on Trust**

The MDF and JRF Rekompak projects played an important role in bringing together key players involved in the housing reconstruction efforts. The national Government provided policy and guidance; donors provided funds which were managed by the World Bank; local governments and the Department of Public Works implemented the project, providing project management, oversight and facilitators. Funds were channeled directly to communities and housing groups, who managed and accounted for the funds that beneficiaries used to rebuild their homes. The trust fostered through these partnerships accounts for Rekompak's success.

A delegation from the European Union (EU) during a site visit to a Rekompak housing project in Aceh. Partnerships of trust, which included the Government of Indonesia, donors, communities, local governments and the World Bank, are credited with the success of the MDF and JRF Rekompak projects.

Photo:
MDF Secretariat

KEY LESSONS LEARNED

The Rekompak projects continually adjusted to accommodate lessons learned during implementation. Recommendations made by government partners, donors, facilitators, other stakeholders and, not least by beneficiaries, ensured more efficient and effective project implementation as improvements were incorporated. Some of the key lessons learned in Indonesia are listed below.

- **Disaster-affected communities can successfully take the lead in their own recovery.** Rekompak as implemented in Indonesia created a platform for independent, self-sustaining communities. The Rekompak approach created strong ownership among the beneficiaries as well as a sense of pride in achievements.

- **Close coordination among concerned stakeholders, including local government, is essential at all phases of planning and reconstruction.** Good coordination with government and other agencies helped fill the gap, particularly for complementary basic infrastructure at the village level. It is necessary to link community level planning and infrastructure with local government planning processes to avoid duplication or gaps.

- **Well-trained and skilled facilitators are essential for successful community-based reconstruction**. There is a direct correlation between the quality of the facilitators and the quality of construction. An investment in facilitators is money well spent.

- **Effective complaint handling systems are necessary for a successful community-based project.** The process empowered community members and strengthened the demand for good and accountable service delivery at grassroots levels. The complaint handling mechanisms are credited with safeguarding transparency and accountability.

- **Housing beneficiary selection criteria and verification must be consistently and strictly observed.** To prevent conflict, communities must set and agree to the criteria for beneficiary inclusion.

- **Providing core houses proved to be more effective and economical than providing homes complete with all finishes.** This lesson learned in Aceh was applied in Java. Core houses are adequate to shelter and house people and they cost less, so it is possible to build more homes and help more people.

- **Inclusive decision making leads to better and more equitable results.** The positive impacts of efforts to give women, in particular, a stronger role in project processes are evident.

- **Participatory monitoring processes were effective in monitoring progress of housing and community infrastructure and promoting accountability.** Communities were involved in and monitored all stages of project implementation from supply of goods to bookkeeping records, expenditures, and reconstruction progress. Reports were publicly presented and included recommendations made for improved performance. These were acted on by beneficiaries and checked on by facilitators and the monitoring committee had to be transparent.

- **Clear and transparent communication with all stakeholders enhanced partnerships and played an essential role in Rekompak's success.** Good communications enabled Rekompak projects to promote good governance through enhanced transparency and accountability, while strengthening community participation and ownership of projects.

What Makes Rekompak Successful? A Community's Perspective

When the housing group leaders and the village head in Mesjid Gigieng village in Aceh were asked what factors contributed to the success of Rekompak, they mentioned the following:

- Effective communication between the community and the facilitators, who by the end of the project were considered "family"
- Effective procedures for materials procurement, financial management and construction supervision
- Bidding for construction materials on-site. Several suppliers participated and this enabled the household groups to get a lower price than what would have been the case otherwise
- Maximizing the use of administrative funds by minimizing expenses – only 1.9 percent of the budget was used for administrative costs such as report preparation
- Clear accounting of costs and financial transparency. Household groups reported to members at regular intervals and information was posted at the Rekompak post which also served as a meeting venue
- Careful monitoring of construction materials procurement by housing facilitators ensured accountability on the part of the household group leaders
- Active participation of women in such activities as receiving and inspecting materials, preparing meals and drinks for the workers, and doing floor finishing work.

The Mesjid Gigieng community considers Rekompak to be the "best project" because it employed a bottom-up approach. They fully trusted the project staff, particularly the facilitators, commenting on their sincere efforts to strengthen the community's internal capacity to manage their own future.

Adapted from: *Aceh After Tsunami: Rebuilding Houses & Communities.*

CONCLUSION

The Government of Indonesia is widely recognized for its efficient and effective management of post-disaster reconstruction in Aceh, Nias, and Java, including the recovery of housing and community infrastructure. From the beginning, reconstruction support was strongly led by the Government of Indonesia and closely coordinated with local governments. The Government of Indonesia worked through line ministries to coordinate and implement the reconstruction program.

Rekompak's success demonstrated that community driven approaches can be successful in post-disaster and post-conflict situations. The project broke new ground: it took significant risks where huge stakes were involved. Rekompak worked through government systems using a community-driven approach and entrusted large sums of money into community hands during difficult times, and, in the case of Aceh, in a high-profile and politically charged situation. Despite many challenges, Rekompak developed a successful model in Aceh that the Government of Indonesia adopted and replicated in two other post-disaster situations. Rekompak proved that a community-based approach is a robust model that can be applied to different disasters and different contexts. It also showed what partnerships can achieve: the Government of Indonesia, local governments, donors, the World Bank, implementing partners and communities all worked together to ensure Rekompak's success.

Community involvement in ensuring the appropriate use of funds and resolution of any funding issues led to a level of transparency that is not easy to achieve with external monitoring. By being involved in every step of the reconstruction, beneficiaries transformed immense personal loss into positive and constructive efforts to rebuild their communities.

Village planning processes strengthened through Rekompak not only benefitted the project's implementation, but also contributed to longer-term development planning and helped create more resilient communities, less vulnerable to future disasters. Rekompak's Community Settlement Planning process is being mainstreamed into Indonesia's national program for disaster preparedness. The National Program for Community Empowerment (*Program Nasional Pemberdayaan Masyarakat Mandiri*, or PNPM) is the Government of Indonesia's premier program for poverty reduction. It is the Government's intention to integrate all community-based programs under PNPM with a unified integrated community planning and decision making

process. This will be well suited for assisting communities with special needs such as post-disaster recovery. The Government established the Indonesia Multi-Donor Fund Facility for Disaster Recovery (IMDFF-DR) in 2011, a standing fund for disaster prevention and response activities, so that funds can be available for more rapid start up when disasters strike.

The experiences gained through using the Rekompak approach in Indonesia have generated many lessons that can benefit other post-disaster or post-conflict operations for the recovery of housing and community settlements in Indonesia and globally. Widely regarded as one of the most successful post-disaster housing and settlement reconstruction projects in the world, Rekompak provides models for best practices and lessons learned. This book has attempted to document these lessons and best practices and to tell the story of how communities took the lead in their own recovery in Indonesia through a series of tragic disasters. It is hoped that government officials and decisionmakers, donors, and disaster recovery practitioners will find inspiration here to follow these examples and put trust in communities to take charge of their own recovery in other post-disaster and post-conflict situations in Indonesia and around the world.

[1] Kecamatan-based Reconstruction and Rehabilitation Planning in Nias Project (KRRP), was implemented by the Ministry of Home Affairs. In addition to reconstructing homes and community infrastructure, community block grants under this project were also used to reconstruct schools and local government offices.

ABBREVIATIONS AND ACRONYMS

Bappenas	*Badan Perencanaan Pembangunan Nasional* (National Development Planning Board)
BPBD	*Badan Penanggulangan Bencana Daerah* (Provincial Disaster Management Agency)
BPN	*Badan Pertanahan Nasional* (National Land Agency)
BRA	*Badan Reintegrasi Aceh* (Aceh Peace Reintegration Agency)
BRR	*Badan Rekonstruksi dan Rehabilitasi* (Board for Reconstruction and Rehabilitation)
CDA	Community Driven Adjudication
CDD	Community-Driven Development
CGI	Consultative Group on Indonesia
CHF	Cooperative Housing Foundation
CSP	Community Settlement Plan
CSRRP	Community-Based Settlement Rehabilitation and Reconstruction Project (also Rekompak)
DaLA	Damage and Loss Assessment
DIY	*Daerah Istimewa Yogyakarta* (Yogyakarta Special Region)
DRR	Disaster Risk Reduction
GAM	*Gerakan Aceh Merdeka* (Free Aceh Movement)
GIZ	*Gesellschaft fűr Internationale Zusammenarbeit* (German Agency for International Cooperation)
GoI	Government of Indonesia
IMDFF-DR	Indonesia Multi-Donor Fund Facility for Disaster Recovery
IOM	International Organization for Migration

JBIC	Japan Bank for International Cooperation
JRF	Java Reconstruction Fund
KDP	*Kecamatan* Development Project
KP	*Kelompok Permukiman* (community group on settlements)
KRRP	*Kecamatan*-based Rehabilitation and Reconstruction Planning Project in Nias Island
MDF	Multi Donor Fund for Aceh and Nias
MPW	Ministry of Public Works
NGO	Non-Government Organization
P2BPK	*Pembangunan Perumahan Bertumpu pada Kelompok* (Community-based Housing Development)
PMU	Project Management Unit
PNPM	National Program for Community Empowerment
Rekompak	*Rehabilitasi dan Rekonstruksi Masyarakat dan Permukiman Berbasis Komunitas* (Community Based Settlement Rehabilitation and Reconstruction Project)
TDMRC	Tsunami and Disaster Mitigation Research Center
TRC	Technical Review Committee
TTN	*Tim Teknis Nasional* (National Technical Team)
UN	United Nations
UNDP	United Nations Development Programme
UPP	Urban Poverty Project
WB	World Bank

BIBLIOGRAPHY

Budiman, and Subandono Dipasaptono. 2010. *Post-Tsunami and Earthquake Community-Based Rebuilding of Settlements and Infrastructure: Experiences of REKOMPAK JRF in the Special Region of Yogyakarta, Central Java and West Java.* Jakarta: Directorate General of Human Settlements, Ministry of Public Works.

Correa, Elena, Fernando Ramirez, and Haris Sanahuja. 2011. *Population at Risk of Disaster: A Resettlement Guide.* Washington, DC: The World Bank.

Dercon, Bruno, ed. 2007. *Anchoring Homes: UN - HABITAT's People's Process in Aceh and Nias after the Tsunami.* Kenya: UN – HABITAT.

Hartmann, Ekart and Heinz Unger. n.d. *Picture Book The Good & The Bad Infrastructure vol. 4 House Construction.* Jakarta: World Bank.

JRF Secretariat. 2007. Java Reconstruction Fund Progress Report. *One Year after the Java Earthquake and Tsunami: Reconstruction Achievements and the Results of the Java Reconstruction Fund.* Jakarta: JRF Secretariat.

JRF Secretariat. 2008. Java Reconstruction Fund Progress Report. *Two Years after the Java Earthquake and Tsunami: Implementing Community Based Reconstruction, Increasing Transparency.* Jakarta: JRF Secretariat.

JRF Secretariat. 2009. Java Reconstruction Fund Progress Report. *Prioritizing Community Based Planning for Sustainability.* Jakarta: JRF Secretariat.

JRF Secretariat. 2010. Java Reconstruction Fund Progress Report. *Enhancing Community Resilience for a Self Sustaining Future.* Jakarta: JRF Secretariat.

JRF Secretariat. 2011. Java Reconstruction Fund Progress Report. *Building on Success: Effectively Responding to Multiple Disasters.* Jakarta: JRF Secretariat.

JRF Secretariat. 2012. Java Reconstruction Fund Progress Report. *In-depth Progress Report for the Performance Period July 1 to December 31, 2011.* Jakarta: JRF Secretariat.

JRF Secretariat. 2012. Java Reconstruction Fund Final Report. *Disaster Response &Preparedness: From Innovations to Good Practice.* Jakarta: JRF Secretariat.

JRF Secretariat. n.d. Java Reconstruction Fund Brochure. *The Java Reconstruction Fund: Supporting Indonesia in the Recovery of Java.* Jakarta.

MDF Secretariat. 2005. Multi Donor Fund Progress Report. *Rebuilding Together.* Jakarta: MDF Secretariat.

MDF Secretariat. 2006. Multi Donor Fund Progress Report II. *The First Year of the Multi Donor Fund: Results, Challenges and Opportunities.* Jakarta: MDF Secretariat.

MDF Secretariat. 2007. Multi Donor Fund Progress Report IV. *Three Years after the Tsunami: Delivering Results, Supporting Transition.* Jakarta: MDF Secretariat.

MDF Secretariat. 2008. Multi Donor Fund Progress Report IV. *Investing in Institutions: Sustaining Reconstruction and Economic Recovery Four Years after the Tsunami.* Jakarta: MDF Secretariat.

MDF Secretariat. 2009. Multi Donor Fund Progress Report IV. *Five Years after the Tsunami: Continuing the Commitment to Reconstruction.* Jakarta: MDF Secretariat.

MDF Secretariat. 2010. Multi Donor Fund Progress Report. *Six Years after the Tsunami: From Recovery towards Sustainable Economic Growth.* Jakarta: MDF Secretariat.

MDF Secretariat. 2011. Multi Donor Fund Progress Report. *Partnerships for Sustainability.* Jakarta: MDF Secretariat.

Ministry of Public Works. n.d. *Merapi Eruption Impact Management.* Jakarta: Directorate General of Human Settlement, Ministry of Public Works.

Ministry of Public Works. 2012. *Build Back Better, Reaching Better Community Settlements.* Jakarta: Directorate General of Human Settlement.

Sugiarto, Ricky. 2009 *Housing: Roofing the Pillars of Hope – BRR Book Series.* Jakarta: MDF – UNDP

World Bank. 2007. *Rebuilding Houses & Communities: The Rekompak Experience in Aceh Province, 2006-2007.* Banda Aceh: The World Bank.

World Bank. 2012. East Asia and Pacific Region Social Development Notes. 2012 *Making Women's Voices Count: Integrating Gender Issues in Disaster Risk Management Overview & Resources.* Washington, DC: World Bank.

World Bank. 2009. *Mid-Term Evaluation (MTR) of the Java Reconstruction Fund (JRF) 28 April 2009*. Jakarta: World Bank.

World Bank. 2010. *Safer Homes, Stronger Communities. A Handbook for Reconstructing fter Natural Disasters.* By Jha, Abhas, Jennifer Duyne Barenstein, Priscilla M. Phelps, Daniel Pittet, and Stephen Sena. The World Bank: Washington DC.

World Bank Report No: ICR00001636. 2011. *Implementation Completion and Results Report on A Multi-Donor Trust Fund For Aceh and North Sumatra Grant in the Amount of US$85 Million to the Republic of Indonesia for A Community-Based Settlement Rehabilitation and Reconstruction Project for Nanggroe Aceh Darussalam and Nias, Phase I May 16, 2011.* Jakarta: The World Bank.

World Bank. 2011. PNPM – KRPP (*Program Nasional Pemberdayaan Masyarakat – Kecamatan*-based Rehabilitation and Reconstruction Project) *The Rehabilitation and Reconstruction of Nias Island.* Jakarta: World Bank for MDF and National Program for Community Empowerment.

World Bank. 2012. *Justification for 2012 Extension of the Community-Based Settlement Rehabilitation and Reconstruction Project (CSRRP) for the Post Merapi Eruption Period.* Jakarta: The World Bank.

KEY RESOURCES

Rekompak: Rebuilding Indonesia's Communities after Disasters provides an overview of the MDF and JRF Rekompak community-based reconstruction that was used to rebuild Aceh and Java after severe natural disasters. For step-by-step implementation and construction, the reference sources listed below are recommended. It is suggested that these are read as key companion pieces to *Rekompak: Rebuilding Indonesia's Communities after Disasters.* For those who would like to delve still deeper into the topic, additional references can be found in the bibliography.

World Bank. 2010. *Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters.* By Jha, Abhas, Jennifer Duyne Barenstein, Priscilla M. Phelps, Daniel Pittet, and Stephen Sena. The World Bank: Washington DC.

This handbook was developed to assist policy makers and project managers faced with large scale post-disaster reconstruction programs. It provides a systematic step-by-step approach to each stage of the reconstruction process, covering everything from how to conduct a damage assessment, how to rebuild homes, and how to carry out the handover of homes to beneficiaries. Each section poses questions, lists decisions to be made, and suggests policy issues that need to be addressed as reconstruction progresses. This first-rate book provides many actual examples of international applications of the community-based approach. It is an invaluable resource for anyone involved in large-scale reconstruction; the book's merits cannot be overstated. Several charts, examples, and explanations found in *Rekompak: Rebuilding Indonesia's Communities after Disasters,* were sourced from *Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters.*

Ekhart, Harmann, and Heinz Unger. n.d. *Picture Book: The Good and the Bad Infrastructure: Housing.* Jakarta: The World Bank.

The need for speedy reconstruction following disasters sometimes leads to poor workmanship and low quality construction. This book provides clear photos, diagrams, explanations, and other useful information on how and how not to build quality seismic-resistant homes. Beginning with how to prepare a building site and house foundation and ending with how to install required services, such as electricity and water, the book covers options and

suggestions for concrete work, walls, roofing, and flooring. One characteristic that sets this book apart from others on similar topics is that it includes photos and diagrams featuring both good and bad examples to illustrate the problems that can occur. The book is useful for builders, beneficiaries involved in rebuilding, contractors, and agencies and NGOs active in reconstruction. Chapter 4 of *Rekompak: Rebuilding Indonesia's Communities after Disasters* lists 12 important rules in housing reconstruction that were sourced from *Picture Book: The Good & the Bad Infrastructure: Housing.*

Multi Donor Fund. 2005-2012. Multi Donor Fund Progress Reports. Jakarta: MDF Secretariat.

Java Reconstruction Fund. 2006-2012. Java Reconstruction Fund Progress Reports. Jakarta: JRF Secretariat.

These reports, published on an annual basis by the MDF/JRF Secretariat throughout the duration of the projects supported by the Trust Funds, informed much of the background, implementation and project progress for *Rekompak: Rebuilding Indonesia's Communities after Disasters.* The reports contain useful information for others embarking on post-disaster reconstruction and related recovery efforts.

World Bank. 2009. *Making Women's Voices Count: Integrating Gender Issues in Disaster Risk Management, Overview & Resources.* Washington, DC: World Bank.

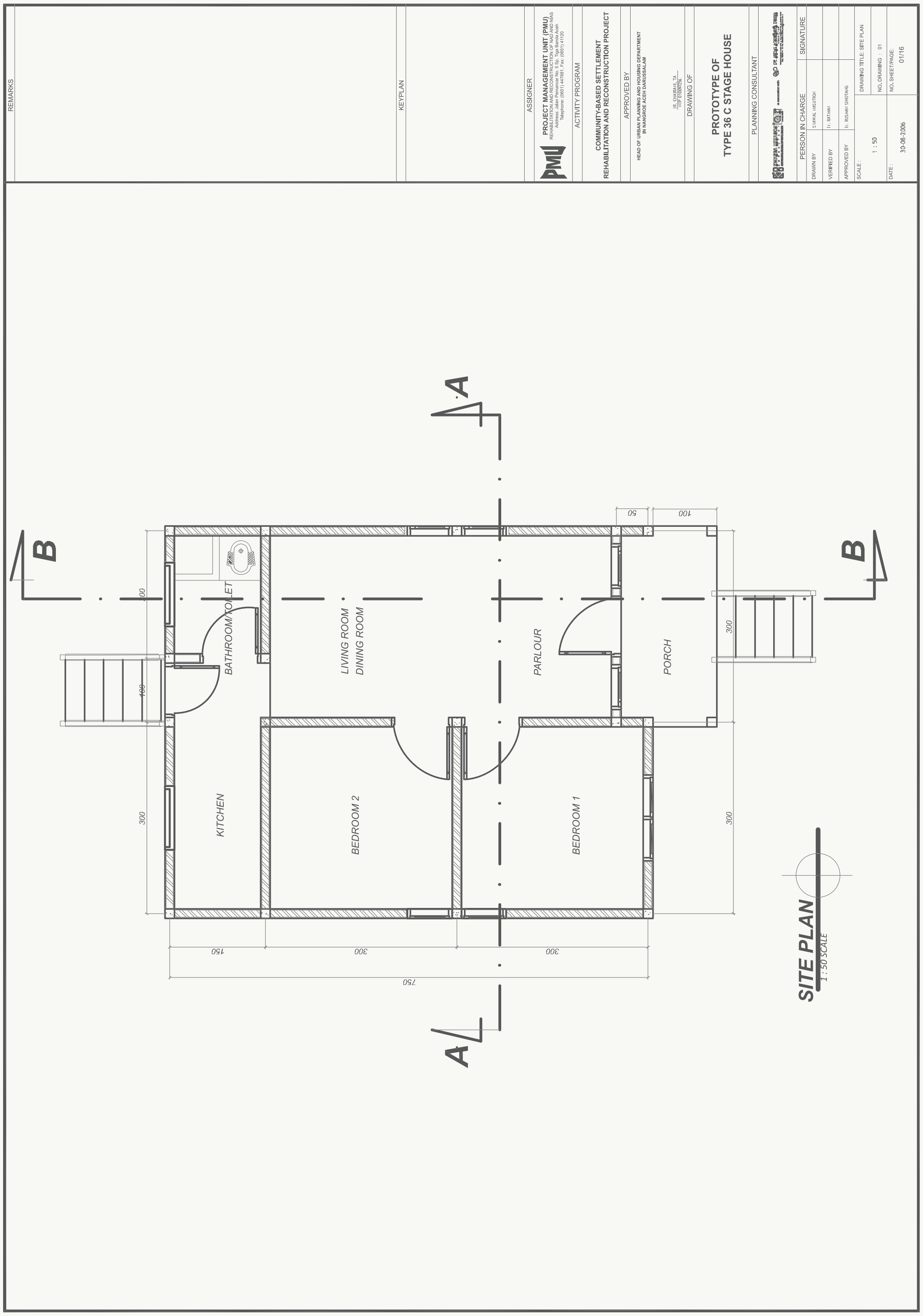
Often the mortality rates for women are much higher in the aftermath of natural disasters and, in most cases, more needs to be done to safeguard women and to ensure that their voices are heard. This report contains five excellent guidance notes on gender issues in disaster risk management in East Asia and the Pacific Region. It addresses gender issues to consider in disaster risk management projects, gender informed monitoring and evaluation, integrating gender issues, and gender mainstreaming in recovery and reconstruction planning.

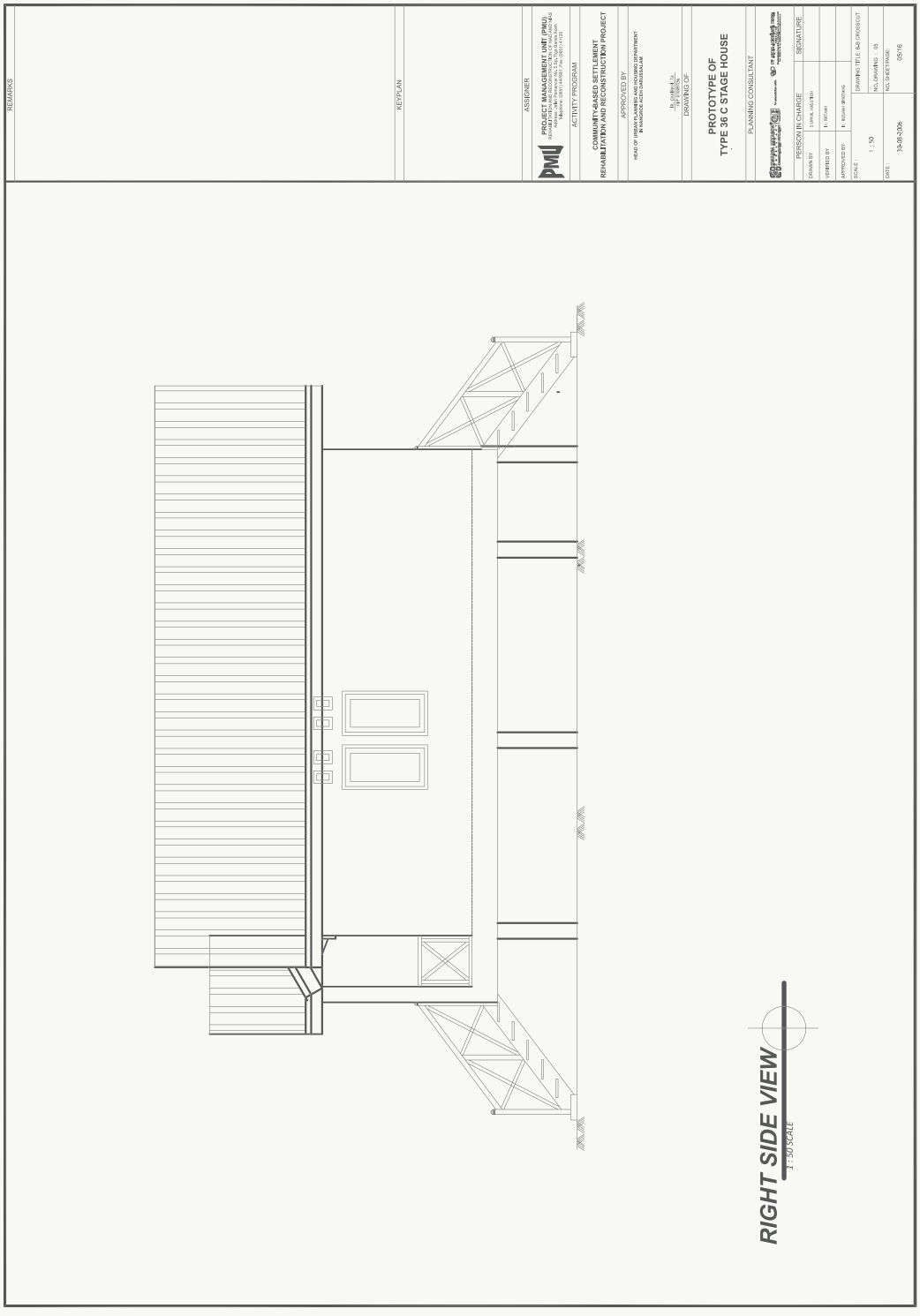
CONSTRUCTION DRAWINGS OF DMC-2 HOUSE

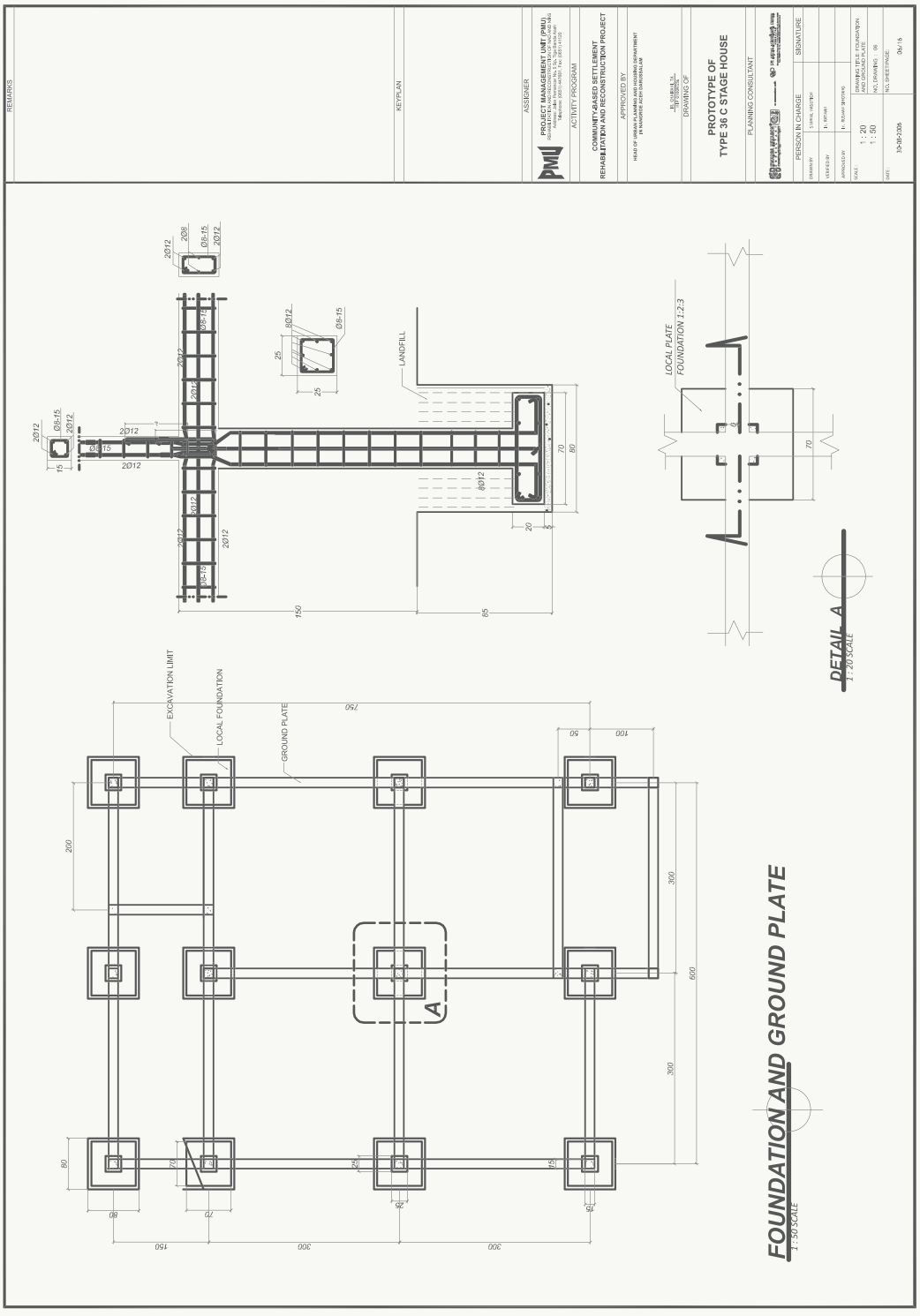
WIDTH OF 6 METERS
TYPE 36 C
STAGE HOUSE

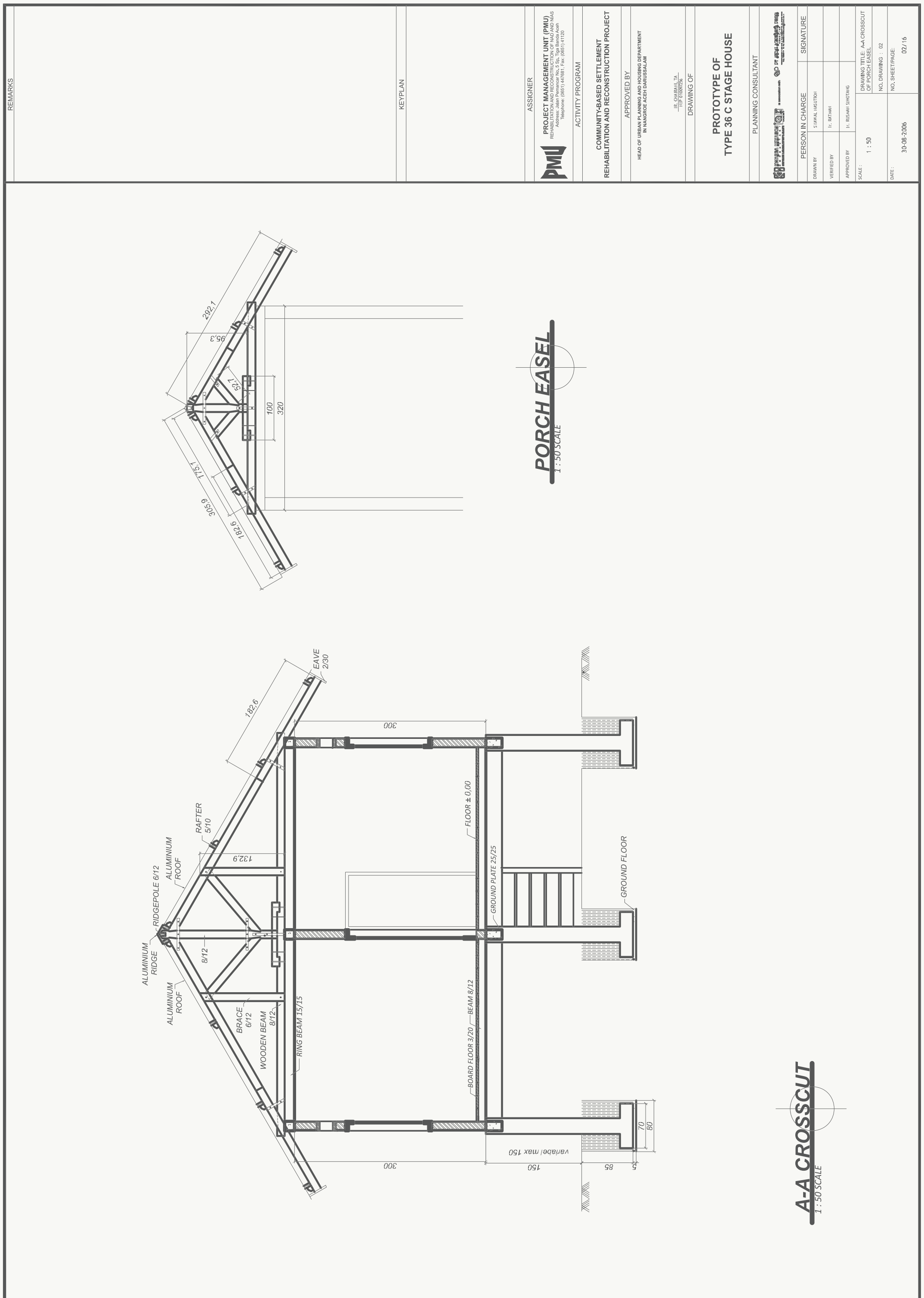
REKOMPAK
DISTRICT MANAGEMENT CONSULTANT
REGION II

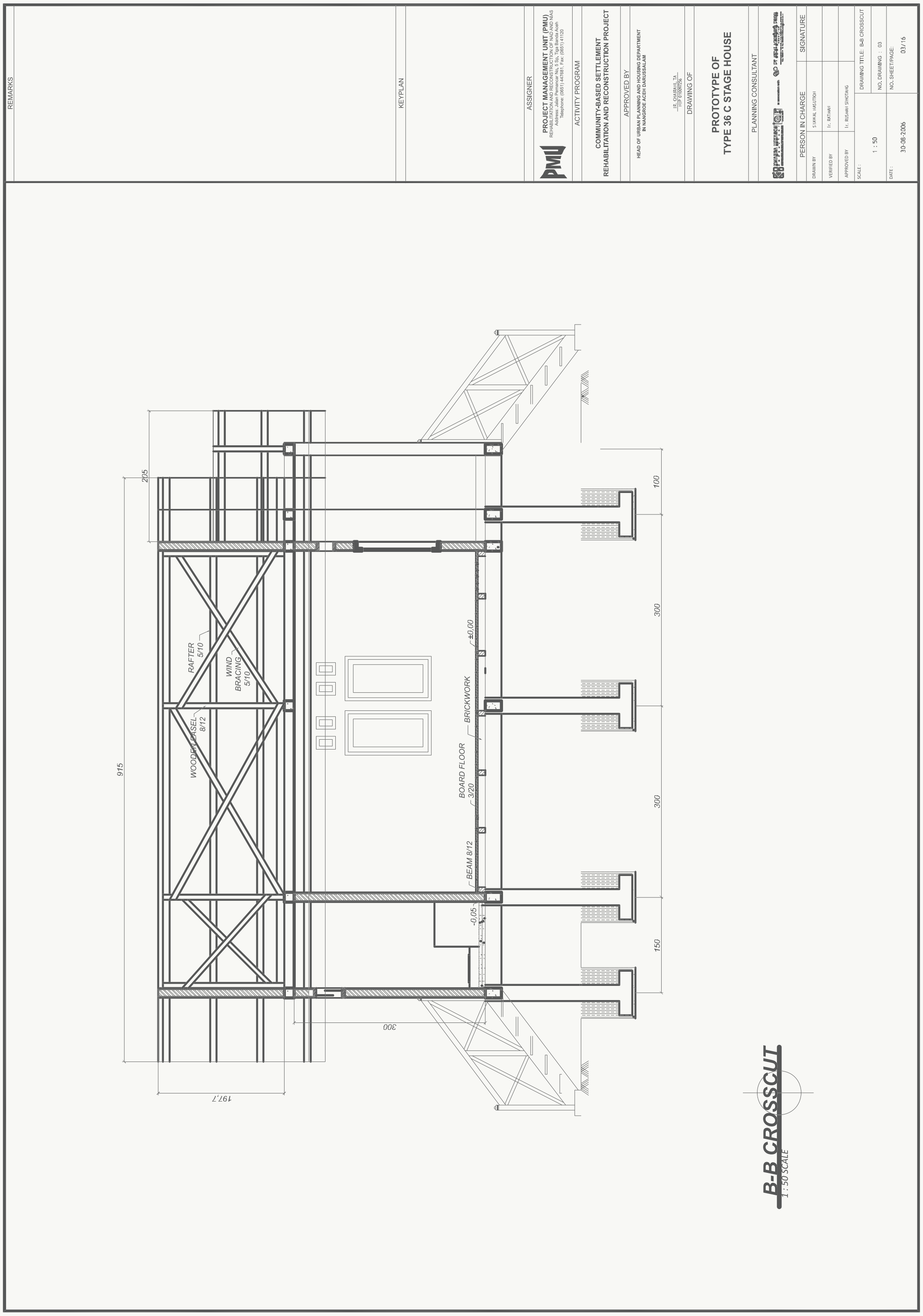
Jl. Singgah Mata II No. 3 Dusun Pulo Desa Seunebok Kec. Johan Pahlawan - Kota Meulaboh Telp. 0655-7012331 Email : dmc2rekompak@yahoo.co.id

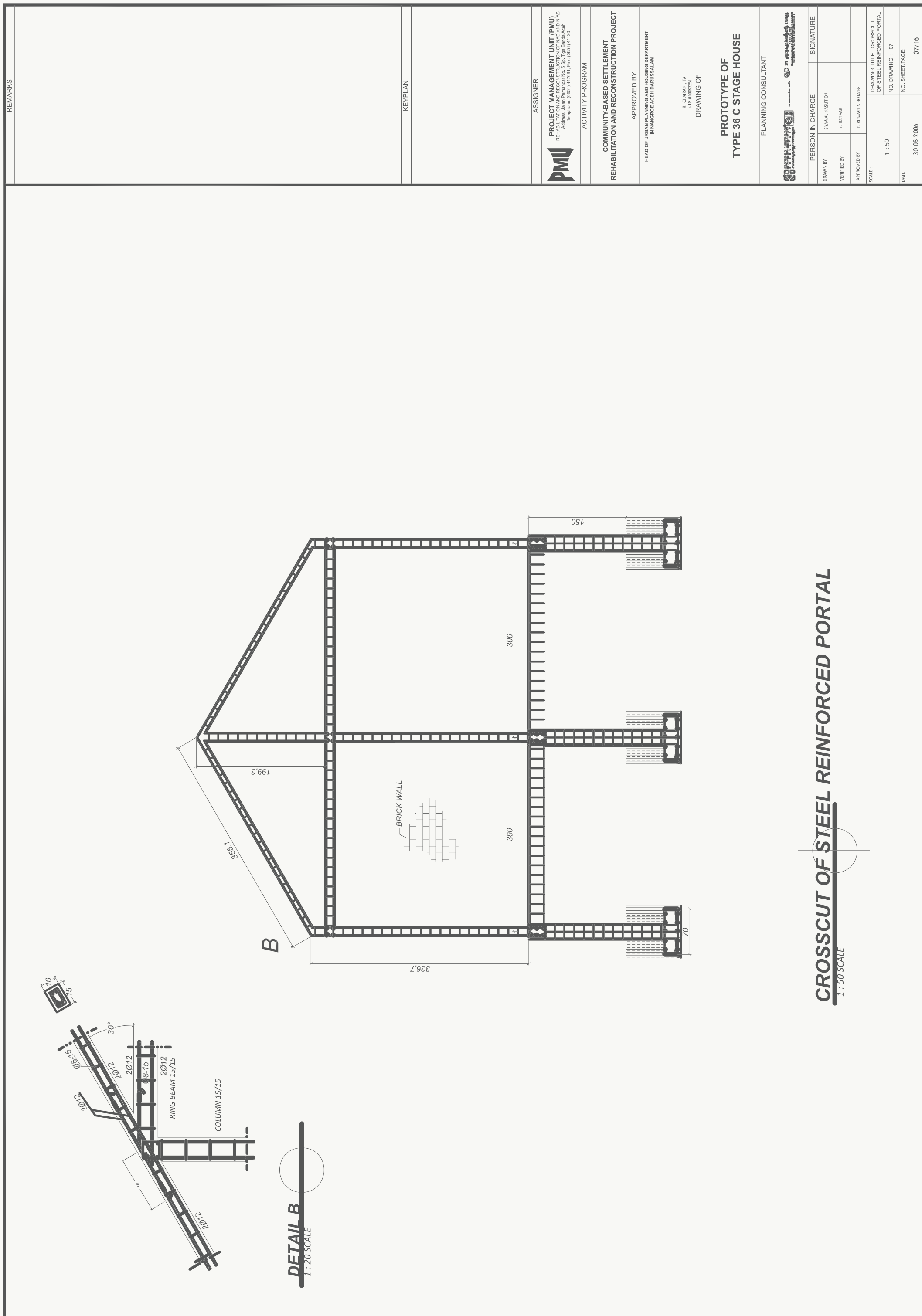

REMARKS
KEYPLAN
ASSIGNER
PROJECT MANAGEMENT UNIT (PMU)
REHABILITATION AND RECONSTRUCTION OF NAD AND NIAS
Address: Jalan Pemancar No. 5 Sp. Tiga Banda Aceh
Telephone: (0651) 447681, Fax: (0651) 41120
ACTIVITY PROGRAM
COMMUNITY-BASED SETTLEMENT
REHABILITATION AND RECONSTRUCTION PROJECT
APPROVED BY
HEAD OF URBAN PLANNING AND HOUSING DEPARTMENT
IN NANGROE ACEH DARUSSALAM
IR. CHAIRANI, TA
DRAWING OF
PROTOTYPE OF
TYPE 36 C STAGE HOUSE
PLANNING CONSULTANT
PERSON IN CHARGE
SIGNATURE
DRAWN BY
SYAWAL NASUTION
VERIFIED BY
Ir. RATMAN
APPROVED BY
Ir. RUSMAN SIHOTANG
SCALE :
1 : 50
DATE :
30-08-2006
DRAWING TITLE: SITE PLAN
NO. DRAWING : 01
NO. SHEET/PAGE:
01/16
A
B
BATHROOM/TOILET
LIVING ROOM
DINING ROOM
PARLOUR
PORCH
KITCHEN
BEDROOM 2
BEDROOM 1
150
300
300
750
50
100
SITE PLAN
1 : 50 SCALE

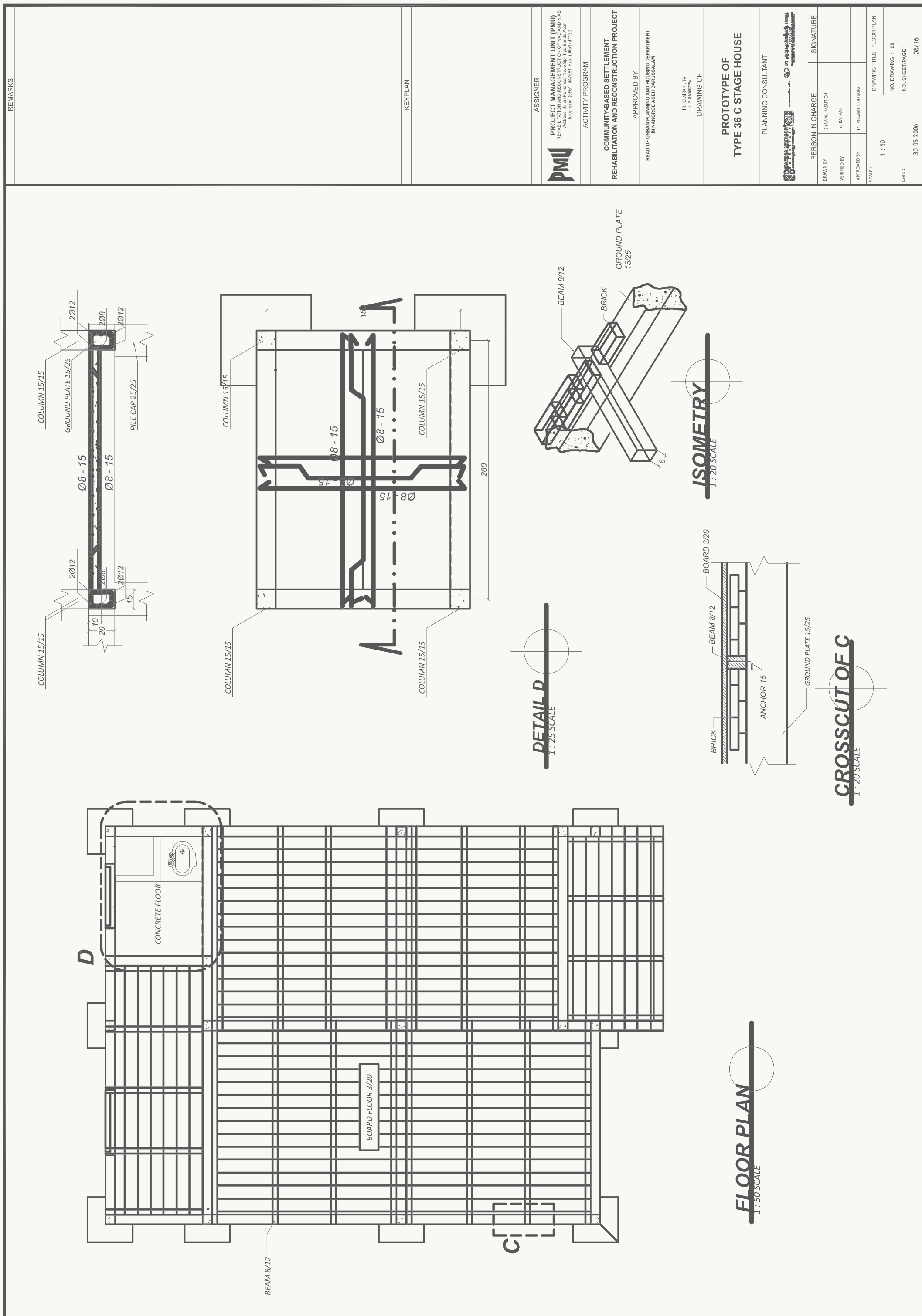

REMARKS
KEYPLAN
ASSIGNER
PROJECT MANAGEMENT UNIT (PMU)
ACTIVITY PROGRAM
COMMUNITY-BASED SETTLEMENT REHABILITATION AND RECONSTRUCTION PROJECT
APPROVED BY
DRAWING OF
PROTOTYPE OF TYPE 36 C STAGE HOUSE
PLANNING CONSULTANT
PERSON IN CHARGE
SIGNATURE
DRAWN BY
CHECKED BY
APPROVED BY
SCALE: 1 : 50
DRAWING TITLE: SAS CROSSCUT
NO. DRAWING: 05
NO. SHEETS/PAGE: 05/16
DATE: 30-08-2006
RIGHT SIDE VIEW
1" = 50' SCALE


REMARKS
KEYPLAN
ASSIGNER
PROJECT MANAGEMENT UNIT (PMU)
ACTIVITY PROGRAM
COMMUNITY-BASED SETTLEMENT REHABILITATION AND RECONSTRUCTION PROJECT
APPROVED BY
DRAWING OF
PROTOTYPE OF TYPE 36 C STAGE HOUSE
PLANNING CONSULTANT
PERSON IN CHARGE
SIGNATURE
DRAWN BY
TRACED BY
APPROVED BY
SCALE
1 : 20
1 : 50
DRAWING TITLE
DRAWING NO.
NO. SHEET/PAGE
DATE
30-09-2005
LANDFILL
LOCAL PLATE FOUNDATION 1:2:3
DETAIL A
1 : 20 SCALE
EXCAVATION LIMIT
LOCAL FOUNDATION
GROUND PLATE
FOUNDATION AND GROUND PLATE
1 : 50 SCALE


REMARKS
KEYPLAN
ASSIGNER
PROJECT MANAGEMENT UNIT (PMU)
ACTIVITY PROGRAM
COMMUNITY-BASED SETTLEMENT
REHABILITATION AND RECONSTRUCTION PROJECT
APPROVED BY
DRAWING OF
PROTOTYPE OF
TYPE 36 C STAGE HOUSE
PLANNING CONSULTANT
PERSON IN CHARGE
SIGNATURE
1 : 50
30-08-2006
02/16
PORCH EASEL
1 : 50 SCALE
292.1
95.3
100
320
175.1
303.9
182.6
EAVE
2/30
RAFTER
5/10
ALUMINIUM
ROOF
RIDGEPOLE 6/12
ALUMINIUM
RIDGE
132.9
8/12
BRACE
6/12
WOODEN BEAM
8/12
RING BEAM 15/15
BOARD FLOOR 3/20
BEAM 8/12
FLOOR ± 0.00
GROUND PLATE 25/25
GROUND FLOOR
300
150
85
variabel max 150
70
60
A-A CROSSCUT
1 : 50 SCALE


REMARKS
KEYPLAN
ASSIGNER
PROJECT MANAGEMENT UNIT (PMU)
REHABILITATION AND RECONSTRUCTION OF NAD AND NIAS
Address: Jalan Pemancar No. 5 Sp. Tiga Banda Aceh
Telephone: (0651) 447681, Fax: (0651) 41120
ACTIVITY PROGRAM
COMMUNITY-BASED SETTLEMENT
REHABILITATION AND RECONSTRUCTION PROJECT
APPROVED BY
HEAD OF URBAN PLANNING AND HOUSING DEPARTMENT
IN NANGROE ACEH DARUSSALAM
IR. CHAIRANI, TA
NIP 010097256
DRAWING OF
PROTOTYPE OF
TYPE 36 C STAGE HOUSE
PLANNING CONSULTANT
PERSON IN CHARGE
SIGNATURE
DRAWN BY
SYAWAL NASUTION
VERIFIED BY
Ir. RATMAN
APPROVED BY
Ir. RUSMAN SIHOTANG
SCALE :
1 : 50
DRAWING TITLE: B-B CROSSCUT
NO. DRAWING : 03
DATE :
30-08-2006
NO. SHEET/PAGE:
03/16
RAFTER
5/10
WIND
BRACING
5/10
WOODEN EASEL
8/12
BRICKWORK
±0.00
BOARD FLOOR
3/20
BEAM 8/12
-0.05
205
915
197.7
300
100
300
300
150
B-B CROSSCUT
1 : 50 SCALE


REMARKS
KEYPLAN
ASSIGNER
PROJECT MANAGEMENT UNIT (PMU)
ACTIVITY PROGRAM
COMMUNITY-BASED SETTLEMENT REHABILITATION AND RECONSTRUCTION PROJECT
APPROVED BY
DRAWING OF
PROTOTYPE OF TYPE 36 C STAGE HOUSE
PLANNING CONSULTANT
PERSON IN CHARGE
SIGNATURE
1 : 50
30-08-2006
07/16
150
300
300
199,3
355,1
336,7
70
BRICK WALL
B
RING BEAM 15/15
COLUMN 15/15
2Ø12
30°
DETAIL B
1 : 20 SCALE
CROSSCUT OF STEEL REINFORCED PORTAL
1 : 50 SCALE


REMARKS
KEYPLAN
ASSIGNER
PROJECT MANAGEMENT UNIT (PMU)
ACTIVITY PROGRAM
COMMUNITY-BASED SETTLEMENT
REHABILITATION AND RECONSTRUCTION PROJECT
APPROVED BY
HEAD OF URBAN PLANNING AND HOUSING DEPARTMENT IN NANGROE ACEH DARUSSALAM
DRAWING OF
PROTOTYPE OF
TYPE 36 C STAGE HOUSE
PLANNING CONSULTANT
PERSON IN CHARGE
SIGNATURE
DRAWN BY
VERIFIED BY
APPROVED BY
SCALE :
1 : 50
DATE :
30-06-2006
DRAWING TITLE : FLOOR PLAN
NO. DRAWING : 08
NO. SHEET/PAGE : 08/16
COLUMN 15/15
GROUND PLATE 15/25
PILE CAP 25/25
2Ø12
2Ø8
Ø8 - 15
200
BEAM 8/12
BRICK
GROUND PLATE 15/25
ISOMETRY
1 : 20 SCALE
DETAIL D
1 : 25 SCALE
BOARD 3/20
ANCHOR 15
CROSSCUT OF C
1 : 20 SCALE
CONCRETE FLOOR
BOARD FLOOR 3/20
D
C
FLOOR PLAN
1 : 50 SCALE


REKOMPAK - JRF













JRF Java Reconstruction Fund

Multi Donor Fund for Aceh and Nias - Bersama Membangun

REKOMPAK Pengembangan Kapasitas Masyarakat Membangun Lebih Baik

THE WORLD BANK