The Kecamatan-based Rehabilitation and Reconstruction Project in Nias Island (KRRP) supported the recovery of communities through the construction of housing and village infrastructure in Nias. Using a community-based approach, this project has successfully contributed to the recovery of Nias through the rehabilitation and reconstruction of over 4,400 houses, 100 school buildings, 110 village halls and village public infrastructure including tertiary roads, bridges and others.

Additionally, KRRP implemented a cultural heritage program that included a heritage education component and the publication of cultural books on Nias designed to increase awareness and appreciation of Nias’s culture. Meanwhile due to environmental awareness and consideration for high demand of timber in physical construction, KRRP conducted community reforestation and tree replanting in the yards of beneficiaries’ houses, on community land and near village roads.
THE REHABILITATION
and RECONSTRUCTION OF
NIAS ISLAND
REHABILITATION AND RECONSTRUCTION IN NIAS ISLAND

Advisors: Jan Weetjens, Natasha Hayward, Sentot Surya Satria

Coordinator: Festina Lavida

Editors:
- Suhadi Hadiwinoto
- Catrini Pratihari Kubontubuh
- Dennie Mamonto
- Eka Hasfi Adha
- Wawan Munawar

Field Resource Persons:
- Marihot Sigalingging
- Asafati Gea
- Nagasakti Peranginangin
- Maurista Manik

ISBN: 978-979-16876-4-5

Published by The World Bank Office Jakarta
for the Multi-Donor Fund and
National Program for Community Empowerment

Copyright 2011 World Bank
All right reserved

Copyright is protected by laws
No part of this book may be copied or reproduced without written permission from the Publisher.

World Bank Office Jakarta
Jalan Jenderal Sudirman 52
Jakarta, Indonesia
www.worldbank.org
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>6</td>
</tr>
<tr>
<td>NIAS POST DISASTER</td>
<td>9</td>
</tr>
<tr>
<td>HOUSING</td>
<td>23</td>
</tr>
<tr>
<td>SCHOOL BUILDINGS</td>
<td>37</td>
</tr>
<tr>
<td>VILLAGE HALLS</td>
<td>55</td>
</tr>
<tr>
<td>VILLAGE PUBLIC INFRASTRUCTURE</td>
<td>67</td>
</tr>
<tr>
<td>ENVIRONMENTAL AWARENESS</td>
<td>83</td>
</tr>
<tr>
<td>CULTURAL HERITAGE EDUCATION</td>
<td>93</td>
</tr>
<tr>
<td>PARTICIPATORY DEVELOPMENT</td>
<td>107</td>
</tr>
<tr>
<td>Epilogue</td>
<td>117</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>120</td>
</tr>
<tr>
<td>Photograph contributors</td>
<td>121</td>
</tr>
</tbody>
</table>
The Indian Ocean earthquake and tsunami of December 2004 and subsequent earthquake in March 2005 caused devastating loss and damage in Aceh and the Nias islands. The outpouring of solidarity and compassion at the time was unprecedented. Pledges to contribute to the overall recovery efforts of these two regions totaled about US$7 billion.

The Multi-Donor Fund for Aceh and Nias (MDF) was established to support the Government of Indonesia (GOI)’s efforts in the reconstruction. With a total of US$678 million pooled from fifteen donors, the MDF has contributed close to 10% of the overall reconstruction funds. The MDF donors are the European Union, Netherlands, United Kingdom, World Bank, Sweden, Denmark, Norway, Canada, Asia Development Bank, United States of America, Germany, Belgium, Finland, New Zealand and Ireland. Through its 23 projects, the MDF is delivering quality results in line with GoI priorities in the areas of community recovery, infrastructure and transport, governance and capacity building, enhancing the overall recovery process, sustaining the environment and supporting economic development and livelihoods.

The MDF contribution to the rehabilitation and reconstruction of the Nias islands is equal to about 30% of the total estimated loss and damage sustained. More than US$115 million has been committed by the MDF for 14 projects with reconstruction activities in the Nias islands.

The Kecamatan-based Rehabilitation and Reconstruction Planning in Nias Project (KRRP) has been the MDF’s key vehicle for supporting the recovery of communities through the construction of housing and village infrastructure in Nias. Using a community-based approach, this project has successfully
contributed to the recovery of Nias through the rehabilitation and reconstruction of over 4,400 houses and hundreds of village-level buildings and other infrastructure including schools, village halls, and community roads and bridges. The project’s schools rehabilitation program includes a cultural heritage education component designed to increase awareness and appreciation of the rich culture unique to the Nias islands.

KRRP has achieved remarkable results despite the sometimes challenging conditions due to the remote location of Nias far from mainland North Sumatra. This book celebrates these achievements and is a tribute to the people of Nias who have played the key role in the recovery of their communities. We are proud of the collaboration, dedication and hard work of so many who have helped build back a better future for Nias. We also thank our friends in the international community for their continued support.

Shamima Khan
Manager
Multi Donor Fund for Aceh and Nias
Nias, located among the western most chain of islands of Indonesia
Nias is located among the western most chain of islands of Indonesia, 120 kilometers west of the Sibolga Coast in North Sumatra Province. In addition to the main island of Nias, there are also some nearby chains of small islands, such as Batu and Hinako. Nias Island covers an area of 5.121 km², slightly smaller than Bali Island which covers an area of 5.632 km². The population of Nias in 2010 was 756,762.

A massive earthquake measuring 8.9 on the Richter scale on December 26, 2004, the epicenter of which was near Simelue, triggered a tsunami that hit Aceh, Nias and the neighboring countries, including Thailand, Bangladesh and India. The tsunami killed 170,000 people in Aceh and Nias, and caused unprecedented damage to houses, public infrastructure and facilities. The tsunami has been recorded in history as one of the worst natural disasters in the world.

Soon after, on March 25, 2005, a tectonic earthquake measuring 8.7 on the Richter scale occurred, with its epicenter in the north of Nias. This earthquake added to the suffering caused by the earthquake and tsunami in 2004. The earthquake in 2005 killed more than 700 people in Nias and devastated 10,000 to 12,000 houses, as well as changed the ground levels in Nias Island, some of which were elevated and others lowered.
The two massive disasters terribly impacted the lives of Nias residents. In addition to the enormous number of casualties and damage to houses as well as incalculable loss of the people’s properties, various economic activities had been paralyzed due to the damage to public infrastructure and facilities.

Massive reconstruction and rehabilitation have been required to help the community in rebuilding thousands of houses and public service infrastructure and facilities, while also taking care of the victims who require treatment, restoring the educational system, etc.

Many countries in the world shared their grief over the suffering of the Aceh and Nias people. They wanted to assist in the efforts to restore the lives of the people affected by the disaster. As a result, the MDF was established in April 2005 and supported by 15 donors, namely the European Union, the Netherlands, England, the World Bank, Sweden, Denmark, Norway, Germany, Canada, the Asian Development Bank, the United States of America, Belgium, Finland, New Zealand and Ireland. The MDF applies a gradual approach to reconstruction starting with the addressing the most urgent needs of the community, followed by the development of large infrastructure, environmental conservation, capacity building, as well as the recovery of livelihoods. KRRP (Kecamatan-based Rehabilitation and Reconstruction Planning Project in Nias Island) or PNPM-R2PN, here in after referred to as KRRP, is a key MDF project in Aceh and Nias with funding amounting to US$51.5 million, 50% provided by the MDF and the other 50% provided by the Government.

Initially, the number of project allocations comprised 2 districts; however, following the division of regions, the current number
of allocations includes 4 districts and 1 city. In the beginning of the project, 66 villages participated and then during its implementation phase, this number increased to 232. 63 facilitators were involved in this activity. This project has built 4,491 houses, 100 schools, 110 village halls and 149 village public infrastructures. In addition to the construction of school buildings, efforts have also been made to improve the quality of education through a focus on natural conservation and local culture so that students as the future generation have better knowledge about their environment and social traditions.

Various activities for the rehabilitation and reconstruction of public infrastructure and facilities have contributed to regaining the social and economic life for people in Nias. They are also expected to heal physical, social and economic wounds with the hope that people will progress and do better in the future.
BRR coordinated the locations of various donor agencies’ projects in order to ensure that their aid would not overlap. 9 sub-districts in 2 districts were allocated for the R2PN project. Many locations were relatively difficult for implementing projects. Not all of the damaged buildings and infrastructure were situated in one concise location. They were scattered in several villages. Most of them were located in very remote areas, which were very difficult to reach due to the lack of transportation infrastructure. Sometimes, building materials had to be transported across rivers where no bridge was available and those materials had to be carried on foot for a distance of 3 to 4 kilometers.

There were many delays in the implementation of the construction due to the slow selection process of beneficiaries, difficult access and the lack of experienced workmen at that moment due to the rapid increase of construction projects throughout the island. Various ongoing projects also had to struggle to find experienced technical staff and, accordingly, there was a relatively high level of personnel turnover within the projects. The price of building materials rose sharply so that various calculations had to be readjusted. The local climate also presented difficulties -- a relatively long rainy season significantly delayed the project implementation. Due to these aforementioned reasons, the completion of the project was delayed from December 30, 2009 to June 30, 2011.

Even though it encountered many obstacles, the KRRP project has now been successfully completed. There are many lessons learned from the project that could be applied to disaster mitigation programs in other regions of Indonesia.
Constructions completed by KRRP spread in 9 sub-districts

<table>
<thead>
<tr>
<th></th>
<th>Unit</th>
<th>Gido</th>
<th>Idanogawo</th>
<th>Lolofu Moi</th>
<th>Namohalu Esiwa</th>
<th>Tuhemberua</th>
<th>Amandraya</th>
<th>Lahusa</th>
<th>Lolowau</th>
<th>Teluk Dalam</th>
</tr>
</thead>
<tbody>
<tr>
<td>House *</td>
<td>Unit</td>
<td>404</td>
<td>485</td>
<td>479</td>
<td>297</td>
<td>361</td>
<td>744</td>
<td>423</td>
<td>425</td>
<td>415</td>
</tr>
<tr>
<td>School</td>
<td>Unit</td>
<td>12</td>
<td>9</td>
<td>9</td>
<td>10</td>
<td>16</td>
<td>9</td>
<td>12</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Village hall</td>
<td>Unit</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>31</td>
<td>7</td>
<td>41</td>
<td>31</td>
</tr>
<tr>
<td>Road</td>
<td>M’</td>
<td>18,380</td>
<td>13,577</td>
<td>17,088</td>
<td>16,106</td>
<td>10,401</td>
<td>10,700</td>
<td>14,450</td>
<td>18,178</td>
<td>12,257</td>
</tr>
<tr>
<td>Bridge</td>
<td>Unit</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Culvert</td>
<td>Unit</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>46</td>
<td>7</td>
<td>51</td>
<td>22</td>
</tr>
<tr>
<td>Water Canal</td>
<td>M’</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>462</td>
<td>-</td>
<td>800</td>
<td>-</td>
</tr>
<tr>
<td>Irrigation Canal</td>
<td>M’</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>650</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Retaining wall and gabion baskets (bronjong)</td>
<td>M’</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>-</td>
<td>990</td>
<td>163</td>
<td>1,485</td>
<td>649</td>
</tr>
<tr>
<td>Dug well</td>
<td>Unit</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>3</td>
<td>14</td>
<td>-</td>
</tr>
<tr>
<td>Clean water piping</td>
<td>M’</td>
<td>1,227</td>
<td>1,501</td>
<td>-</td>
<td>-</td>
<td>1,728</td>
<td>5,938</td>
<td>-</td>
<td>1,400</td>
<td>-</td>
</tr>
<tr>
<td>Bathing, washing and latrine facilities</td>
<td>Unit</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Public hydrant</td>
<td>Unit</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Village health post</td>
<td>Unit</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Village market</td>
<td>Unit</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>School classroom</td>
<td>Room</td>
<td>-</td>
<td>-</td>
<td>7</td>
<td>-</td>
<td>3</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Education supporting facilities</td>
<td>Package</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*458 houses were built by BRR by using the KRRP fund in Nias Districts
Damaged houses, village halls, schools, hospitals, roads, bridges and canals could be found everywhere, both in the cities and villages. The loss of family members and relatives in the disaster caused tremendous trauma. Consequently, regaining a normal life has not been a simple matter.
People tried to restart their economic activities immediately by opening small shops, bicycle repair shops, etc.
Walking on a brittle bridge and over steep cliffs to reach a project location in the very remote area
Carrying building materials by walking along the river or climbing hills was not an obstacle.
HOUSING
When the earthquake destroyed thousands of houses in Nias, many people lost their shelters, their places of residence for resting after work, the places that protected them during stormy weather, and the stable places that offered better future. Without a home, family life – and all the benefits that come with it - was disturbed. With this in mind, the construction of houses became a priority in the rehabilitation and reconstruction of Nias Island.
The construction of houses was an urgent need which had to be addressed immediately. Initially, 5,000 houses were planned, with a standard size of 36 square meters and average cost of US$6,000 per unit. Due to the intensive level of construction activities throughout Nias, building materials became scarce and prices soared. This project completed the construction of 4,492 houses that came in several versions, which could be selected by the beneficiaries. The walls were made of large bricks and plaster while the roof was made of corrugated iron sheets supported by lightweight steel roof truss.
This project was based on the principles of transparency and participation, whereby all people were involved in planning, making decisions and openly taking part in the construction activities together. Efforts were made to incorporate the views of all members of the community and to prevent domination by any particular group or leader. Efforts were also made to encourage women to take an active role in this process. In fact the decision-making process in the project was performed through special village meetings for women so that they could freely express their opinions. In previous times, women were not involved in meetings and decision-making in the community. Therefore, additional time was required to socialize women participation.

Women participation in the house construction process was important since they would be the persons spending the most time in the homes and they were responsible for caring for and maintaining the houses. Therefore, in this project women played an active role in the decision-making process in their village.
The construction of houses began with the selection of residents entitled to the new houses through meetings to ensure that the recipients would be those who qualified and met the stipulated requirements. Sometimes, there were disputes among potential recipients. The dispute settlement process had to go through a time-consuming process involving up to two months, which eventually slowed down the project completion.

Pictures of every assistance recipient were taken and recorded.

In order to prevent manipulation and duplication in the selection of target groups, pictures of each recipient were taken in front of their houses or locations. Recipients were selected through open meetings attended by village residents and announced on a notice board in front of the Village Hall. There was one-month grace period for the residents to lodge objections so that it took extra time to clarify and settle the objections, which also contributed to slowing down the project completion.
In the construction of houses, efforts were made to use materials available or easily obtainable in the nearby area. Wall was typically built using bricks made by the communities themselves. Cement, glass, corrugated iron sheets, hinges, as well as electrical and water installations were brought from outside Nias. If wooden roof trusses were used, there was a concern that the extensive requirements for timber for constructing thousands of houses would be harmful to forest conservation in Nias. Therefore, it was decided that lightweight steel roof trusses would be used, even though this caused some additional problems since they were brought from Sumatera.

In using timber for various needs, it had to be ensured that the timber was wood obtained from villages and not obtained by cutting down trees in forests in conservation areas. Thus, the basic attitude of forest preservation was promoted and developed from the earliest stage.
Some local residents were also accustomed to defecating in rivers. They did not want to have a toilet inside their houses because they considered it dirty. For this group, it was necessary to approach them first and discuss the issue, and they were persuaded to use toilets constructed in their backyards. Those toilets were completed with septic tanks. Water tanks were also provided to catch rainwater from the eaves.
One of the recipients of house assistance was Mrs. Kasih Riang Gulo’s family in Lasara Idanoi village. They have two grown-up children. In addition to her husband’s salary as a civil servant, they have a plant nursery in the front yard which generates additional income. Similar to the renewed focus on agricultural commodities, as well as the growth of re-greening and reforestation activities, the plant nursery business has also been growing increasingly.
Another recipient was Alvizatulo Zelava’s family that comprises 12 children. Some of the children are already married, but the others were still live in his house. Moreover, an aunt also lived in that house. This family expanded their house to the backyard. The rooms are tidy and they enjoyed painting their house green.
Mr. Emanueli Zelava has a half-hectare farm planted with cacao trees and vegetables. He and his family have been working diligently on his farm and have adequate income. They are grateful that their house, which was damaged by the earthquake, has been replaced. Although there are still serious problems to be addressed, they look to the future optimistically.

Basically, a 36-square meter house is adequate for a family with two children, but there are also many families with more than two children. In fact, there are also extended families living in the same house, such as grandparents, aunts, etc. There are families who have no other option but to live in a 2-room house and there are also families who make additional rooms on the sides or the back of their houses.

Some well-off families have renovated the interior of their houses, laid ceramic tiles, added a terrace, and so on, but most of the houses are still in their original condition. Generally, the KRRP house beneficiaries are satisfied with their houses. The only complaints were generally from those who had bigger houses prior to the earthquake.
Based on a standard design, various types of houses have been constructed

The houses are adapted to local conditions, needs and personal taste
kamar mandi dan wc

Bathroom and toilet

Tangki air

Water Tank

Septic Tank

A house at the edge of a forest

A house that is also a small shop
SCHOOL BUILDINGS
Tuhemberua Elementary School
KRRP project has successfully built 100 school buildings in 9 sub-districts, including 6 multi-story buildings, which were constructed due to limited land available in the locations. 12 units of school buildings have been constructed in Gido, 9 units in Idanogawo, 9 units in Lolofitu Moi, 10 units in Namohalu, 16 units in Tuhemberua, 9 units in Amandraya, 12 units in Lahusa, 13 units in Lolowau and 10 units in Teluk Dalam.

Generally, the school buildings have been constructed in the former location of the damaged schools so that additional land acquisition would not be necessary. However, in some cases requiring the acquisition of land, such acquisition can be conducted by using donations from local community or compensation for damages. In this case, compensation for damages cannot be funded by the project so that most of the land acquisition in this case was using donations from the community. There were also claims lodged by the heirs believing that they had not been involved when their land was granted for school buildings. It took a quite long time to conduct the resolution process of such land dispute.
Turumbaho Elementary School in Botolakha village, Tuhemberua sub-district is lucky since a local philanthropist donated his land for the Elementary School (SD) and a vocational high school nearby. Further behind Turumbaho Elementary School, there are two vocational high schools. The location of the land is excellent because it is by a road and next to a church.

This school has 6 classrooms, a teachers’ room and a headmaster room as well as a library. The construction of the school has been completed and has also been used. The library has also been completed with books and teaching aids. The teachers suggested that there should be a librarian specially hired for managing the library.

The teachers also suggested that training should be provided more often in order to improve the teachers’ quality. This school has not used any computer since it has not been connected to electricity supply grid. There is a generator but it is only used in emergency condition. It is not good to be used for electronic equipment due to its fluctuating voltage.
Lolofitu Moi Elementary School is located on the sides of small road on hillside. There is a small suspension bridge heading toward the school. The students come from villages around the school within a distance of 1-2 kilometers. When it is raining, the journey to the school is quite difficult.

There is sufficient number of teachers but most of them are contract employees. Those contract employees are expected to become civil servants soon. The classrooms and the yard are well maintained.
The students are enthusiastic and study cheerfully
They really enjoy the school’s atmosphere
Suspension bridge leading to the school, which is relatively dangerous for children
This is one of the elementary school buildings constructed as a multi-story structure due to insufficient land. At this school, three classrooms are located on the ground floor and three others on the second floor. The teacher’s room and library have been constructed higher up.
The students really like traditional games and singing in addition to mathematics and social sciences. In this picture, a student asks his classmates to cheer and sing along. Some schools are lucky to have a large and green yard for the students to play and do physical exercises.
Various situations and colors of schools
Even though a multi-store school building is relatively new, children in the village have adapted well to them and do not find any difficulties. Indeed, the challenges faced in acquiring additional land have motivated the construction of these buildings. Such difficulties are frequently faced in densely populated areas.
When schools were damaged by the earthquake, many students had to study in emergency buildings so that their studies would not stop.

With limited facilities, students and teachers continued their activities enthusiastically. They expected that the emergency situation would be handled quickly.
A school environment with many friends and interesting activities is a pleasant place for children. Teachers are critical in improving the environment and realizing the potential of children and preparing them for the future.
Perspective drawing of school building

Village mapping by community
VILLAGE HALLS
Village Hall is an important facility for developing social interaction among residents so that they can be more intimate and active in developing their village. Mutual assistance among residents must be promoted and stimulated so that it will not decrease and disappear. In several villages, mutual assistance has diminished and needs to be re-strengthened so that it can become a strong fundamental for the future.

Considering that KRRP project is a community-based project, the role of Village Hall is absolutely vital since residents’ meetings in order to achieve consensus is a major part of the whole process. The understanding of shared problems, identification of potentials, review of alternative options and decision making should be performed through deliberations among residents. Likewise, agreements on the beneficiaries of assistance, persons who will receive such assistance first and who will receive such assistance later, are made through village meetings.
Village Hall is a training center for voicing residents’ aspirations while respecting the rights and opinions of others. Here, organizational skills, ability to identify problems and ability to jointly find solutions are developed. Village Hall is also a training center for learning new approaches and technologies as well as for developing creative local innovations. At the Village Hall, the real dynamic and democratization processes are developed.

Initially, the budget was allocated for constructing government offices i.e. sub-district office. Then, PMD confirmed a government policy that Sub-District office could not be funded by the project budget because it is covered by the Central Government’s budget. Therefore, it was agreed to build a village hall completed with a room for community meetings and other various activities of the citizens in Nias and Nias Selatan District. Since the Head of Nias District did not agree for this provision, the construction of Village Hall allocation for Nias District was moved to South Nias, namely for constructing 110 village halls.

The Village Halls are constructed with high roof adopting Nias traditions for buildings. The roof is made of corrugated iron sheets with wooden roof trusses. The Village Halls are constructed with reinforced concrete structure and low walls. The upper parts of the walls are open. There are some villages that want to display the characteristics of Nias buildings by adding some ornaments and statues such as those found in many Nias traditional buildings. In the back of the buildings, there is an enclosed space which can be used as an office, warehouse and toilet. The Village Halls are constructed on community lands or donated lands preferably those which are close to village center so that they can be easily reached by residents from various directions.
A Village Hall incorporating Nias traditional architecture with 2 lasara in the front yard and ornaments at the end of its pillars.
Some variations of village halls, developed based on one same standard design

People use plenty of colors and architectural details
A Village Hall is a place where people hold meetings to achieve consensus and to agree upon specific development activities in their future. Women play an active role in the decision-making.
A Village Hall can also become a place for learning and the arts. Besides elders and adults, youths also need a space for their activities.

Basically, a village hall must offer benefits to the entire community, old and young, rich and poor, men and women, merchants, farmers and any other resident of the village.
A Village Hall by the sea.

A Village Hall in a coconut plantation.
The Rehabilitation and Reconstruction of Nias Island is the result of a partnership between the Directorate General of Village Community Development of the Ministry of Home Affairs, the Multi Donor Fund, PNPM Mandiri, BRR and District Governments, supported by various community organizations and local communities. This partnership has ensured that the commitment to reconstruct Nias after the tsunami in 2004 and earthquake in 2005 has been successfully fulfilled with a spirit of unity and cooperation that has successfully overcome many complexities and obstacles.
The construction of foundation, columns and walls has been completed

Internal concrete structure

The roof truss being installed
Front view and ground plan of a Village Hall
VILLAGE PUBLIC INFRASTRUCTURE
The construction of infrastructure may include extensive work, such as roads, bridges, culverts, water canals, irrigation canals, retaining walls, dug wells, clean water pipes, bathing, washing and latrine facilities, public hydrants, village health centers, village markets, etc. In this case, village-scale local infrastructure is being prioritized.
Extra caution has to be exercised while crossing this bridge.
Together we can

Working in a very remote areas with workers and simple equipment became the main challenge faced. They worked with enthusiasm and great energy, realizing that their duty was very important for the community’s improvement and welfare.
Men and women working hard together

Spirit and dedication
The work had to be precise and carefully executed.
Village roads and inter-village roads are extremely important in the daily life for the people's social and economic activities. Efforts were made to ensure effective and efficient location planning and design so as to be in line with local needs and available budget. There were three types of roads constructed: (a) paths which could be used by bikes, (b) double-lane roads for bikes which could be used by cars, (c) roads for cars of a minimum size.

For pedestrians or bikes
Inter-villages roads are getting better and connected to one another
Residents in several villages built covered bridges to make them last longer. Gabion baskets were also built to retain the river bank from erosion. Such efforts have been useful for the maintenance of infrastructure and the surrounding environment.
Saluran air melintasi kebun dan sawah.

Water canal through a field

Irrigation canal
Water reservoirs are built to collect clean water and distribute it to residents through pipe.

The pipes are connected to hydrants installed near a group of residents’ houses. The residents who need water can get the clean water from hydrants.
Village health centers provide health services to village residents so that they can easily and quickly address health problems without having to go to a city. Village health centers are served by doctors and paramedics who provide basic services, including the supply of generic drugs for simple health problems. More complex health problems are referred to service centers at the Sub-District or Regency/Municipality level. This facility has been very useful to rural communities.
Village markets are greatly needed to facilitate the buying and selling of various products offered by farmers, craftsmen and small industry entrepreneurs. Consumers can buy foodstuffs, clothes, tools and other necessary items. Village markets stimulate village economic life and ensure the supply of goods needed by the community.

Most of old markets were located next to roads and often disrupted inter-city traffic. The construction of village markets at appropriate locations is required to overcome such traffic problems.
A market which has been recently constructed is being actively used. In a short time such market has come alive and developed.

Sellers and buyers are comfortable at a market.

The new market is cleaner, more spacious, orderly, and does not interfere with traffic.
Increasingly better and smoother roads enable community activities in small-scale industry, trade, tourism and many other sectors. Development can be accelerated and become more beneficial for the people’s welfare if it is supported in different ways.

Smooth roads also tempt drivers to drive at high speed. Awareness of traffic rules and driving safety needs to be increased to prevent accidents.
Since access is now open, opportunities are also established for creativity and innovation in business development.
ENVIRONMENTAL AWARENESS
With so many buildings being rebuilt after the earthquake, the need for building materials made of wood soared drastically and it was feared that this tremendous demand would destroy forests in Nias Island. There was also a concern that the efforts to bring timber from the surrounding small islands would threaten forest preservation in those islands. It was also difficult and costly to bring timber from the mainland of Sumatera due to the great distance.

Therefore, efforts were made to reduce the needs and the use of timber by incorporating approaches such as: (i) using lightweight steel for the roof trusses of houses and schools; (ii) reusing existing timber; (iii) using scaffolding made of bamboo or branches; and (iv) exercising routine supervision on the use of timber.

Moreover, efforts were also made to create timber legislation for ensuring that timber used came from public forests through a verification process by a field consultant. The KRRP project held trainings on the identification and measurement of the types of timber for 60 Village Heads, as well as encouraged Regional Governments to issue the Head of District Decree for the appointment of those Village Heads as “Officials issuing Certificates of Timber Origin” (SKAU).
Reforestation and tree planting in front yards and along village roads were promoted. Each beneficiary of KRRP project was required to plant at least 12 trees and 60 trees were required to be planted for the construction of every school and village hall. As of June 2010, 117,000 mahogany trees were planted by the beneficiaries. This number is twofold the number originally planned.

Moreover, training on Community-Based Forest Management was held for the beneficiaries of the houses, village halls, schools, as well as village infrastructure and facilities. There were several problems, including a lack of public understanding and knowledge, the limited number of field consultants, and non-optimal supervision and response to emerging difficulties.

In order to ensure the successful implementation of this program, it was suggested to increase the number of seedlings, encourage the participation of local governments, improve the capacity of the consultants thorough training, maximize supervision at the district and sub-district levels, and increase the community awareness through media.
Students learning to identify, plant and nourish trees
A teacher plants a tree in the front yard of a school under construction
CULTURAL HERITAGE EDUCATION
In addition to physically fulfilling basic needs, the KRRP project was intended to support the strengthening of understanding of local culture and its preservation through the Cultural Heritage Education Program as a part of the school improvement initiative.

The term “heritage” in Bahasa Indonesia is translated into various words. Literally, it is often paired with the term ‘Warisan Budaya’ which is usually used in countries of similar origin, such as Malaysia. However, after a series of long discussions in Yogya, Jakarta, Kaliurang and Ciloto with the Indonesian Heritage Conservation Network as well as conservation organizations from various regions in Indonesia, universities and relevant governmental institutions, the term ‘Pusaka’ was agreed upon as the translation of the word heritage (JPPI, 2003).

Pusaka Indonesia is the legacy of nature, culture, and saujana, the fusion of the two. Natural heritage is the construct of nature. Man-made heritage is the legacy of thought, emotion, intentions, and works that spring from over 500 ethnic groups in Tanah Air Indonesia, singularly, and together as one nation, and from the interactions with other cultures throughout its long history. Saujana heritage is the inextricable unity between nature and man-made heritage in space and time. (Charter of Indonesian Heritage Preservation, 2003).

The school is believed to be one of the formal education facilities for building young generations who will take over development in the future. In addition to basic studies, it is the appropriate role for schools to become a place for learning and understanding the heritage of a region. The direct main target of the program is students and teachers, and the indirect targets are the people in general of Nias Island, especially students’ parents or guardians. Heritage education is one of the strategies for improving the understanding and appreciation of local culture,
which is believed in many places in the world as being central to a school environment. (UNESCO Review, 2007).

The strengthening and enhancement of cultural education of Nias island are intended to complement the activities which have been carried out by the communities themselves in a simple way and improve activities which have been started by various local cultural organizations in a broader scope, as well as various innovations of cultural education in the framework of cultural heritage programs.

The first part of this program was the “Development of a Museum for Nias”. This activity was intended to strengthen the understanding of Nias Island cultural preservation through the optimal improvement of museum activities.

The development of museum in Nias Island included: (i) student visits to the museum; (ii) cultural training for teachers; (iii) Nias Island cultural inventory programs; (iv) encyclopedia of Nias Island cultures for students; (v) Re-publishing of a book about Nias cultures consisting of a collection of articles from the Nias Heritage Media newsletter and cultural book written by Pastor Johannes Hammerle, a well-respected missionary and anthropologist who has been living in Nias for more than 30 years; (vi) optimization of the museum as a cultural education facility consisting of relevant collections, the production of a museum catalog, re-designing showrooms and their layout, and improving printed and electronic promotional media, brochures and website; (v) capacity building for museum employees.
The activities were carried out by Yayasan Pusaka Nias which manages the Nias Heritage Museum in Gunung Sitoli. In its development, efforts were made for improving the presentation of the museum’s collections so that they can motivate people especially teachers and students to preserve Nias culture.

The Nias Heritage Museum is one of the best museums presenting Nias history and culture. This museum is often visited by students, researchers and the general public. Students invited to visit the museum are happy and interested in the historical relics which are often overlooked by them. Various artifacts are presented neatly and systematically. Guides are available who can provide detailed explanations of the museum’s collections.

The museum has a library with large collection of books about Nias’s history and culture. Researchers can sit in the reading room to examine various types of information. In addition to artifacts and books, this museum also offers a collection of typical flora and fauna of Nias. A small zoo in this museum is also very useful for introducing various endemic flora and fauna to students. These attractions are very interesting for young and old visitors alike. Finally, visitors can also enjoy beautiful beaches and stalls selling traditional food behind the museum.
Reviving traditional games

The Second Part of the Cultural Heritage Education Program is heritage education at schools. Heritage education at schools is an activity for preparing cultural education materials as a complement to the existing curriculum, as well as facilitating art training at schools.

Activities include, among other things: (i) survey and inventory of heritage properties of Nias island by each pilot school; (ii) preparation of heritage modules for teachers conducted by a module preparation team consisting of relevant experts, teachers’ representatives and school committee members; (iii) workshop and Training of Trainers (TOT) on heritage module implementation for teachers; (iv) preparation of heritage modules for students by teachers at pilot schools; (v) test of heritage module application for students at pilot schools including art facilitation activities at those schools.

The activity was organized by Bamper Madani Foundation based in Teluk Dalam, South Nias District. Through the support of heritage education, various activities have been developed at schools leading to the improvement of awareness of heritage, as well as encouraging its actualization in daily activities, both in the school and community.
Children were invited to become familiar with and wear traditional clothes, learn to play traditional games, and enjoy traditional music.

Through such an introduction and understanding, an appreciation for local culture will be developed and nurtured.
In order for the students to recognize the rich and varied cultural heritage in their region, heritage educational modules were provided for children in the form of comic books or children’s text books. These books are written in a way that was interesting and easy to read for children. The sentences are short and simple, decorated with many interesting visual illustrations for children. These books will help children to enjoy reading and develops the kind of curiosity that is very useful for subsequent children development.

By knowing and understanding cultural richness and diversity, children will appreciate a multi-culturalism and learn to respect the culture and views of others. As the next generation, children are expected to be the main supporters of cultural preservation activities in the future.
Going on a field study trip for to enjoy the cultural richness of a traditional village and to try to understand its history

The third part of the Cultural Heritage Education Program is the Field Study Program to a traditional village. The Field Study Program to a traditional village is an effort to strengthen the understanding of the heritage of Nias Island through student and teacher visits to a traditional village in Nias Island in order to introduce the culture and environment directly. The activities consist of: (i) visits to a traditional village with students as the participants from the model schools (the beneficiaries’ school of KRRP are prioritized); (ii) an essay writing competition about a traditional village visited by students after their visit; and (iii) preparation of comic books with illustrations that are easy to understand by children based on the summary of the essay writing contest winner.
This activity was carried out by the Foundation for Empowerment Board and Cultural Heritage of Nias Islands/Badan Pemberdayaan Warisan Nias (BPWN) located at Gunung Sitoli. In this study of heritage exploration, various activities aimed at improving heritage awareness, as well as encouraging its actualization in daily activities of the community, were conducted through direct observation outside of schools. Students’ direct experience visiting traditional villages in their area was one of the methods believed to be effective in gaining such understanding.
Learning how people made fire in the past

Nowadays, many children and people in general do not respect their traditions and culture because their knowledge is limited and no one has explained to them the background of its development. Therefore, it is very important to introduce children and even adults to history and culture.

It turned out that learning to play traditional musical instruments was interesting and fun
Learning the basic movements of a traditional dance

Children love to try. When they are introduced to a traditional game, dance or music, they will be interested to try, learn and practice them. Therefore, it is essential to introduce traditional music and dance, local cuisine and culture, and local wisdom to students through the kinds of interesting and interactive learning methods that are more suitable for children.

Similarly, studios, clubs and traditional art groups need to be developed, especially for children and teenagers. The measures initiated by KRRP need to be continued and developed further.
PARTICIPATORY DEVELOPMENT
The basic principle developed in KRRP project is participatory and transparent development. The community is invited to be active in various processes, from the identification of problems and potentials, selection of planning alternatives, setting priorities, preparing budgets, managing and supervising the implementation, to the evaluation of the development deliverables.

Actually there is a tradition of customary meetings in Nias, but in such meetings in the past, opinions of senior figures and elders were dominating. Through R2PN, all residents of all levels of society had active participation, including youths and the poor. Likewise, women which in old tradition were less involved, were encouraged to actively participate in decision-making process.

This change was not always easy and smooth. Facilitators or advisors had to work hard, be patient and be careful in introducing the community to this new scheme. Workshop and training for facilitators were held to strengthen the technical understanding of project implementation and management as well as communication approaches and development of consensus. Workshops were also held to jointly evaluate the achievements.

Community training for village spatial planning and development was very interesting because this process was rarely carried out, and there was even a village which never experienced such training. The villages which have participated in KDP or PNPM program, were familiar with this process, but for those which never participated in those programs, initial understanding had to be developed first. The relatively complicated issues in this matter were the inclusion of youths, the poor and women who were previously excluded.
Training for facilitators was held first in districts and sub-districts for the organization and management of development so that everything can run in a synchronous and uninterrupted manner. At the village level, the training was held for local cadres.
In various village meetings, women played an active role.
Meeting were carried out at various levels, namely at district, sub-district and village levels, using a method which was appropriate for the target groups.
Experience in Indonesia and around the world indicates that using a community-based post-disaster recovery approach is more likely to generate sustainable solutions compared to a top-down strategy.

Community-based approaches are also usually more capable of generating local solutions for social conflicts that may arise. Conflicts often occur in reconstruction activities in which the differences of damage levels are translated into differences in the amount of assistance. The experience in Nias and globally indicates that local negotiations can solve such problem. Community-based reconstruction approaches are actually appropriate for a community where the social structure is still strong but the technical capacity is weak and access to market is still difficult. People are able to rebuild their houses through a mutual assistance culture and togetherness, but what is still required are specific interventions such as assistance for technical facilitation and earthquake-resistant construction.

The main target groups of this project have been: (i) house beneficiaries; (ii) students and teachers whose schools were reconstructed; (iii) communities that obtained village halls and various infrastructure projects. It is also expected that the communities and people involved in this process will obtain experience and knowledge.

There was a delay in the first year because the community and project manager were not fully prepared. There were many empty facilitator positions so that community facilitation was not carried out as planned. It is very important to note the importance of early preparation in various projects in the future. The readiness of local communities and organizations will also determine the smooth and timely implementation of projects.
Community deliberations were also held in the field and at project sites.
In addition to the internal supervision by the project, various implementation activities were also monitored by donor agencies to ensure that everything went smoothly according to the plan and applicable regulations. Observations made by the community and various community organizations also strengthened the supervisory system.

Public support greatly affected the success implementation of the project. Participation in the form of energy, ideas, time, fund and land came from various parties. Teachers, guardians, and communities donated their land and in the photo below project management staff at Sub-District Turumbaho, Botolakha village posed together in front of the school which had been constructed.
In addition to the direct activities in the KRRP project, there were also a lot of social and economic activities initiated by community members utilizing various facilities resulting from the project implementation.

Innovation and creativity at the community and individual level also determined the extent to which the project investment produced actual results for the improvement of people’s welfare. This motivation has to be encouraged and nurtured so that the benefits of this project will grow further.
EPILOGUE
The rehabilitation and reconstruction of Nias Island have been implemented for six years since the last earthquake on March 2005. Meanwhile KRRP had started since February 22, 2007 and completed June 30, 2011. There were many activities that had been implemented and many basic needs have been fulfilled, although there are still many things that have to be completed further by the government and the community of Nias. Several important activities must be taken into consideration, including the maintenance of the large number of infrastructure projects and facilities that were constructed.

The completion of the main infrastructure and facilities has opened up opportunities for the development of socio-economic and cultural life. Currently, such benefits have not been achieved optimally. Various creativities and innovations are expected to continue growing in order to realize existing potential for improving the community’s welfare. Such creativity and innovation require a continuous level of motivation and spirit.

There are numerous lessons learned from the work of the past six years. Coordination and synchronization are the key concepts that are often uttered but very difficult to realize. It is crucial to develop coordination which is based on equality and does not rely too much on top-down instruction. Horizontal coordination is very suitable to the egalitarian spirit which is being developed in the current reform era in Indonesia.

Available opportunities must be seized through the development of human resources and a reliable management framework for nurturing them. Nias is not a barren area that has no future; instead, Nias has significant potential in many areas. Older and younger generations need to be connected by shared ideals of development which will create one solid and forceful community.
ACKNOWLEDGEMENTS

We would like to express our gratitude to all stakeholders of KRRP or PNPM-R2PN project, namely the Directorate General of Community and Village Empowerment (PMD) Ministry of Home Affairs, Rehabilitation and Reconstruction Agency (BRR) Aceh-Nias, and Local Governments in Provincial, District and Sub-District level that have assisted the publication of this book. We would like to thank all communities on Nias Island and those community organizations that were involved for their generous support and cooperation.

We also express our gratitude to Scott Guggenheim and John Victor Bottini who provided inputs and guidance, and thanks to all team members for the book’s preparation, implementation and supervisory of this project who have provided data, inputs and shared the notes of their experiences.

Hopefully, the publication of this book will be useful for drawing lessons and valuable insights that can be applied to similar situations in the future, as well as offer ideas and inputs for the ongoing development in Nias Island.
Photograph contributors

Catrini Pratihari K. page 37, 48 a-b-c-d-e, 50 b, 54, 67 a-b-c, 88 e, 99 a-b-c, 112 d.

Dennie Mamonto page 24 a-b, 36 b, 45 b, 49 b, 57 a-b-c-d-e, 68 b, 69a, 73 a 74 a-b-c, 75 b, 86 d-e, 87 e-f, 88 a-b-c-d, 112 e-f.

Melkhior Duha page 59 a-b-c, 100, 101, 102 a-b-c, 103 a-c.

Suhadi Hadiwinoto page 9, 17, 27 b, 28 a-b-c-d, 29 a-b-c-d, 39, 40 a-b, 41 a-b, 42, 44 a-b, 45 a, 56 a-b, 60 b, 66 a-b, 78 b, 80 a-b-c-d, 81 a-b, 84, 85 b, 92, 93 a-b-c, 95, 96, 97 a-b-c, 98 a-b-c-d-e, 103 b, 113 a-b-c-d-e-f.

Other photos contributed from Festina Lavida, Eka Hasfiadha, Nagasakti Peranginangin, Maurista Manik, Marihot Sigalingging, Gea Asavati, and World Bank archives and KRRP field team.

Book’s cover: processed from BRR documentation
The Kecamatan-based Rehabilitation and Reconstruction Project in Nias Island (KRRP) is a pilot within the Government of Indonesia’s (GOI) National Program for Community Empowerment in Rural Areas Program (PNPM-Rural), and is implemented by the Ministry of Home Affairs (MoHA), Directorate General of Community and Village Empowerment (PMD).

KRRP is a community-based planning and recovery project designed to support the reconstruction efforts on the tsunami- and earthquake-affected island of Nias. KRRP is co-financed by the GOI and the World Bank-administered Multi-Donor Trust Fund (MDF).

The Kecamatan-based Rehabilitation and Reconstruction Project in Nias Island (KRRP) supported the recovery of communities through the construction of housing and village infrastructure in Nias. Using a community-based approach, this project has successfully contributed to the recovery of Nias through the rehabilitation and reconstruction of over 4,400 houses, 100 school buildings, 215 village halls and village public infrastructure including tertiary roads, bridges and others.

Additionally, KRRP implemented a cultural heritage program that included a heritage education component and the publication of cultural books on Nias designed to increase awareness and appreciation of Nias’s culture. Meanwhile due to environmental awareness and consideration for high demand of timber in physical construction, KRRP conducted community reforestation and tree replanting in the yards of beneficiaries’ houses, on community land and near village roads.

THE REHABILITATION and RECONSTRUCTION OF NIAS ISLAND