ACEH AND NIAS ONE YEAR AFTER THE TSUNAMI
The Recovery Effort and Way Forward

A Joint Report of The BRR and International Partners, December 2005

ACEH NIAS
REMEMBER. REBUILD.

BRR NAD – Nias

FOREWORD_

PRESIDENT OF THE REPUBLIC OF INDONESIA
ON THE REPORT OF THE ACEH-NIAS
REHABILITATION AND RECONSTRUCTION AGENCY

Assalamu'alaikum warahmatullahi wabarakatuh
Fellow countrymen,
Ladies and Gentlemen,

This report marks the passing of one year since the devastating tsunami of 26 December 2004 and the earthquake of 28 March 2005. The massive loss of life and tremendous destruction were tragic. The grief they brought the people of Aceh and Nias and the wider Indonesian nation were beyond words. Yet from this great tragedy there came an impressive outpouring of support from around the world for which I offer my heartfelt gratitude on behalf of our nation.

The resilience and courage of the survivors have been equally impressive. Their dignity, forbearance and discipline have been clearly seen during the passing of the first Ramadan since the disaster.

The peace accord brokered in Helsinki and the subsequent cooperation all round in the peace process are major achievements that bode well for a successful recovery program. I admire and thank all involved.

We are now into the hard yards of the recovery process. The journey ahead will be long and hard. I trust and hope it will also be rewarding as we work together in rebuilding and strengthening the affected communities and infrastructure as well as the government and economic capacity on which they all depend for prosperity and success.

I have taken a close personal interest in the work of the Aceh-Nias Rehabilitation and Reconstruction Agency over the past several months since I established it. The Agency has given strong and effective professional leadership to the national and international recovery effort. I will continue to monitor its progress and maintain my support for its excellent work. I trust in it to deliver not just an effective reconstruction program but also a model of reform and development of which we can all be proud.

My best wishes and thanks also go to all who have been involved in helping the people of Aceh and Nias. Your contributions to the rehabilitation and reconstruction program are welcome and admired.
To the people in the affected communities, I also wish you well. I will continue to do all I can through the Aceh-Nias Rehabilitation and Reconstruction Executing Agency to give you the support you need in the difficulties you face.

We have now built a strong platform for delivering sustainable recovery. I urge all to continue in good faith as we all strive to overcome the many great challenges that lie before us.

Wassalamu'alaikum warahmatullahi wabarakatuh.

Jakarta, 14 December 2005
PRESIDENT OF THE REPUBLIC OF INDONESIA

DR. H. SUSILO BAMBANG YUDHOYONO

United Nations Nations Unies

Office of the Secretary-General's Special Envoy for Tsunami Recovery

From the United Nations Special Envoy, President William J. Clinton:

In the course of my three visits to Aceh since the devastating events of December 26, 2004, I have been moved by the extraordinary strength of the Acehnese people. Their courage and determination to rebuild their lives and communities after this devastating natural disaster inspires and motivates the rest of us to do better and to do more.

As we approach the anniversary of this terrible event, we have much to be proud of. Great strides have been made in protecting the lives and livelihoods of tsunami survivors. Temporary schools, shelters, and health clinics are filling interim needs while more permanent structures are built. Cash-for-work programs, food distribution, and vocational training programs are helping to protect standards of living while efforts are made to revive businesses, agriculture, and fisheries. We have a long way to go to build Aceh back better, but the process is well underway.

Kuntoro and his team at the BRR deserve much of the credit for this progress. The agency has played a vital role in coordinating the recovery effort and ensuring that the process is led by Indonesians. President Yudhoyono's decision to create a specialized agency for this massive task, with Kuntoro at the helm, was an inspired one. It will be judged well by history, particularly as the large-scale reconstruction gets underway.

The international friends of the Acehnese people have also played critical roles in the recovery effort. This has been an extraordinary partnership, including the military contingents who flew in water and food in the first weeks, the international NGOs -- large and small -- that provided help to entire communities, and the United Nations and international financial institutions like the World Bank and Asian Development Bank. Foreign governments have made much of this possible, through their generous financing of the recovery process. Private citizens from around our world have also played a crucial role, on a scale unprecedented in the history of private giving.

The scale of the task and the sheer number of actors involved has made it at times difficult to get a clear picture of what is needed and who is helping to meet these needs. This report will clarify the situation, and I am confident it will make an important contribution to guiding the recovery effort.

I will continue to do my part to promote Aceh's recovery. We must sustain the same levels of commitment and effort for as long as it takes to build back better in Aceh and Nias, ensuring that communities are left on a safer and sounder development path.

One United Nations Plaza, New York, NY 10017 USA

Palang Merah Indonesia

By Sunday evening, 26 December 2004, I was in Banda Aceh. Within 15 minutes of my arrival at the airport, I was standing with our first Satgana disaster response volunteers who were already evacuating cadavers and the injured from the surrounding area. The team had begun its first assessment of conditions, and fortunately I was able to receive a first-hand report on this unprecedented catastrophe.

The scope of this disaster was far beyond my expectations. Never before could I have imagined nor prepared myself physically and mentally, in my capacity as Chairman of the Indonesian Red Cross, to cope with this grievous calamity. However, the activities going on around me by our Satgana volunteers energized me to deal with the critical nature of the situation.

In responding to this most tragic event, PMI, the International Federation, ICRC and dozens of Red Cross and Red Crescent national society staff and volunteers from all over the world worked hand-in-hand to provide relief according to our universal mandate. This massive emergency response operation is a success story, with first tribute going to all volunteers who were actively involved.

Now, one year later, there are many lessons to be learned, especially that an early warning system must be built with a holistic and community-based approach. We do recognize that the rehabilitation and reconstruction is a difficult and complex challenge. The recovery process necessary to re-build communities in Aceh and Nias is a seminal task. We must reaffirm our long-term commitment and take real action based on the needs and aspirations of the communities that require our help.

I am confident that all stakeholders will fulfill their commitments for the benefit of those affected; that is our primary responsibility. An effective revitalization of civil society in Aceh and Nias will create even more resilient communities in that region of our country.

Mar'ie Muhammad
Chairman, Indonesian Red Cross Society

THE WORLD BANK

December, 2005

PAUL WOLFOWITZ
President

The December 26, 2004 tsunami caused unimaginable devastation to Aceh and Nias. Only three months later, another major earthquake struck, causing additional heavy damage mainly to Nias. The magnitude of these events triggered an amazing outpouring of compassion and generosity from around the world. Private citizens provided huge amounts of support, and donors pledged generously to help survivors

But reconstruction involves more than rebuilding roads, homes, schools and health clinics. It is also about rebuilding people's lives—so that they can regain their livelihoods and institutions, and heal the emotional wounds that linger in their minds. Aceh and Nias were already poor prior to the disasters, and recovery is further complicated by the backdrop of the decades-long conflict in Aceh.

I was impressed by the courage and resilience of the people of Aceh during my visit there earlier this year. Indonesians were eager to play an active role in the re-development of their communities. Emergency relief needs were met in the months following the disasters, and serious outbreak of disease and malnutrition were averted. Progress was also made in 2005 on understanding local needs, addressing planning and policy issues, and strengthening capacity for large scale reconstruction.

BRR, Indonesia's reconstruction agency, is building its capacity for coordinating actors, monitoring programs, and trying to ensure that the needs of communities are recog nized and addressed. It is important that they continue to strengthen and adapt their capacity as needed to ensure the sustainability of the investments being made.

Yet one year after the tsunami disaster, we must not lose sight of the fact that we are still at the beginning of a complex reconstruction and recovery process. Delays in getting funds flowing, establishing a brand new agency to manage recovery, and trying to coordinate the hundreds of players trying to help have meant that physical reconstruction has been slow to start. The tsunami provides us with yet another example that countries need to have systems and policies for recovery in place prior to disasters—in order to respond quickly and effectively.

One remarkable achievement this year, prompted in part by the tsunami disaster, has been the progress on peace in the region. With the signing of a peace agreement in August between the Government of Indonesia and the Free Aceh Movement (GAM), and the progress on its implementation, there is increasing confidence that peace will last. In order to nurture this still fragile peace process, tsunami recovery programs will need to be closely linked with conflict recovery and reconciliation efforts to bring hope to all citizens of Aceh and Nias.

The coming year will be critical to the long-term recovery of the region. The year 2006 must be one of large-scale action on the ground. Vigorous efforts must be focused on ensuring that the affected communities drive the reconstruction programs, and that government and partners work together to deliver results in a transparent manner. The progress and problems of the past year reviewed in this report should pave the way for rapid progress towards recovery.

The recovery of Aceh and Nias is a test for Indonesia, and a test for the entire international community. The eyes of the world are upon us. We must not fail those who responded so generously to this terrible tragedy. More importantly, we must not fail the people of Aceh and Nias in supporting their path to a safer, more secure future.

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GLOSSARY

Adat	Social custom or tradition
ADB	Asian Development Bank
AIPRD	Australia Indonesia Partnership for Reconstruction and Development
AMDAL	Environmental Impact Assessment (Analisa Mengenai Dampak Lingkungan)
AMM	Aceh Monitoring Mission
AusAID	Australian Agency for International Development
BAPEDALDA	District Environmental Impact Management Agency (Badan Pengendalian Dampak Lingkungan Daerah)
Bapel	Executing Agency of BRR (Badan Pelaksana)
BAPPENAS	National Development Planning Board (Badan Perencanaan Pembangunan Nasional)
Barat	West
BPD	Regional Development Bank (Bank Pembangunan Daerah)
BPM	Community Development Agency
BPN	National Land Agency (Badan Pertanahan Nasional)
BPS	Statistics Indonesia (Biro Pusat Statistik)
BQ	Syariah Financial Cooperatives (Baitul Qiradh)
BRR	Rehabilitation and Reconstruction Agency (Badan Rehabilitasi dan Rekonstruksi)
Bupati	District Head
Camat	Sub-District Head
CDA	Community Driven Adjudication
CDC	Centers for Disease Control and Prevention
CDD	Community Driven Development
CFAN	Coordination Forum for Aceh and Nias
CGI	Consultative Group for Indonesia
CIDA	Canadian International Development Agency
CoHA	Cessation of Hostilities Agreement
CoSA	Committee on Security Arrangements
CPI	Consumer Price Index
CRS	Catholic Relief Services
CSO	Civil Society Organization
DDR	Disarmament Demobilization and Reintegration
Desa	Village
Dewan Pengarah	Advisory Board
Dewan Pengawas	Oversight Board
DFID	UK Department For International Development
DHWS	Directorate for Housing, Water and Sanitation
Dinas	Provincial Sub-Project Management
Dinas Bina Marga	Regional Road Offices
Dinas Sosial	Social Department
DIPA	Issuance of spending authority (Daftar Isian Proyek Anggaran)
DISNAKERTRANS	Regional Office of Manpower and Transmigration Department (Dinas Tenaga Kerja dan Transmigrasi)
EC	European Commission
ECHO	European Commission Humanitarian Office
ECLAC	Economic Commission for the Latin America and Caribbean
EIA	Environmental Impact Assessment
EMIS	Education Management Information System
ERTR	Emergency Response and Transitional Recovery
ETESP	Earthquake and Tsunami Emergency Support Project
EU	European Union
FAO	Food and Agriculture Organization
FY	Financial year
GAM	Free Aceh Movement (Gerakan Aceh Merdeka)
GDP	Gross Domestic Product
GeRAK	People's Movement for Anti-Corruption
GIS	Geographic Information System
GOI	Government of Indonesia
GPS	Global Positioning System
GTZ	German Cooperation Agency (Gesellschaft fuer Technische Zusammenarbeit)
HIC	Humanitarian Information Center
IAP	Immediate Action Plan
IBI	Indonesian Midwives Association
ICW	Indonesia Corruption Watch
IDP	Internally Displaced Person
IFRC	International Federation of Red Cross and Red Crescent Societies
ILO	International Labor Organization
IMC	International Medical Corps.
IOM	International Organization for Migration
IRC	International Rescue Committee
IRD	International Relief and Development
JICA	Japan International Cooperation Agency
JICS	Japan International Cooperation System
Kabupaten	District
KDK	Emergency Humanitarian Committee (Komite Darurat Kemanusiaan)
KDP	Kecamatan Development Project
Kecamatan	Sub-District
Kelurahan	Village
Kerap	An elected local committee that handles and monitors reconstruction funds under the Urban Poverty Project
KfW	German Development Bank (Kreditanstalt fuer Wiederaufbau)
Kota	City District

KPK	Anti-Corruption Commission (Komite Pemberantasan Korupsi)
KPPN	State Treasury Offices (Kantor Pelayanan Perbendaharaan Negara)
LC	Land Consolidation
LCS	Logistics Coordination Service
LCT	Landing Craft
LDR	Loan and Deposit Ratio
LEI	Eco Labeling Institute
LIPI	Indonesian Institute of Science (Lembaga Ilmu Pengetahuan Indonesia)
LRWG	Livelihood Recovery Working Groups
MDTF	Multi Donor Trust Fund (for Aceh and North Sumatra), commonly referred to as Multi Donor Fund
Mesjid	Mosque
MFI	Micro Finance Institutions
MOC	Ministry of Communication (Departemen Perhubungan)
MOE	Ministry of Environment
MoNE	Ministry of National Education
MoRA	Ministry of Religious Affairs
MOU	Memorandum of Understanding
MPW	Ministry of Public Works (Departemen Pekerjaan Umum)
MSF	Medecins Sans Frontieres
NAD	Nanggroe Aceh Darussalam
NGO	Non-Governmental Organization
NPL	Non-Performing Loan
OCHA	Office for the Coordination of Humanitarian Affairs
OECD	Organization of Economic Coordination and Development
P3JJ	Project of Planning and Supervision Roads and Bridges (Proyek Perencanaan dan Pengawasan Jalan dan Jembatan)
PDAM	Government-Owned Water Enterprises (Perusahaan Daerah Air Minum)
Perpu	Regulation in Lieu of Law (Peraturan Pemerintah Pengganti Undang Undang)
PERTAMINA	The National Petroleum Supplier (Perusahaan Pertambangan Minyak Nasional)
Pesantren	Islamic School
PHC	Public Health Center
PHO	Public Health Office
PLN	The National Electricity Company (Perusahaan Listrik Negara)
PMU	Program Management Unit
Posko	Coordination Post (Pos Koordinasi)
Puskesmas	Health Center at Sub-District Level (Pusat Kesehatan Masyarakat)
R3MAS	Master Plan for Aceh and Sumut (Rencana Rehabilitasi and Rekonstruksi Masyarakat Aceh dan SUMUT)
RALAS	Reconstruction of Aceh Land Administration System
RKA-KL	Ministry Work Plan and Budget (Rencana Kerja dan Anggaran Kementerian/Lembaga)
RKP	Government Work Plan (Rencana Kerja Pemerintah)
RCRC	Red Cross/Red Crescent
Rp	Indonesian Rupiah
SAKERNAS	Labor Force Survey (Survey Tenaga Kerja Nasional)
SAMAK	People's Anti Corruption Solidarity (Solidaritas Masyarakat Anti Korupsi)
SCF	Save the Children Fund
SD	Primary School
SME	Small and Medium Enterprises
SNREA	Strategic Natural Resource and Environmental Assessment
SPADA	Support for Poor and Disadvantaged Areas Project
SST	Telephone Subscribers (Satuan Sabungan Telepon)
SUMUT	North Sumatra (Sumatera Utara)
Syariah	Islamic law
TELKOM	State-owned Telecommunications Company
TNI	Indonesian Military (Tentara Nasional Indonesia)
TSAD	Socialization Team for Peace in Aceh (Tim Sosialisasi Aceh Damai)
UN	United Nations
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFPA	United Nations Family Planning Agency
UNHAS	United Nations Humanitarian Air Service
UNICEF	United Nations Children's Fund
UNIMS	United Nations Information Management Systems
UNJLC	United Nations Joint Logistics Centre
UNOCHA	United Nations Office Coordination Humanitarian Affairs
UNOPS	United Nations Office for Project Services
UNORC	United Nations Office of the Recovery Coordinator
UPP	Urban Poverty Project
USAID	United States Agency for International Development
USO	Universal Service Obligation (here: public phone)
WFP	World Food Program
WHO	World Health Organization
YIPD	Center for Local Government Innovation (Yayasan Inovasi Pemerintah Daerah)
yoy	year-on-year

EXECUTIVE SUMMARY

On December 26, 2004, an earthquake struck 150 km off the coast of Aceh. It was the most powerful the world has seen in a generation. Forty-five minutes later the tsunami wave hit Aceh and within minutes it swept clean an 800 km coastal strip of Aceh – equivalent to the coastline from San Francisco to San Diego. Some 130,000 people were killed and 37,000 remain missing.

The March 28 earthquake added to the toll in Nias, Simeulue and southern parts of Aceh. The power of nature in these events is scarcely comprehensible. To give just one illustration: the December earthquake caused the 2000 sq km island of Simeulue, with its 78,000 inhabitants, to sink about one meter, while the March earthquake caused it to rise two meters – more, in some parts. Being able to walk through exposed coral reefs is a stark reminder of the surreal transformations nature can bring.

These events caused immense social, economic and environmental devastation to areas that were already poor, while sparking unprecedented emergency support. Before the tsunami, more than a third of the population of Aceh and Nias lived in poverty. Now, almost half live below the poverty line or are dependent on food aid. Full recovery will take years. The calamity also unleashed an unprecedented national and international response for emergency needs. The Indonesian military and military forces from various countries led the search and rescue, relief distribution and immediate clean-up activities. The United Nations launched a US$ 800 million flash appeal for the tsunami affected countries. NGOs and donors made record contributions.

The effort has now shifted gear from coping with the emergency to helping the people of Aceh and Nias piece back their lives. Visitors are still struck by the scenes of utter devastation, but they now see clear evidence of recovery activity as disaster survivors, along with the staff of 124 international NGOs, 430 local NGOs, dozens of donor and United Nations agencies, various government agencies, some military, and many others are collectively working on reconstruction efforts.

Many new and innovative mechanisms for funding the recovery have ensured that sufficient resources are available. Fifteen donors have come together to pool their grant assistance in a US$ 525 million Multi-Donor Fund for Aceh and Nias, co-chaired by the European Commission (the largest donor), the World Bank and the BRR. The Asian Development Bank launched the Earthquake and Tsunami Emergency Support Project with its own US$ 300 million grant. And major bilateral programs of grants and soft loans have been offered by the Australia-Indonesia Partnership for Reconstruction and Development, the Governments of Japan and Germany, and USAID as well as many other generous governments from around the globe. International NGOs and organizations such as the Red Cross/Red Crescent, CARE, CARDI, Catholic Relief Services, MercyCorps, Oxfam, Save the Children, and World Vision have raised record funds to support ongoing relief and recovery efforts. These funds provide hope that it is indeed possible to "build Aceh and Nias back better."

The greatest hope for a lasting recovery has come from the signing of a peace accord in Helsinki between the Government of Indonesia (GoI) and the Free Aceh Movement (GAM) on August 15, 2005, ending a 30-year-

conflict during which almost 15,000 people had died. Past accords have not held, but lessons have been learned and so far the prospects look good. Former GAM combatants are smoothly reintegrating into their original communities, arms are being handed over on schedule, Indonesian military forces in Aceh are scaling back as promised and local institutions are welcoming GAM leaders into decision-making positions. There is the possibility of a "virtuous circle"; the tsunami gave the chance for peace, and the reconstruction effort presents an opportunity to strengthen that peace by bringing entire communities together to plan for their future.

PROGRESS – ONE YEAR ON

Emergency relief is still needed, but the burden of effort is now focused on reconstruction, and progress is being made on multiple fronts. In Aceh and Nias, great areas of urban landscape remain nothing but rubble; about 67,500 people are still living in tents, many of which are going moldy. Hundreds of thousands of people still depend on food aid and emergency employment schemes. However, unlike in similar disasters elsewhere, there has been no major outbreak of disease or hunger, due to the well-coordinated emergency effort. Now, almost 1,000 reconstruction projects are underway, many of which have recorded progress (table 1).

Recovery programs are targeting many needs, with a heavy emphasis on housing, health and restoring agrarian livelihoods. By early December, 16,200 houses had been built and 13,200 were under construction for those made homeless, 15,000 families are housed in temporary barracks, and the UN and Red Cross/Red Crescent are now leading a temporary house campaign which is intended to get everyone out of tents by early 2006. Most children are now back in school, health centers have largely reopened, some two-thirds of farmers are back farming their damaged land, and three-quarters of the fishing boats lost have been replaced or are being built. Some progress, but more limited, has been made in restoring livelihoods.

Those displaced or who lost their livelihoods are understandably frustrated that a year later the recovery hasn't been faster. The pace of reconstruction following a disaster of such magnitude is never fast enough, given the lives that have been disrupted, but it is proceeding at least as rapidly as in other contemporary disasters (box 1).

The recovery effort is beset by challenges of enormous complexity. No amount of planning or ingenuity could have averted them. To quote a few:

- Land has to be cleared of millions of tons of debris and silt before it can be used again – whether for farming or building homes; and before building houses it is vital to establish who owns what land.
- Large areas of land are no longer suitable for housing because they are now flood plains due to tectonic plate shifts that depressed much of the coastal shelf by up to 1.5 meters.
- Water, sewerage, electricity, public transport and other service connections must be planned before houses are built to ensure communities become viable again.
- The single road reaching along the west coast was washed away in many areas, as were many ports. In spite of the temporary road built by the Indonesian army, which can only carry 5-ton trucks even when it is dry, it is proving a logistical nightmare to bring in the thousands of tons of building supplies needed for reconstruction.
- The islands, especially Nias and Simeulue,

Table 1 Damage and Progress in Aceh and Nias

	Damage	Progress
People	• 167,000 dead or missing from tsunami • 500,000 displaced from homes in Aceh • 900 dead from the March earthquake and 13,500 families displaced from homes in Nias	• In Aceh, over 300,000 have been able to return to homes • About 75,000 given shelter by relatives and neighbors
Housing	• 80,000 – 110,000 new houses needed • About 50,000 are housed in barracks; • About 65,000 remain in tents	• 16,200 new houses completed • 13,200 underway • 5,000/month new houses being built
Infrastructure	• 3,000 km of roads impassable • 14 of 19 seaports badly damaged • 8 of 10 airports damaged • 120 arterial bridges destroyed, 1,500 minor bridges	• 235 km roads restored • West coast road project started • Major road projects underway • 5 major ports being rebuilt • 35 arterial bridges rebuilt
Education	• More than 2,000 school buildings damaged • Approximately 2,500 teachers died	• 335 new schools built or under construction • Over 1,100 new or temporary teachers trained • 1.7 million textbooks distributed
Health	• More than eight hospitals damaged or destroyed • 114 health centres and sub-centres damaged or destroyed	• 38 hospitals, clinics and health centres rehabilitated or rebuilt • 51 more under reconstruction
Economy	• US$1.2 billion damage to productive sector • Projected economic decline of 5% in Aceh; 20% in Nias	• Construction boom is stimulating economy
Fisheries	• 4,717 coastal fishing boats lost • 20,000 ha fish ponds destroyed or out of action	• 3,122 boats replaced or being built • 5,000 hectares fish ponds repaired, back in use
Agriculture	• 60,000 farmers displaced • Over 60,000 ha agricultural land damaged	• 40,000 farmers assisted to return • 13,000 ha farmland restored
Enterprise	• 100,000 small business persons have lost their livelihoods	• 7,000 workers given skills training • Over 120,000 benefited from cash-for-work schemes

Source: Range of housing issues based on these sources: IOM damage assessment of houses destroyed adjusted to account for loss of villagers (March) BRR survey of Camats and Village Heads (November); 2005 BPS census shows 192,055 IDPs including 12,353 in tents on own land

Box 1 Comparing Reconstruction Pace Across Countries

- **Honduras:** Hurricane Mitch devastated several Central American countries in 1998. In Honduras alone, more than 441,000 were displaced. Four years later, about 85,000 houses were rebuilt, but hundreds were still living in temporary shelters.
- **India:** The Gujarat earthquake in 2001 killed about 14,000 people; the recovery program aimed to rebuild 214,000 houses; in the first two years 113,000 had been built (53%)
- **Iran:** In December 2003, an earthquake in Bam killed more than 30,000 and left 75,000 homeless. One year later, most people lived in pre-fabricated temporary shelters and only 5% of the permanent houses needed were rebuilt.
- **Japan:** The Kobe earthquake killed 6400 and displaced 300,000 in 1995. It took seven years to fully recover in terms of population, income, and industrial indices.
- **Turkey:** After the Erzincan earthquake in 1992, a government program to build 3600 houses didn't start until two years later. Following the August 1999 Marmara earthquake (which destroyed 64,000 houses), government capacity for reconstruction had increased, and it took about three years to complete the bulk of the housing reconstruction.
- **United States:** In Florida some people are still living in mobile housing more than a year after Hurricane Ivan struck in 2004.
- **Venezuela:** The floods and landslides of 1999 displaced 80-100,000; more than one- third of these still lived in barracks/temporary shelter 8 months later. A year after the disaster, all of the displaced had homes; however, many were pressured to relocate.

lost most of their ports and never had the scale of transport infrastructure necessary for the logistics of large-scale reconstruction.

- Since reconstruction began there have been many other earthquakes (not least the giant one in March), heavy floods, landslides and gales. Avian influenza and polio have also reached Aceh.

Though nothing could have been done to avert these problems, other sources of delay could have been averted. It took the Government several months to formulate its strategy. Many NGOs and donors made commitments to undertake programs for which they had little experience. Many donors swiftly pledged aid for recovery but then took several months to authorize or transfer the funds. And inappropriate policies often caused unnecessary delays and false starts- for example, the initial policy to limit the budget for a new house to US$ 3,000 – a level that was clearly too low – constrained housing projects. It was eventually revised, but not before many programs were already underway.

The budget processes for government funds and official aid provided through the government have proven slow. Traditionally in Indonesia (as in many countries), transferring funds from the national treasury can be cumbersome. This year budget execution was even slower as a result of newly introduced reforms, even though a rapid response was required. Inevitably, the new system, though designed to increase transparency and accountability, initially generated confusion and uncertainty, as long-standing practices were overhauled. Just as the need for speed in accessing funds was greatest, the budget system nearly broke down leaving considerable resources assigned by the government for recovery languishing in Jakarta until as late as September 2005.

THE RECONSTRUCTION STRATEGY

The Government's master plan for rehabilitation and reconstruction contained two critical decisions that were to initially delay reconstruction, but which gave the recovery a firm foundation for sustainable progress in the long term. The first was to establish a ministerial-level Rehabilitation and Reconstruction Agency (BRR) to provide leadership of the recovery; though it took some months before the agency became fully operational. The second was to insist that communities take the lead in planning their own recovery; participatory processes are often slower than top-down alternatives but are more effective over the long term because the plans have full community support. Indonesia's strategic choices have set a different path from that chosen by countries in other disasters, but given the complex political and social environment in which the tsunami occurred, these choices made sense. Indeed, the creation of a credible, independent agency, based in Banda Aceh, to oversee the reconstruction and emphasize community-driven processes, has surely contributed to the peace process.

Since its formation in April the BRR has quickly established leadership over the reconstruction effort. BRR comprises three bodies: an Executing Agency (Bapel), headed by Kuntoro Mangkusubroto; a high-level Advisory Board to guide the reconstruction strategy; and an Oversight Board to monitor activities, handle public complaints, and conduct audits. All three report directly to the President. The term BRR is commonly used for the executing agency, a practice followed in this report.

BRR's first priority was to clarify its mission, build its staff and develop a set of standard operating procedures to provide coordination, strategic leadership and quality control of the myriad activities underway by donors and NGOs. It established a review and approval process to ensure that projects are compatible with overall recovery priorities and requirements. It drafted policies and guidelines to lay down common standards and practices in key areas with a strong focus on anti-corruption. It also established an operations center to track donor projects and sought to set up new frameworks for donor coordination. And through allocation of substantial resources from the Paris Club moratorium, it became an important source of government funds for reconstruction.

BRR has now been given additional powers to implement housing reconstruction projects through direct contracting. This will enable it to respond to gaps or poorly performing programs, by being able to assume responsibility for those programs or reassign them to another agency. It is also giving priority to engaging district government systems in the reconstruction by passing on BRR's own funds to projects managed by provincial and district administrations. BRR will also use block grants to empower local governments to address their middle-level infrastructure needs, while providing the necessary capacity-building through a "learning-by-doing" approach.

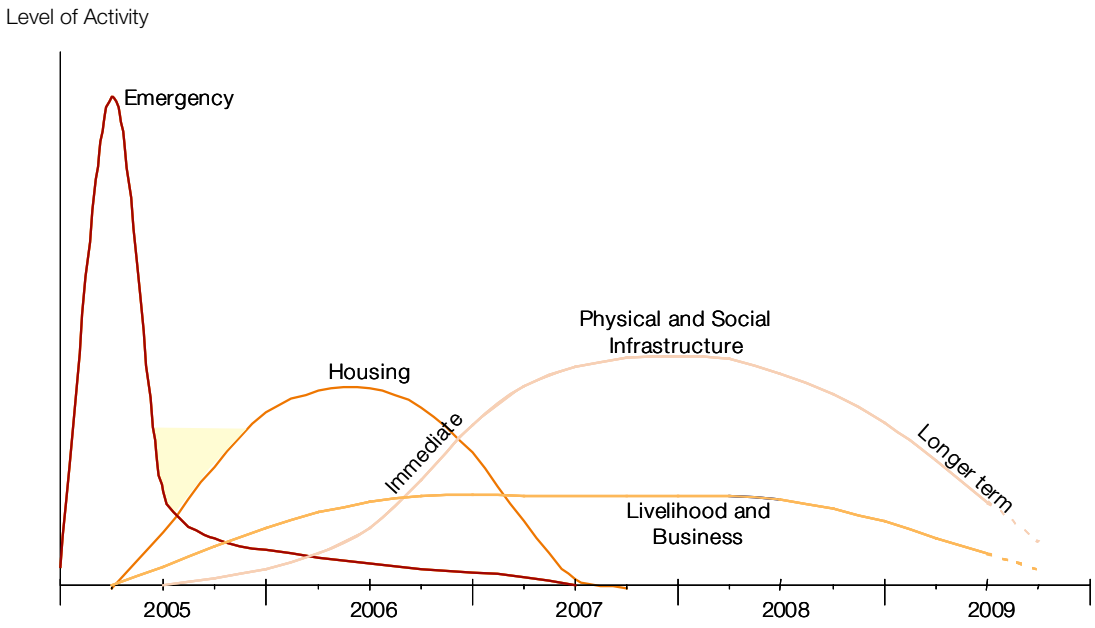
The transition from relief to reconstruction has not been seamless. A hiatus in activity in the middle of 2005 gave the impression that the recovery effort was running out of steam. Planning for the recovery phase started in earnest in March and did not end till the Government's revised budget was approved in June. Disbursements for recovery activities remained on hold just as the emergency response was beginning to wind down. This created a trough in the funding flows - illustrated by the shaded area in figure 1- and coincided with mounting frustration among

those displaced who were understandably impatient to see progress.

The recovery program has now gained momentum and funds are starting to flow for reconstruction projects. This became possible as capacities were built, plans were agreed with communities, contracts were awarded and construction materials were procured. Resource flows to reconstruction projects have increased to about US$ 150 million per month and should grow to US$ 200 million per month in 2006. BRR has set out a sequencing of the reconstruction effort, as the diagram illustrates, broadening from the current emphasis on housing to include infrastructure and livelihoods in 2006, and in subsequent years to longer term infrastructure needs and local capacity building (see figure 1).

Tangible progress in reconstruction is now evident. Any journey now through most of the tsunami zone reveals a constant stream of new houses, public works projects and construction yards run by international or government agencies. However, the remoter areas are still seriously neglected, in particular Nias.

Figure 1 Sequencing of Emergency and Recovery Effort (schematic)



REBUILDING HOMES AND COMMUNITIES

About 500,000 people were displaced from their homes by the tsunami. Most have been able to return to their property or to find an alternative, but about 190,000 people remain homeless in Aceh and a further 13,500 families in Nias. Some 67,500 people in Aceh remain in tents.

The first hurdle to overcome in permanent housing is clarifying who owns what land. Often there is no visible trace of property boundaries. A program is now underway to restore property rights using participatory

approaches. People in a village first map out their community showing approximate boundaries, damage to property, and who lived where. The whole community then collectively adjudicates on who owns or should inherit which plot. The National Land Agency then certifies the community's decision, draws up detailed maps and starts the process of issuing legal title to the plots. Speed is of the essence in this complex process.

Dealing with land issues where people have to move is much more complicated. An estimated 30,000 families are likely to have to relocate permanently, sometimes as whole communities. Where NGOs or others are prepared to help (perhaps in purchasing the land needed) and where local government heads provide decisive leadership, these problems can be resolved.

Current projections indicate that 60,000 houses will have been built by June 2006, and the full housing program should be complete by the middle of 2007. This would entail building 75,000 houses in Aceh in 2006. Progress remains slow in the more remote areas, however, particularly the islands of Nias and Simeulue.

Most housing projects today are in easier-to-reach areas and do not require large amounts of new land; the most difficult housing projects are yet to start. In 2006 house-building will be needed for the island dwellers, those in cut-off areas, and those whose land has been washed away or become permanently flood-prone. Many other policy constraints have to be overcome. As a result, there is a risk that housing starts may soon peak as these more difficult areas are reached.

RESTORING LIVELIHOODS

The tsunami caused an estimated loss of US$ 1.2 billion in the productive sectors. More than half of this was in the fisheries sector and the rest was divided between farming and manufacturing. Cash-for-work, financed by many donors and NGOs, has played a vital role in providing safety nets and revitalizing the economy. These programs are now being phased out, as more housing construction projects and other regular employment activities are being launched.

The construction boom offers many jobs, but there could be a sting in the tail. The initial rise in unemployment after the tsunami has been reversed due to jobs in construction, but this boom will eventually end. Although it is tempting to reserve recovery-related jobs for local people, this would precipitate wage and price inflation in the region with damaging consequences in the long term for Aceh and Nias. The region cannot revert from a construction-led economy if labor has priced itself out of the Indonesian market, and wage rates are much more flexible upwards than downwards. A balance must be struck between ensuring that reconstruction jobs help IDPs and allowing flexibility for labor migration.

In the fisheries sector a great deal of help has been given, but not always of the right type, and gaps remain. A high proportion of the small coastal fishing boats have been replaced but many may not last beyond 12 to 18 months due to poor design and craftsmanship and the use of substandard materials. Furthermore, even before the tsunami there were doubts about the sustainability of coastal fishing, while there are reportedly large fish reserves in the deeper ocean. Few agencies are providing the larger boats needed to harvest these reserves. There are other gaps

too. Many shrimp and fresh-water fish ponds have not been rehabilitated and few agencies are helping with marketing-related needs, such as replacing ice-plants lost in the tsunami.

Agriculture has been one of the few sectors of recovery that has proved easier than initially thought. Emergency employment schemes to clear debris and deposits, and restore drainage and irrigation channels have assisted 40,000 families to return to farming (two-thirds of affected households). Some areas are reporting high crop yields due to the nutritional value of the silt deposits. In other areas, considerable investments in drainage are needed to bring back lands to pre-tsunami production levels.

Many small and medium-scale entrepreneurs are having a hard time getting back on their feet. A number of NGOs are providing start-up grants or micro-finance facilities for small and medium enterprises (SMEs). But the formal banking system is not providing normal services to businesses in Aceh and Nias because the high proportion of tsunami-related non-performing loans has made them risk-averse. The loss of assets, lack of access to capital, and damage to their normal market channels has seriously demoralized entrepreneurs.

RESTORING PUBLIC SERVICES

Most educational services have been quickly restored, but problems of quality remain. Many children are now taught in tents or temporary learning spaces. A large program was undertaken to train more than 1,100 new or temporary teachers. However, children's education has suffered from the disruption of service, the movement of communities in resettling, and the trauma of the disasters. More than five percent of children aged 7-12 were still not enrolled in school by August and more than ten percent of children aged 13-15 years were not going to school It appears that many children are leaving school to take up jobs, so potentially being deprived of life opportunities. The challenge, moving forward, is to complete the repairs to over 2,000 schools in Aceh and Nias, replacing the temporary facilities with disaster-resistant permanent ones. This also presents an opportunity to improve the quality of education delivery. Donors initially focused their support on reconstructing primary schools in urban areas and along main roads. Better targeting is needed to ensure that the needs at the secondary levels are met, as well as the significant needs in less accessible rural areas, and those places affected by the conflict.

Most health facilities have been restored to pre-tsunami levels. Donors and NGOs responded quickly and generously to health sector needs by establishing field hospitals and providing staff and equipment. Reconstruction and capacity-building for permanent health facilities are now underway in 70 percent of damaged health centres and sub-centres, and in some areas donors have provided adequate resources. Low levels of public investment and years of conflict meant that public health facilities were already in a poor state prior to the natural disasters. Planning for the longer term will be a high priority in the coming year, as issues of overlap, equity, and capacity for maintenance are critical. More programs will also be needed to tackle mental health problems which are more complex and longer-lasting than physical injuries.

Meeting transport needs must become a top priority. The extensive repairs made to the road network after the disaster allowed relief operations to reach remote areas, but they were quick fixes. With the onset of the rainy season, access to areas along the west coast has become

very difficult and emergency maintenance is now underway. A revised transport master plan is now in the works. Major road works are now beginning. Existing commitments should meet most national road needs, but there are still big gaps in the funding for district roads. Port rebuilding is particularly under-funded. Within a year, significant stretches of the west coast road should be in good condition, and emergency repairs to key ports should be finished. However, a year is a long time for people living in tents, and without transportation to reach the suffering communities, recovery will continue to be disrupted.

The provision of water and sanitation must keep pace with house building. The emergency operation gave considerable attention to needs in this sector and, as a result, there was no major outbreak or water-borne disease. Still, about 80,000 people have their daily water trucked in by NGOs and donors. Now the recovery operation has moved to the reconstruction of permanent water and sanitation facilities, especially in the major towns and cities. Such facilities were poor before the tsunami. Facilities in Banda Aceh are being reconstructed, and a special program to address water and sanitation needs of those in temporary accommodation is underway.

While community-level and large scale infrastructure programs are progressing, there is a significant gap in infrastructure at the level of districts and cities. The main coordination and funding gaps relate to secondary roads, dykes, sewerage and water supply which are the responsibilities of local governments. These are beyond the scope of most NGOs and require government planning and implementation systems. However, district governments in both Aceh and Nias currently lack the capacity and, in many cases, the drive for the task.

SUSTAINABLE RECOVERY

Rebuilding the economy is a great challenge and is best served by starting physical reconstruction as swiftly as possible. It is estimated that the disasters will reduce the 2005 GDP by 5 percent in Aceh and 20 percent in Nias, though the impact varies greatly by district with two of them losing half their GDP. This signals that an additional 325,000 people in Aceh, and 149,000 in Nias might fall below the poverty line without adequate safety nets. Post tsunami, prices have increased more sharply than nationwide, in particular in Banda Aceh, where year-on-year inflation in October 2005 reached 37.5 percent - largely due to the heavy demand for construction materials and skilled labor. The construction boom has also led to a 30-40 percent surge in wages across all professions.

Commercial banks suffered major losses due to unrecoverable loans but are slowly recovering. Many banks are seeking to salvage what they can by softening terms for creditors in difficulty. Debtors who lost their productive assets in the tsunami and earthquake are still struggling as they can hardly access credit without collateral. However, bank deposits have increased significantly as construction picks up and there is confidence that this, coupled with the peace agreement, will help revive the banking sector and restore economic confidence.

Restoring the natural environment will require years of hard work. The natural disasters caused substantial environmental impact in urban and rural areas. Some 800 km of coastal Aceh, often up to 5 km wide, was severely affected; in Nias, the whole coastline has changed. The major damage was due to debris and sediment deposits to farmland and fish ponds. In many places

beaches were lost and riverbeds changed. Although the environment accounts for a small proportion of donor and government recovery commitments, there have been some very effective programs of waste management and ecosystem restoration. Mangrove restoration is a particular priority in the long term. A major issue is the potentially damaging environmental effects associated with the demand for building materials, especially timber and masonry.

THE PEACE DIVIDEND

So far the peace is holding but a number of events in 2006 will test its robustness. The peace accord has been widely hailed by Acehnese people as an important new opportunity – a silver lining to the dark clouds of the past 12 months. In 2006, a new law is to be enacted on the governance of Aceh, which will inevitably involve fraught processes of negotiation and public debate. The upcoming elections for the governor of Aceh and most district heads will be an important test for the consolidation of democracy in Aceh.

The international community can play an important role in helping to safeguard the peace. It is important that tsunami and post-conflict recovery are integrated to the fullest extent possible. At the least, it is important that all agencies are sensitive to conflict issues to ensure that aid programs do not exacerbate tensions that could fuel the eruption of conflict. All projects must be strictly equitable and inclusive. Agencies must be careful about process as well as outcomes and they should establish responsive complaints-handling mechanisms.

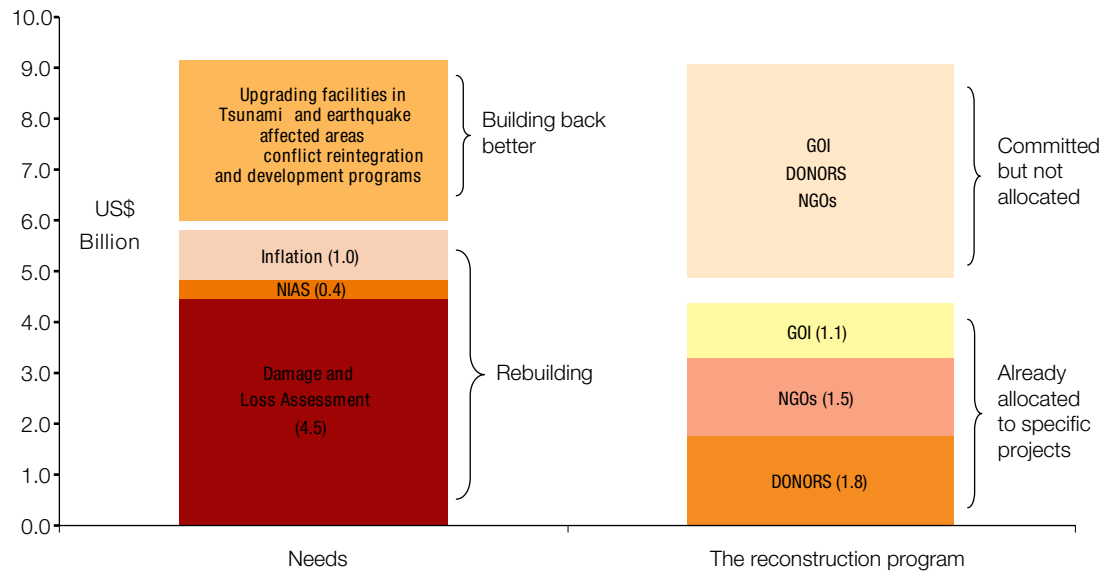
FINANCING THE RECONSTRUCTION PROGRAM

The people of Aceh and Nias will need at least US$ 5.8 billion to restore lost assets. This includes taking into account rising inflation due to high demand for reconstruction-related goods. Additional resources will be needed to upgrade facilities that were already in poor condition before the disasters hit, particularly in conflict-affected areas and Nias.

One year after the tsunami, US$ 4.4 billion has already been allocated for specific projects. The Government (including 2006 budget) has allocated US$ 1.1 billion, NGOs US$ 1.5 billion and official donors US$ 1.8 billion (see figure 2). These projects meet the minimum needs in most sectors, but important gaps remain, particularly in transport, flood control and environment. Out of the US$ 4.4 billion, US$ 775 million had been spent by end-November 2005.

There is an opportunity to *build back better*. Total pledges for reconstruction and development in Aceh and Nias amount to about US$ 9 billion. The Government of Indonesia, donors and NGOs are each expected to contribute US$ 2.5-3.5 billion. Since Aceh and Nias need US$ 5.8 billion to rebuild, additional resources of about US$ 3 billion could be used to make Aceh and Nias a better place (see figure 2). For this to happen, all partners need to keep their commitments and implement their projects.

Figure 2 Reconstruction Needs and Commitments (US$ billion)



THE WAY FORWARD

Coordination among all stakeholders is not yet strong enough and tends to focus on information-sharing as opposed to common decision making. BRR is trying to address this by establishing coordination forums, policy advisory groups and other mechanisms to ensure that all gaps are filled, with a minimum of duplication. It is also helping to strengthen coordination at the local level, by opening local offices and working with local governments and community leaders.

BRR has set four key priorities for 2006:

- **Provide decent shelter to all**: Through the transitional shelter campaign, accelerating the pace of permanent house-building, resolving the remaining policy and strategy dilemmas, and meeting remaining gaps through direct implementation where needed.
- **Rehabilitate vital infrastructure**: Especially the transport links along the west coast, urban drainage and facilities, and coastal protection; also preparing a longer-term plan for infrastructure development.
- **Strengthen institutional and human capacities**: By building the capacities of local governments to handle complex infrastructure and development schemes; building the capacities of independent organizations to monitor this and help guard against corruption; and by continuing to restore education and health facilities and services.
- **Restore livelihoods**: By ensuring the construction boom is used to create sustainable job opportunities and new skills; completing the revitalization of 58,000 hectares of damaged farmland; developing new potential in the plantation sector; ensuring a more holistic approach to recovery in fisheries; and providing more support to SMEs.

Aceh and Nias have considerable development potential for the long term which must be nurtured. The sudden opening of Aceh's doors to the world presents the province with a choice. It can either return to being a relatively isolated region at the end of the Indonesian archipelago or it can consolidate its connections with the rest of the country and the wider world. Its location is a potential advantage, with easy sea routes to a number of the world's most rapidly growing economies. It could also choose to strengthen its trade and business connections. Aceh has considerable natural resources it can tap, and a chance – with the peace process – to better harness its full human potential. With scenic beauty, good beaches and a world class National Park, Aceh and Nias have the potential to develop tourism. The future prospects are promising, and now is an opportune moment to initiate wide public consultation about the direction the people prefer to take.

The healing of Aceh and Nias will take a long time, and will inevitably see setbacks, as well as celebrations. It is time to get beyond sentiments of "my project, or yours" and recognize the need for active coordination. There is one common recovery endeavour and all agencies share the responsibility for ensuring its health. BRR is providing leadership in this coordination, but cannot do it alone. All agencies must provide information about their experiences and their programs, and be prepared to work in partnership with others. In this way, it will not just be building houses but building homes. And by respecting community-driven processes, it will not just be erecting settlements throughout the damaged areas of Aceh and Nias, but it will be recreating vibrant communities. This is the goal for which everyone must strive.

Part I

ONE YEAR AFTER – WHERE DO WE STAND?

Chapter 1 | REBUILDING HOMES AND COMMUNITIES

In the horrifying minutes that the tsunami devastated coastal Aceh what had once been bustling urban neighborhoods and thriving villages became fields of rubble, covered by millions of tons of debris and mud. The March 28 earthquake inflicted further destruction, particularly in Nias and South West Aceh.

Amidst the immediate emergency needs of catering to both the living and the dead, one of the clearest recovery challenges that emerged was housing. Roughly 500,000 people were out on the streets – if they could be called "streets". Initially they slept in public buildings, under sheeting supplied by the army or volunteers, or in the homes of those more fortunate. Bit by bit, many people have been able to repair and clean up their homes; some have built shacks on their old house-plots; and some have even built new houses. But about 190,000 remain homeless plus more than 40,000 in Nias. The government – in particular the army – did an impressive job of building barracks-style accommodation and coordinating others in a program of temporary shelters for these internally displaced people (IDPs), which now house about 15,000 families.

Within days of the tsunami, hundreds of international NGOs and donors had descended on the province to see what they could do to help. Some focused on giving food, tents, water, medical services and other emergency needs, but many identified the provision of shelter as their priority. Over the coming weeks and months, many more agencies arrived and plans started to develop for rebuilding houses, rather than just temporary shelters.

Many of these agencies had never built a house before – even ones who had worked in relief and development for many years. But they threw themselves into the challenge with immense energy and conviction. While the people of Aceh and Nias will forever be grateful for this, there were downsides. Today, there are 109 agencies building houses in Aceh and Nias; each with their own ideas of what the task entails. For some it is just a house; for others it extends to full site-and-service provision. Some offer quickly-erectable prefabricated units, others give full-scale 3-bedroom brick houses. This could be a recipe for disaster – the diagonal opposite of town planning. It could be, but by and large it isn't. It isn't for one good reason. The communities are calling the shots.

Early on in the reconstruction phase many leading agencies and the government of Indonesia resolutely emphasized the importance of using participatory processes; namely trusting the judgment of communities themselves and ensuring they are in the driving-seat of their own recovery. So most agencies (but not all) have carefully discussed all possible options with survivors in a village and help them decide what course to take. For some, they simply want to rebuild houses like the ones they lost and do so on the same plots of land. Some are seizing the opportunity to create something better than the dense, sprawling alleyways and tightly packed houses they had previously. Others must move wholesale, perhaps because the land they once lived on was washed away or remains permanently flooded. The early idea of a master-plan – a top-down blueprint for where communities would be relocated and where houses and facilities would be built – has given way to Community-Driven Development (CDD) as is described in the 'Communities' section.

Years from now, the story of Indonesia's tsunami recovery could well be the text-book example of Community-Driven

Development on a massive scale. This story is in the making today. With more than 1,000 villages and urban parishes involved, it is probably the most widespread example of participatory planning the world has ever seen. It has its costs in addition to benefits, as the following chapters tell. There will be many bumps in the road and much frustration. But it is already clear that CDD is making a major difference. The better programs that are emerging are not just concerned with providing shelter over peoples' heads but also reflect the facilities people care strongly for, consider people's security and social needs, and reflect the desire to recover and strengthen livelihoods. These programs are not just building houses. They are building homes.

Determination of housing needs was not easy. In the first few months after the tsunami, the international agencies arriving in Banda Aceh, Meulaboh or other sites saw the need for houses as far as the eye could see. Until quite recently it was widely believed that up to 500,000 people would need a new house. In those early chaotic weeks problematic logistics made it impossible to gather reliable data. At that time, too, the government had decreed a ceiling of about US$3000 on the cost of a new house. So agencies, wanting to do all they could, calculated how much they could budget for their housing projects and estimated how many they could provide at the government's ceiling.

Some months later the deficiency of such a supply-side calculation became clear. Coordination through a shelter working group together with better data-gathering made it clear there was a "disconnect". Offers totaled well over 200,000 houses while the need for new houses is probably between 80,000 to 100,000. At the same time, IDPs (and many NGOs) expressed anger that the government cost ceiling was inadequate, especially in light of global public generosity. In June, the newly-created reconstruction agency (BRR) formally changed policy to lift this ceiling and at the same time make clear that anyone building houses should assume a responsibility to provide related services and use CDD approaches. Reworking house designs together with striking agreements with individual communities (rather than just district level governments) has led to a steady increase in the quality of houses offered and a commensurate reduction in numbers pledged. Fears of over-supply have thus abated. However there is something of a "buyers' market" in that communities are often switching from one supplier to another if they are dissatisfied with their original partner or are persuaded they can get a better offer. CDD has virtues, but can also foster poaching between agencies.

The actual constructing of houses got off to what many considered a slow start, though in reality no slower than in most other large-scale disasters. As the rainy season approached there was an urgent decision to get the most vulnerable IDPs out of tents (67,500 persons) by early 2006, and all IDPs by the end of June. Suitable, pre-fabricated, easily-assembled houses are being imported and many NGOs are transporting and erecting the temporary houses in various locations around Aceh and Nias.

Housing construction progress has been fraught with difficulties – most of which have largely now been resolved. The time taken for CDD approaches has already been mentioned, but it is clear that this has been a good investment, not time wasted. But delays due to inappropriate or unclear policies have been frustrating. The too-low price ceiling was one such; others concerned unclear definitions of permanent (as opposed

to temporary) houses, the lack of building codes, an early ruling requiring only the use of domestic timber (which NGOs committed to using wood from certified sustainable forestry programs found unacceptable), and lengthy delays and high tariffs on equipment imported to meet reconstruction needs. The BRR has since resolved most of these issues and has provided clearer coordination of shelter providers. It has specified a building code (together with the public works ministry), cleared the blockage of equipment at Medan port, permitted foreign timber to be used where appropriate and cleared many other bottlenecks.

Some barriers to progress cannot be solved so readily particularly the problem of land. When communities have been reduced to rubble and there are no visible signs of where houses and property boundaries were before it is unsafe to start building houses before getting the agreement of all concerned where those boundaries should be drawn – otherwise protracted legal battles could ensue or people could be dispossessed from their entitlements. Hence one of the fascinating stories is the effort many are making to help the National Land Agency (BPN) restore property rights. In addition, many families – sometimes whole villages – will have to move because their original communities are uninhabitable.

The physical difficulty of reaching many of the damaged communities, still less bringing trucks of building materials and heavy-moving equipment to them, makes progress in many areas slower than expected, let alone desired. This leads to frustration on all sides, which is why imaginative solutions are being sought, such as setting up production sites to make cement-fiber panels or bricks from locally available materials, rather than bring them in from outside. Agencies are also exploring various ways to combat uncertain supplies of key construction needs.

Against all these odds, and with the continuing unreliability of much data concerning communities' needs and agencies' plans to address those needs, progress is being made. Any journey in Aceh today involves passing many new houses and NGO building yards where 6 months ago there was just destruction and decaying tents. Everyone involved will always ask whether results could have come faster – and that reflection is needed – but the critical conclusion is that reconstruction is now happening at a rapid pace and this momentum must be maintained until the task is done.

TRANSITIONAL SHELTER AND PERMANENT HOUSING

The housing sector suffered about a third of the total estimated tsunami damage. A damage assessment carried out in March showed that about 70,000 houses were destroyed and a further 57,000 damaged in Aceh. Initially probably more than 500,000 people were made homeless by the disaster, but most have been able to return, leaving about 192,000 IDPs living in tents, barracks or with host families (SPAN, November 29, 2005). Of those who returned to their homes a potentially large number are living in temporary structures built from reclaimed materials. The earthquake on March 28, 2005 destroyed

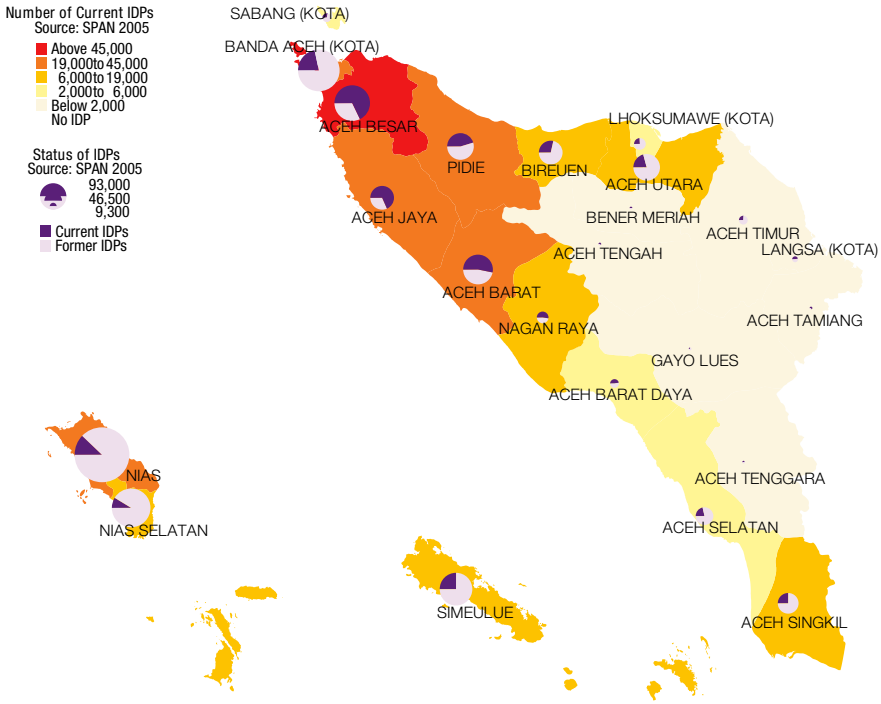
Table 1.1 Housing Damage Assessment

	Destroyed	Seriously Damaged	Partly Damaged	Total Damaged or Destroyed
Aceh	69,932	26,331	30,806	127,069
Nias	12,010	32,454	39,437	83,901
Total	81,942	58,785	70,243	210,970

Source: International Organization for Migration (IOM) damage assessments of Nanggroe Aceh Darrussalam (March 2005) and Nias and Simeulue islands (April 2005). Note: Immediately after the tsunami, estimates were higher: 127,000 houses destroyed and 152,000 seriously damaged.

The shelter program has had a single objective: to get people into progressively better accommodation as swiftly as possible. In the first few days this meant bringing in tents from across the world so people could move out of crowded public buildings and off the streets. In the following several weeks there was a dual approach of encouraging people throughout Aceh to host displaced families and simultaneously planning a series of "temporary living centers" with barracks-style housing that hold some 15,000 IDP families. By April, work started on building solid houses. The early programs of significant scale were the "transitional house" schemes of IOM and other organizations comprising prefabricated buildings erected on land that was either leased or provided by local government (over 6,000 of these are in place to date). At the same time, donors and NGOs started planning permanent housing on the site of people's original homes or on plots identified by the communities. A long-term housing strategy started to emerge. This chapter describes the progress with the overall program and discusses the trade-offs and challenges entailed.

Map 1.1 Distribution of those currently identifying themselves as IDPs



Soucre: SPAN 2005

GETTING PEOPLE OUT OF TENTS

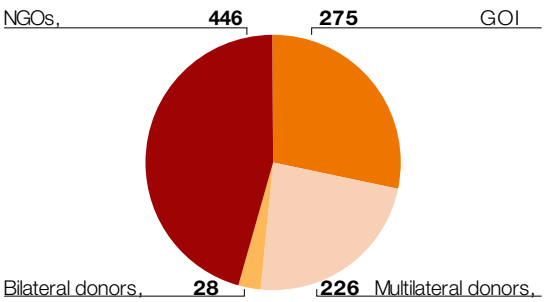
Recently, there has been a renewed focus on temporary housing. While communities have urged NGOs and donors to help build permanent houses as swiftly as possible, about 67,500 people still remain in tents. During emergencies there is always a difficult trade-off between building temporary and permanent houses. As the rainy season approached, however, there was an urgent reassessment, encouraged particularly by the UN. The tough choice was between replacing old tents for new – which would certainly impact morale – or diverting some resources and attention from permanent to temporary housing, which would slow the eventual goal of getting everyone into their new home. It was agreed that the most vulnerable IDPs should be out of tents by early 2006, and all should be by the end of June.

A consortium of agencies was formed, led by the Red Cross Red Crescent Movement (RCRC) to spearhead this campaign. RCRC has identified suitable quickly-erectable houses and has begun the process of importing 20,000 units over the coming 3 months, building up to the rate of 2,000 units per week. IOM and RCRC are transporting them swiftly to various locations around Aceh and Nias, and many NGOs have agreed to erect them, with the support of local government in identifying land and local labor. UNICEF, Oxfam, the American Red Cross and others are providing water and sanitation in the new settlements, and the intention is that those living in the early barracks will also be eligible for these units in a second phase such that everyone is living in decent temporary circumstances as soon as logistically possible. Everyone moving into one of the temporary units will be assured that this will not delay their getting a permanent house.

PLANNING THE PERMANENT HOUSING PROGRAM

At least US$760 million is needed to replace permanent houses. As with all such disasters, the government (with support of donors and NGOs) is committed to ensuring that everyone who lost a house is entitled to receive a decent new one in compensation – but only up to a certain standard. Those who owned expensive houses cannot expect compensation up to that level (unless they had private insurance), but conversely the poor should end up with an improved home. Some US$700M has been committed by the donor community for housing – almost adequate had it not been for the Nias earthquake. Of the funds pledged, around 47 percent comes from NGOs (US$ 331 million), and the remainder from donors (US$ 335 million) and domestic sources (US$ 36 million).

Figure 1.1 Composition of Financing in the Housing Sector (US$ million)



Source: BRR, World Bank staff estimates; see also Annex 6.

Soon after the tsunami, agencies started assessing how many families they could offer to re-house. NGOs, multi-lateral and bilateral donors and some private companies arrived in large numbers (including many from Indonesia). At the outset – when it seemed that the need for houses was almost limitless – NGOs and donors estimated how much they could budget for houses and, using the price ceiling of about US$3000 set by government,

Box 1.1 THE NUSA DIARY : Housing

It is virtually impossible to say how many houses were destroyed in Nusa because no one knows how many there were before the tsunami. On each of my six visits to the village I was given different statistics - which made me appreciate just how hard it must have been for the aid agencies to compile accurate data on anything. Based on all the figures I received, I would say there were between 148 and 160 houses in the village; just over a third were destroyed, just under a third were damaged to varying degrees and about a third survived in tact due to being on higher ground.

In the immediate aftermath of the disaster, those villagers whose houses survived put up people whose homes had been washed away or were unsafe to inhabit. Due to its topography, which provided psychological security, the village also welcomed more than 200 people from neighboring low-lying villages which had been wiped out. Many of these displaced people stayed in the primary school and then moved into tents before being housed in barracks nearer their own villages.

Nusa was one of four villages in Lhok Nga sub-district to pilot the barracks. Five barracks and a multi-purpose communal building were completed by early March and the last displaced people from other villages left by mid-April. The person in charge of barrack construction had no idea whether the wood was from sustainable sources and didn't seem to care. During the year there were occasional problems with water supply and in one storm parts of the roofs blew off a kitchen area and a bathroom block but for the most part the barracks performed well. People decorated their sections to make them as homely as possible and the communal areas were always clean and tidy whenever I visited.

By early April residents started moving back to their damaged homes, even if only a couple of rooms remained inhabitable; they were understandably preferred to the barracks. By May more than 60 families had moved out. Their rooms in the barracks were taken by families who had been sharing.

No house reconstruction had started by my last visit in mid-October except for one man who had become frustrated with the wait and so borrowed money from family and friends to start rebuilding on his own. CARE International is running the reconstruction program. In August they thought building would start by the end of September; in October they hoped the training house would be ready by the end of November. The delays were put down to the need to meet BRR spatial plan criteria which were published later than expected, the size of the task and the need to ensure the workers were properly trained. CARE is building or repairing 162 houses in Nusa and some communal buildings.

Wanting to "build back better" and realizing space was not a constraint, CARE decided to build houses about 45 square meters rather than the 36 square meters being built elsewhere at a cost of Rp 35 million per unit. The outer walls will be brick and the room partitions predominantly plywood to reduce the potential threat from future earthquakes. Wood is coming from BRR-approved sources.

Villagers have five designs to choose from - the pictures for these were posted in October and provoked much discussion amongst villagers. Each house should take about six weeks to build and CARE estimates all will be completed by the middle of 2006.

Source: John Aglionby (The Guardian)
This review of housing on the village of Nusa, 10km west of Banda Aceh on the main road to Meulaboh in Lhoknga sub-district, have been contributed by John Aglionby of Britain's Guardian newspaper. He has been one of the few independent people to regularly visit Aceh throughout the year to report on reconstruction and on each trip monitored developments in Nusa.

calculated how many houses they could offer. The result was a supply-side estimate, totaling over new 200,000 houses.

More recently it has become apparent that fewer new houses are needed. Since June it has become evident that the number of destroyed houses is somewhat less than was first estimated and many have been able to rehabilitate their houses for themselves and are no longer IDPs. Using community driven planning processes, agencies now have a much clearer idea of what is needed where and have made their commitments to partnering with those communities.

It has also become apparent that building houses is more expensive and more difficult than it first appeared. From the outset, communities and housing agencies expressed concern that the government's ceiling of US$3,000/house was too low – especially as the construction boom started pushing up prices of construction materials and labor, and the price of fuel rose steeply. BRR intervened to change the policy, permitting agencies to go beyond this, while urging restraint so that there is not undesirable competition between agencies to outdo one another (this voluntary restraint has only partially worked). The current cost estimate per house on average is now about US$5-6,000/house plus perhaps US$2,000 for infrastructure and other costs.

Furthermore, various logistical and practical constraints also soon became apparent. These include acquiring sustainably produced and legal timber, good quality cement, bricks and steel, gravel, other material needs and adequate labor. Access to remote areas outside of Banda Aceh and other city centers is difficult, and thus costly in terms of transportation of building materials. In many areas, site preparation – preparing for water supply and sanitation, and arranging for wider roads, escape routes and other community facilities – has proved complicated and slow processes. Using community-driven processes, negotiating with each village what exactly they want from which agency, also takes time and can cause delays (as communities often change their minds). Hence the reconstruction of houses has been somewhat slower as well as more costly than first estimated.

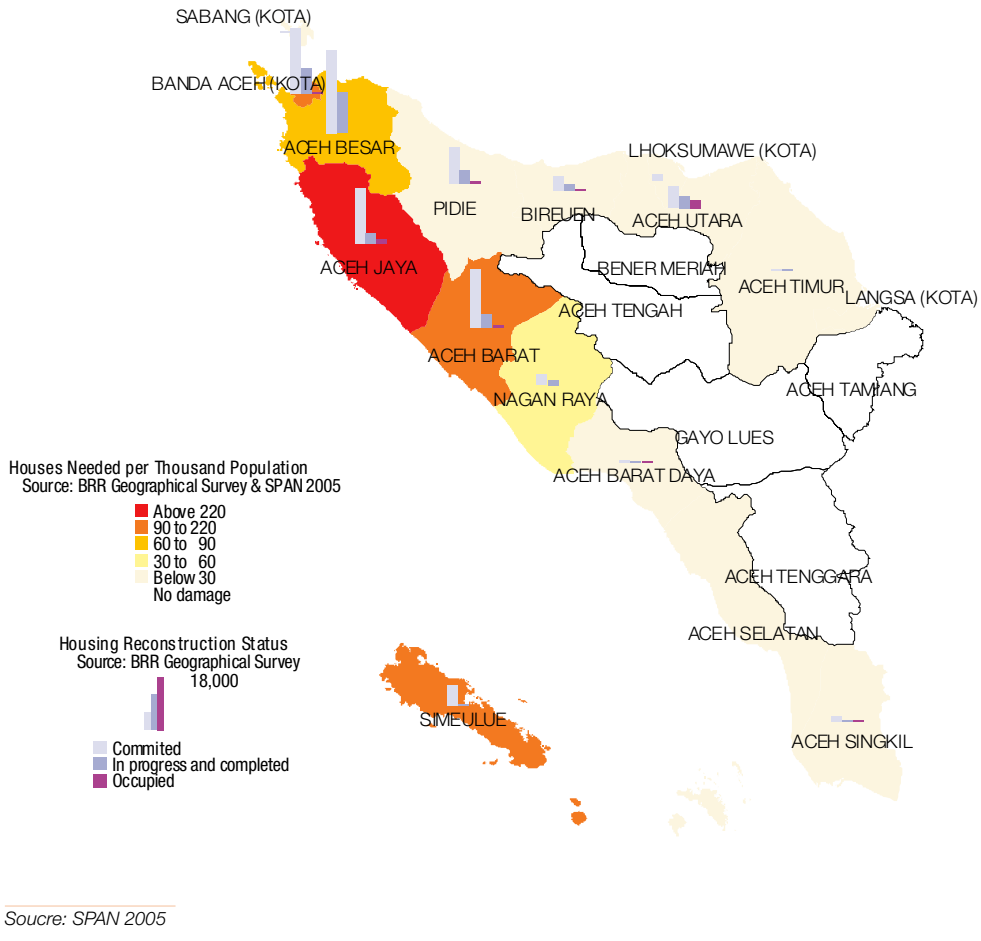
Agencies have therefore scaled back to more realistic pledges and targets, which more closely reflect communities' needs. The current commitments reported by the major agencies involved in housing stands at about 125,000 new houses and 24,000 repairs. This is largely based on their demand-side estimates – from consultative processes. This still somewhat exceeds aggregate new house needs (estimated at between 80,000 and 110,000)[1] probably because some programs are faltering and communities have switched to other providers and some providers have reached understandings with the BRR or district governments but not with individual communities. Despite such a scale-back in construction, this compares with past average construction rates of 100,000 homes per year for the entire country. To deal with any possible shortfall in housing BRR is now committed to financing up to 40,000 houses in Aceh and Nias out of its own resources

PROGRESS WITH THE HOUSING PROGRAM

There was a slow start but the program is now accelerating. Although the overall housing program got off to a slow start – largely due to the logistical and policy reasons described in this chapter – it has accelerated and there are now good prospects that this faster pace will be sustained. By the end

of September a BRR survey of housing progress, as reported by sub-district officials in consultation with village heads, indicated that about 9,500 permanent and temporary houses had been built. A similar survey in November found that more than 29,000 houses had been built or were in progress, of which 6,000 were occupied. This means that the BRR target of 60,000 new houses by the end of June 2006 can be reached, and the ultimate aim of completing the re-housing by the middle of 2007 is certainly attainable. This

Map 1.2 Housing Needs and Progress of Reconstruction.



Soucre: SPAN 2005

Source: BRR/World Bank staff estimates

will require, however, a huge ongoing effort. It would entail building about 75,000 houses in Aceh/Nias during 2006, which is more than the formal housing output of the whole country in an average year

Although more than 100 agencies are involved in housing it is likely that the largest 15 will account for over 80 percent of houses built. But it is also apparent that the smaller agencies are building faster at these early stages and will

Table 1.2 Pledges and Progress by NGO/Donor

Donor/NGO	Committed New Houses	Repairs	Finished by 12/31/26	Finished by 6/30/06
Red Cross/Crescent Movement	34,000		1,500	4,000
Multi Donor Fund	6,000	18,000	50	4,000
ADB	11,000	5,000	0	3,621
CRS	6,000		300	4,000
IOM	8-20,000		3,800	6,632
KfW/GTZ	4,500	975	30	2,500
CARE	6,500		150	Unknown
Habitat for Humanity	7,500		1,600	7,000
World Vision	4,066		200	2,000
Oxfam	2,100		700	1,900
Samaritan Purse	2,500		400	Unknown
UN Habitat	4,745		530	3,000
UNHCR	2,622		10-50	Unknown
Save the Children	4,000		423	Unknown
Others	24,200		Unknown	Unknown
TOTAL	**>130,000**	**23,000**		

Source: BRR Housing Sector data collected directly from NGOs and donors

account for more than half of the permanent houses completed one year after the tsunami. With so many agencies involved, coordination has been a major challenge. The UN has convened the Shelter Working Group which has been useful for disseminating information and revising estimates of needs and progress, but because so many donors and NGOs are involved it has often not been able to give the BRR and provincial government clear policy advice on the major bottlenecks. Hence the BRR has convened a Policy Advisory Group of the larger agencies for this purpose and has encouraged stronger coordination at the local level. BRR needs considerable support to serve this coordination role and various agencies (including UN Habitat and the World Bank) have provided such help.

Some areas are better served than others; but now BRR is evolving an overall planning framework to ensure all communities are covered. It is clear that areas close to Banda Aceh and that are easier to reach by road are getting more attention. Hence almost three quarters of the houses completed in 2005 will either be in the Banda Aceh and Aceh Besar area or on the east coast near the Medan

road. Meanwhile very few houses will be built in the more inaccessible regions of the west coast or the islands. Agency planned programs similarly attend well to the needs of areas around Banda Aceh and Meulaboh but leave significant gaps in Nias (7,000 houses), Simeulue (4,000) and in South-west Aceh. BRR is now charting carefully where gaps and slow progress is occurring and is negotiating program shifts amongst the major agencies to ensure geographic equity and reduce delays.

Box 1.2 Difficult Trade-offs in Housing Construction

There are a number of trade-offs that the BRR and all housing agencies have to grapple with. Some have already been discussed – such as the trade off between using time and resources for temporary housing or putting all available resources into building permanent houses as rapidly as possible. Other trade-offs include:

- The trade-off between speed and quality. Agencies are understandably being urged to speed up their programs wherever practicable. This can lead to a tendency to cut corners or resort to house designs that use readily available and perhaps inferior quality materials.
- The trade-off between speed and equity. Moving forward as fast as possible may lead to the difficult geographic regions or the difficult-to-serve population groups (such as those who rented homes and widows) being put to one side while agencies concentrate on the "low hanging fruit".
- The trade-off between speed and cost and sustainability. The urge to build rapidly and cheaply may lead some agencies to think less about their programs' environmental footprint. In particular, some agencies are determined only to use timber that they can prove comes from environmentally sustainable forestry schemes. Since there are few such reliable sources in Indonesia, this can mean importing timber, which is both time consuming and costly.
- The trade-off between using local versus imported labor. The construction boom is leading to a rapid escalation of wages and hence some agencies are keen to bring in contractors plus crews from outside Aceh and Nias. There is also not an adequate supply of skilled labor locally, and so using outside workers can avoid the need for time-consuming and expensive training. On the other hand, using local labor provides livelihood to IDPs and others who have suffered greatly and training programs can impart skills needed later. And using outside labor could possibly create cultural problems and jealousies.
- The trade-off between uniform design and local choice. The fastest and most cost efficient approach is to have a few house designs that are built on great scale. However this strips people of the opportunity to make their own choices and risks producing communities of depressing uniformity.

ISSUES WITH THE HOUSING PROGRAM IN THE COMING YEAR

There are problems in the supply chain for building materials needed and in labor. Timber is the most difficult product but there are also local shortages of bricks, gravel and other materials. These constraints will become more serious as construction accelerates. The BRR has reversed an earlier policy of the Ministry of Forestry that required all timber needs to be met domestically, and now UNHCR has been able to import all the timber needs for housing in Nias, and the British Red Cross is importing sustainable timber from New Zealand.

Building houses is not enough; they need to be provided with services and infrastructure. Some agencies are building

housing without the associated infrastructure and basic services including water supply, drainage, sanitation, power and lighting, roads, and solid waste disposal. Sometimes the community-based approach does not lead to these needs being properly addressed. BRR and donors are now working together to inject a spatial planning approach that gives due attention to these needs and coordinates progress on all fronts. This will require the contracting of experienced engineering firms to assist local government plan and implement these programs.

Those who rented have had insufficient help to date and need help to acquire land. It has been estimated that up to as many as 30,000 IDP families rented their homes. While NGOs and donors are prepared to offer them houses, few are prepared to acquire the land for this and at present the renters would have to do so. While this may be feasible in rural areas, the bulk of renters were urban and most would not be able to afford the land needed. BRR has not yet established a policy regarding this group, though one is under active discussion.

Many IDPs may not want to have a new house, but would prefer cash compensation or help to set up a business. A high proportion of IDP families in Aceh are single-person families. Many are still traumatized, after having lost all their family members, and may prefer to set up a new life elsewhere. Some may remarry or move in with adult children. At present there are no clear policies or schemes to attend to these groups.

Programs to help with house-repairs have got off to a slow start and must now be accelerated. Approximately 95,000 houses in Aceh and Nias require repairs or rehabilitation. While most may be taken care of by the owners directly, many will need help, especially where the repairs are extensive. Few programs have yet started in this area and some donors, including the ADB and Multi-Donor Fund are considering reorienting their programs in this direction.

Concerns of quality and equity have become more prominent. There is mounting concern regarding the varying quality of housing provided by various donors. A UN Habitat study indicates, for example, that the unit price of houses currently varies from US$2,500 to US$11,000 with an average unit price of about US$5,000. The juxtaposition of housing of varying quality in neighborhoods is creating jealousy among communities. This has lead to delays as villagers consider other options to the one they have been given, notwithstanding their written commitment with a particular donor.

The role of local government needs to be clarified. To date, local government involvement in reconstruction has been secondary, with BRR taking the major role working with NGOs and donors. Initially this was understandable as local government staff and facilities were decimated. Now, local governments are rebuilding, and should be included more fully in the decision-making, planning, monitoring, supervision, and evaluation of reconstruction efforts. This is a priority objective of BRR.

LAND AND PROPERTY RIGHTS

The earthquakes and tsunami caused significant damage or destruction to property on extensive tracts of land. While in some areas the land will be rehabilitated,

in many areas the land is now permanently submerged, flooded or washed away into the sea. These land parcels will never be habitable or productive again, and occupants will need to relocate. Much farm land was washed away or damaged by debris and salt water. Even where communities can rebuild on their original locations, there is a need for a substantial number of households to move to facilitate improved community planning and preparation – with wider roads and escape routes—for future hazard events.

Damage to the land administration system is affecting both the re-establishment of

Table 1.3 Damage to Property Rights and the Land Administration System

Quantification of Damage

Loss of BPN staff

- 40 BPN staff in Aceh Province, 30% of staff in Kota Banda Aceh.

Offices and equipment:

- 6 BPN Land Offices destroyed or severely damaged including Banda Aceh District Office completely demolished.
- Destruction of office and survey equipment, including computers, to support urgent record recovery.

Damage to Government land books (the official register of land):

- 10% of land books lost.
- Remaining 90% needing urgent conservation and restoration work

Destruction of official land documents

- 80% of land documents lost, including almost all cadastral maps.

Damage and disappearance of property rights evidence:

- Destruction of much of the physical evidence of property boundaries and witness evidence held in the minds of those who perished.

300,000 land parcels affected

- 170,000 urban and 130,000 rural including 549 parcels on Nias affected by the tsunami
- 60,000 (40,000 urban and 20,000 rural) and 240,000 non-registered Land Parcels:
- 5% of titled land parcels were mortgaged, with mortgages registered by BPN

In Nias, land demarcations were also destroyed in areas of complete collapse, such as in the center of towns. Many owners' records and files were destroyed. Moreover, the level of land registration was extremely low before the disaster, hampering the ability of many owners to find collateral for rebuilding their businesses and livelihoods. Fortunately, BPN did not lose any land records in Nias. Duplicates can be issued, but re-surveying the parcels will be required.

Protecting land and property rights will provide firm legal ground for the long-term reconstruction efforts, as well as advancing the social, economic, and cultural rights of affected families and individuals. It is also essential to the development of infrastructure, including the realignment of roads, recovery of the commercial sector, and efforts to address coastal zone development. A fervent effort is needed to deal with land ownership, so that communities can get on with rebuilding in a safer way, with the assurance that their rights are protected. Particular attention is necessary regarding regulations on registration, ownership, and inheritance for women, children, and minorities.

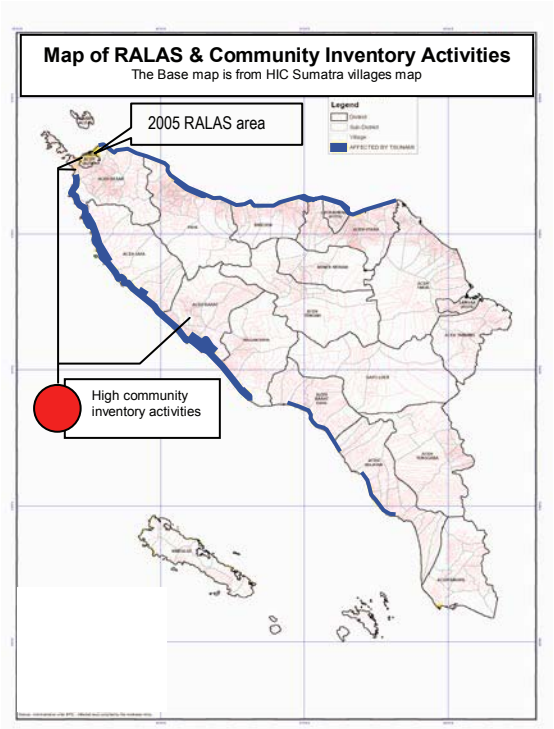
RECONSTRUCTING THE LAND ADMINISTRATION SYSTEM

The first step is to determine unambiguously who possessed what land before the disasters, whether or not they held registered title. The approach used by many donors is to help people to prepare maps of their communities showing where properties were, what type of properties they were, who lived in them and how much damage they sustained. This is known as community land mapping. The process involves: (i) the preparation of a village inventory of land owners or heirs; (ii), the placement of boundary markers to identify land parcel boundary corners, by agreement between adjoining owners; (iii) the preparation of rough sketches of the land parcels; and (iv) the signed agreement of the community on the acceptance of each of these outputs. This isn't straightforward because many communities are in such disarray that there remains little or no visible evidence of property boundary markings. The death toll took with it the "human archive" on which much memory of the location of these boundaries is based. Furthermore, the losses sustained by the provincial and district offices of the BPN, both in terms of destroyed land records, lost cadastral maps, and the loss of life of land administration specialists, have made the reconstruction task even more daunting.

The early, well-intentioned community land mapping efforts were undertaken using different approaches and varied in quality. It quickly became evident that there was a need to standardize these efforts, so that ultimately the "evidence" of community land mapping could be formally processed by BPN, and that legal titles could be issued following the necessary adjudication, legal land survey and public advertising. Only BPN has the legal authority to issue titles.

Reconstruction of Aceh Land Administration (RALAS) project aims to ensure that community-led processes are conducted to a standard that will have a strong legal basis for future titling by landowners. It also supports the rehabilitation of the land administration system and provides a framework for clarifying property rights. It is implemented under the direction of BPN, and funded by a US$28.5 million Multi-Donor Fund Grant. Through RALAS, BPN is aiming to ensure that community-led processes are conducted to a standard that will have a strong legal basis for future titling by landowners. The project secures community agreement on ownership rights by harnessing the involvement of existing community development workers (from NGOs, donors, and the government KDP and UPP programs) and links them into BPN as the agency with the legal authority to issue formally recognized land title. The project also includes provisions to secure transparency and accountability in response to concerns over potential corruption and mismanagement. RALAS does not cover all land-related issues, such as resettlement, land acquisition, eviction, land speculation or compensation. These important issues are being addressed by BRR separately.

Map 2.3 Map of Ralas and Community Inventory Activities



A number of partners are collaborating to restore property rights. While RALAS supports the rehabilitation of the land administration system and provides a framework for clarifying property rights there are a number of important efforts underway in the land sector.

- UNDP is providing support in the critical early stages for training, supplying surveying equipment, and support for the website and internet communications of BPN. It is supporting the training of more than 750 CDA facilitators, and has funded the publication of information brochures on RALAS and property rights.
- The European Commission has provided pre-tsunami satellite imagery (and two technical advisor missions to build BPN capacity in imagery processing), to support community land mapping. This imagery is now available for all reconstruction projects and is available through BPN.
- Australia provided some initial surveying equipment to BPN and has agreed to support community land mapping in up to 400 communities and train 100 facilitators.
- Oxfam has supported the establishment of a partnership for RALAS, covering training, monitoring, and information dissemination.
- A number of local NGO networks, including women's networks, are proposing to monitor the RALAS project independently. Oxfam is also planning to support research on gender, land, and property issues in Aceh.
- BPN has established a community secretariat to engage with NGOs and CSOs in Aceh. This secretariat is now being reshaped as an NGO/CSO forum with which BPN can regularly engage and disseminate information.
- Syariah courts are working with RALAS to provide "circuit courts" in the villages, which can advise and deal with cases involving widows and under-age heirs.

In June 2005 a Community Driven Adjudication (CDA) manual was prepared, led by the World Bank and Multi-Donor Fund in collaboration with the government, NGOs/CSOs and donors. BPN subsequently issued a formal decree giving the manual legal status. The BRR has also prescribed the CDA manual as the standard approach for community land mapping to be undertaken in reconstruction areas. CDA training is being provided to NGOs and other agencies involved in reconstruction. Provided that community land mapping is completed in accordance with the legal standards prescribed by the government in the CDA manual, communities may commence constructing houses and infrastructure before title is formally issued by the BPN.

Land registration is expected to rapidly cover an increasing proportion of the affected population. Table 1.4 and map 1.3 summarize current and anticipated progress.

Table 1.4 Progress in Land Mapping and Restoring Property Rights

No. of adjudication teams (20 personnel per team)	**10**
No. of NGO facilitators/BPN personnel trained in CDA	**400/200**
No. of villages where community land mapping has commenced	**215**
No. of villages where community land mapping has been completed#	**80**
No. of land parcels completed community land mapping#	**50,000-80,000**
No. of land parcels publicly notified#	**30,000**
No. of land parcels for which legal title will be issued by end 2005	**5,000**

 # Estimated outputs for December 26, 2005 as provided by BPN November 2005.

LAND ISSUES IN THE COMING YEAR

Clarity is needed on options and procedures for helping communities that need to relocate to new settlement sites[2]. The Government of Indonesia has estimated that at least 30,000 families require some form of relocation, and that between 15,000 and 50,000 hectares of land are submerged or uninhabitable. It is estimated that at least 700 to 1500 hectares of land will be required for relocation to support housing alone. While the district-level authorities are in the process of allocating state land for relocation sites, many of these sites are far away from original neighborhoods and resource bases, and therefore, many people are reluctant to move. Much state land also needs clearing and leveling before being ready for construction, which will require large amounts of resources and time. To respond to this gap, a land acquisition policy is currently being drafted by BRR. A special unit will be established at the BRR to coordinate, ensure funds for and monitor land acquisition for communities in need of relocation. Some NGOs have advocacy programs to help communities acquire and negotiate the land they need. For example, Oxfam helped two villages in Aceh Besar locate land, negotiate a fair price with the owners and facilitate the process by which the district government paid this compensation so that the communities could move

Guidance is also urgently needed on land consolidation and re-allocation. Some communities will need to re-design their villages for several reasons due to incursion of the ocean and the desire to reconfigure the village plan to increase preparedness against future natural disasters and or to also improve community amenity. This process may require land consolidation and/or land re-allocation affecting many families. Some communities are moving in this direction before they have legally re-established property rights, raising the risk of long-term land disputes and social problems from disenfranchised land owners or heirs. BRR has prepared a draft policy on land resettlement, and it is imperative that officials work with NGOs to prioritize community land mapping programs for those areas most likely in need of reallocation or consolidation programs.

In order to speed implementation, it is essential there is two-way communication between implementing agencies and BPN to ensure that community-land mapping efforts are coordinated, to enable BPN to manage its forward planning of adjudication. People overwhelmingly desire to start rebuilding their

houses and communities and will inevitably begin before BPN is fully operational. While BPN will not prevent anyone from building on their land, it strongly prefers that community land mapping, in accordance with the CDA manual, should be first completed in order to minimize the risk to property rights in future registration exercises. This is seen as providing communities and individual property owners with a high degree of confidence that they are building on the right land parcel and well within the boundaries of that parcel.

Protection of the rights of orphans, widows and other heirs. The CDA will help to ensure the property rights of vulnerable groups are protected. Registration will only occur if there is clear community agreement and no dispute, backed up by checks on records (including tax) and pre-tsunami satellite imagery. BPN will only adjudicate and survey those land parcels which are not in dispute after CDA is completed. While this may delay the final decision, BPN is determined to ensure fairness. Training of the Syariah courts is underway to provide "circuit courts" in the villages, where they can advise and deal with cases involving widows and under-age heirs.

Land speculation: Soon after the tsunami struck, BPN issued a decree prohibiting the transfer (sale) of land as an attempt to protect the vulnerable tsunami victims from being pressured into hasty transfers, at a time when they were struggling with grief, loss, injury and illness. Requirements for land purchasing to support resettlement have resulted in inflated requests for land purchasing by bupatis being submitted to BRR, and deforestation is alleged to have led to the illegal sale of harvested timber. There is evidence that there is an increase in speculative activity as landowners and third parties anticipate the need to purchase or rent new land for relocation, as well as several communities who are facing legal complications over the land acquisition procedure. It is important that these issues do not drive desperate communities into cycles of debt and hardship. BRR has prepared a draft policy on land speculation.

Evictions from land. There have already been some reports of evictions. For example, on November 15 a landowner in Aceh Besar evicted 725 IDPs originating from Aceh Jaya from private land (a sawmill site) that they had occupied since February 2005. These people moved to a new site on state land. An NGO has advised that at least one community in Aceh Barat faces eviction.

A report by local media on November 25, 2005, advised that some 500 IDPs in Desa Reusak, Kecamatan Samatiga, were given an ultimatum to move by the private landowner upon whose land the community has been living on since early 2005. These IDPs, many who are landless, are awaiting resettlement to a new site, which the government has allocated for the community. This land acquisition and resettlement process is facing many bottlenecks, such as insufficient funds, land clearing, and coordination between various government authorities and implementation agencies.

Recovery of damaged land records: Japan is funding the recovery of damaged documents. Approximately 15 tons of documents were transported to Jakarta by three TNI (military) Hercules flights in March 2005. Since that time the documents have been stored at -40o Celsius. Document recovery will be used to support the resolution of any land disputes that may arise over previously titled lands.

Box 1.3 Learning from the People of Lamjabat

Land mapping depends on participation of residents to ensure a smooth process and make certain that nobody is disadvantaged, for example, if heirs lack information on ownership or boundaries of the land they inherit. In the village of Lamjabat, Banda Aceh, most right of land ownership is under customary law with land being inherited from one generation to another, though some heirs are now residing outside Aceh.

The acting leader of Lamjabat's community, Ir Asbar, explained that the initiative of the community to conduct land mapping on their own was born out of a desire to rebuild the village. "In the wake of the tsunami our community went into a turmoil. Some stayed temporarily with people in Geuceu, some stayed in other villages. Then we got together and though about our future," said Asbar, a lecturer with the University of Syiah Kuala, Darussalam, Banda Aceh.

Two months after the tsunami the people of Lamjabat, whom survived and were displaced to other villages, agreed together to start to return to the village to clean up their homes. "We asked Zamzami A Manaf to conduct the mapping. He works with the Public Works and is native to Lamjabat. He did the mapping with full participation of the surviving community members," he said, adding that from 1,500 people only 240 survived.

He explained that the community did the land mapping themselves in order to encourage BRR and other agencies to start rebuilding their village immediately. In October they were receiving 55 homes from IOM, built on loaned land of residents. The sub-district head of Meuraxa, Tarmizi Yahya, confirmed Asbar's statements. According to him, people in Lamjabat conduct their own surveys and mappings, and even resolve disputes on the ground by themselves. "In fact, they are willing to give up some of their land for public interest; for moats, road widening. They are making sacrifices," said Tarmizi.

Source: BRR

COMMUNITIES LEADING THEIR OWN RECOVERY

A central feature of the reconstruction effort in Indonesia has been the way in which communities have come together to determine their needs and priorities and to assert leadership of their own recovery. In most areas, communities are firmly in the driving seat and this could serve as model for disaster response everywhere.

This has not been easy as the tsunami and earthquakes destroyed not only people, homes and infrastructure but also damaged community structures. The tragic events killed countless religious and community leaders, social workers, teachers, and organizers of civil society. Splitting up the homeless into tented camps, host communities and barracks further eroded community cohesion. Just when it was most urgently needed, the capacity of communities to come together, comfort each other, seek mutual support in the rebuilding of lives and create visions for a better future was badly battered.

Aceh has a rich tradition of associations, ranging from faith-related and community-based organizations (e.g. Panglima Laut– the association of fishermen, savings clubs, village development associations

and funeral societies) to semi-government structures, based on elected neighborhood and community representatives. This sense of community and relatively high levels of education have been sources of strength in the emergency response.

Relief agencies quickly found community leaders and structures they could work with, and where leaders had been killed, new, informal ones swiftly emerged. While many government units were in disarray, community leaders helped with information-gathering, re-uniting separated families, and spreading information about available help. They also gave a coherent message of needs to the many organizations that arrived to assist with recovery and reconstruction.

Community participation, coupled with the quick emergency response, ensured, within a short period of time, that almost everyone had at least basic shelter, that few became seriously hungry and that there were no unchecked epidemics. This convinced the government of Indonesia and the donor community to make a firm commitment to using and trusting community-driven development (CDD) approaches.

COMMITMENT TO COMMUNITY-DRIVEN RECONSTRUCTION

There is a growing conviction that the best way of addressing smaller, local infrastructure and household needs is to empower and resource citizens, allowing them to prioritize needs and take care of themselves through CDD. One argument for this approach is the widespread nature of the devastation. Over 850 villages in 86 sub-districts of Aceh and 22 sub-districts of Nias were damaged. On average, 130 families were affected, or 2/3 of the population of each of the impacted villages and about half of these remain displaced from their homes. Yet the situation is highly localized and hence the most effective response uses local knowledge and leadership. In early 2005, donors and NGOs collaborated to prepare an operational framework[3] designed to encourage all agencies to commit to high standards of consultation, participation, transparency and coordination.

TRADE-OFFS AND COSTS OF PARTICIPATION

Effective participation, however, takes time and necessitates facilitators working with the communities to guide them in these processes. This inevitably leads to a difficult trade-off between wanting swift reconstruction and ensuring that communities truly are leading the effort, with all members of the community having a voice in reconstruction. There is a parallel trade-off between wanting to deliver results and building capacity of local people and institutions. These trade-offs are limiting the pace of community reconstruction today but hopefully enhancing its sustainability. For example, community decision-making in many villages has emphasized employing IDPs as much as possible, rather than outside labor. Some NGOs have scaled back the pace of their housing programs to include training local people in carpentry and other skills. The fastest way to build a house might be to bring in a construction firm, complete with their own crews, from outside Aceh, but many communities are voicing a preference to build their own homes.

Understandably, with the large number of agencies who see themselves as CDD practitioners, approaches and standards vary greatly. This has led to inconsistencies and duplication – sometimes with communities

voicing frustration that multiple NGOs arrive, each wanting to practice participatory planning and sometimes urging villages to give them "exclusive rights" and tell other NGOs to go elsewhere. Communities often voice frustration at the time they are expected to put into meetings with all the NGOs.

Conversely, some NGOs and donors are frustrated about the fickleness that CDD can lead to, and the lengthy processes of data collection and assessments. They may spend a great deal of time planning a program with a village, only to find later when they arrive to do the work that the village has changed its mind and agreed programs with other organizations. This is most likely to occur when only community leaders, rather than the whole community, are involved in the decisions.

Informal, inclusive processes can also blur decision-making. A well-run, well-attended village meeting can give a visiting NGO a clear account of what is wanted. It is human nature at the close for the NGO leaders to tell the community how impressed they were and how they will do what they can to help. This is meant sincerely; the NGO is doing what it can to help tsunami victims. But it can be interpreted literally as a promise to help that village. If the NGO finally decides it cannot stretch its resources to include it, the community feels betrayed. It has become increasingly common for villages to voice frustration and even anger towards donors as a result. Sometimes it is well justified; certainly many agencies have promised a great deal and not followed up. This may be easing now, especially where sub-district coordination processes clarify who is running what program, but there are incidences of demonstrations against donors.

CDD approaches generally lead to more holistic, integrated, development plans than a top-down, donor designed program. The donor might have a particular interest, but a participatory project reflects trade-offs and compromises between multiple priorities. This can result in projects that are spread rather thin, and that are complex – but the positive side of this is that they are truly owned and therefore strongly supported by the bulk of the community. At the time of great stress, however, it is not so easy for the community to sustain its enthusiasm for such integrated projects. People thirst for quick action to resolve livelihood-threatening issues. Some NGOs, such as IRC-CARDI, have resolved this through staggering their support. In the first months after the tsunami they offered support for "quick impact projects", tackling a defined range of needs as determined by the community. Over time, they offered Integrated Community Development project covering a much wider range of activities, and based on a careful community mapping and participatory prioritization process.

Aceh and Nias are demonstrating a particular dilemma in using CDD at times of disaster response; namely how and when to replace private versus communal assets. Community meetings tend to forge agreement on rehabilitating or replacing community assets – the schools, clinics, roads, bridges etc. Seasoned community-development workers tend to steer people in this direction. In normal times this makes good sense and minimizes the conflicts that arise when some in the village benefit from a project but others do not. However in Aceh and Nias today, people are overwhelmingly preoccupied about their personal losses – their houses, boats, land or businesses. CDD programs in Aceh and Nias are therefore giving more attention to private assets than would be the norm for CDD programs.

SOME LEADING COMMUNITY DEVELOPMENT PROJECTS

The most widespread CDD program in Aceh prior to the tsunami was the Kecamatan Development Project (KDP), a government program financed by the World Bank in which a participatory, sub-district level process awards block grants to villages to meet the infrastructure, basic services or livelihood needs they have prioritized. Immediately after the earthquakes, the KDP was expanded from 87 sub-districts in Aceh and 13 in Nias to all 220 and 22 rural sub-districts, respectively. This network of CDD professionals (now numbering 600, working with over 35,000 village facilitators in over 6000 villages) has proved extremely valuable in helping tsunami-affected communities plan their responses. In addition, information facilitators have recently been appointed in district offices, in particular to help camats coordinate reconstruction efforts and improve the two-way flow of information about reconstruction needs, programs, gaps and community preferences.

The Urban Poverty Project (UPP) is a parallel CDD project for urban areas and in addition includes the election by the community of a board of trustees to represent it in the decision-making processes and provide oversight of the ensuing programs. It is now operational in Banda Aceh, employing 50 facilitators, and is expanding to cover 352 urban parishes.

The KDP and UPP facilitators have helped communities prepare maps showing the extent of damage in each village and plan priority rehabilitation and repair programs. KDP has so far this year built or rehabilitated 145 km of roads, 79 bridges, 187 irrigation or drainage canals, 14 schools, and four clinics. The Multi Donor Fund is financing the expansion of the KDP and UPP programs and the block grants to the villages, enabling quick high return investments. CIDA, AUSAID, EU and DFID are also financing the programs.

Many other organizations have also provided grant support for CDD. This includes US$11 million from International Relief and Development to support the creation of elected Community Empowerment Groups in 22 villages. These assist displaced people to return to their villages, agree priorities for re-starting their communities, and advocate these to local government. Other CDD programs include a Save the Children program which concentrates on ensuring that not only are children's issues included in village planning, but also that youth and children have the chance to take part in village discussions. Pekka – an national association of widows – has developed an impressive program providing support, including new houses, to their members. Oxfam is concentrating its CDD activities on working with and building up the capacity of Acehnese NGOs (of which they have 63 partners so far). USAID is providing US$20 million for a program of Peaceful Democratization and Community-Based Recovery in more than 50 villages, and the International Federation of the Red Cross is providing US$23 million for a CDD program that combines recovery with "integrated community-based risk reduction".

Many donors are also financing the rehabilitation and rebuilding of community buildings including meeting places, mosques and other religious buildings. Many NGOs and donors have helped communities prepare maps showing the extent of damage they experienced. The Multi-Donor Fund, USAID and others have helped strengthen this process into a formal community land mapping and adjudication process as a necessary precursor to establishing who owned what land and is entitled to what compensation.

Today's reconstruction efforts also offer another opportunity. The relative isolation of Aceh and Nias, and the long-running conflict mean that civil society is less developed than in other provinces. The pause in the conflict, coupled with the presence of large numbers of highly-experienced NGO leaders from many different countries, offers the chance to build local civil society capacity, for example through training and mentoring programs, resource centers and network building. The Multi Donor Fund is planning to finance such a program through UNDP which is intended to enhance the contribution of Acehnese civil society to the recovery, including by strengthening its roles in monitoring, combating corruption, and helping citizens voice concerns and grievances.

NOTES

[1] Shelter Working Group estimate 82,000 new houses are required based on the IOM damage assessment with adjustments for numbers of survivors; BRR survey in November identified 111,000 new houses required based on each Camat capturing housing requirements from displaced people in his sub-district

[2] This refers to those whose land is now submerged, unsafe, and those who were renting land/houses

[3] "Common Operating Principles and Guidelines for Tsunami Reconstruction", included as an Annex to the World Bank Board paper, Indonesia: Proposed Multi-Donor Trust Fund for Aceh and North Sumatra, April 4, 2005, R2005-0074

Part I

ONE YEAR AFTER – WHERE DO WE STAND?

Chapter 2 | REBUILDING LIVELIHOODS

After basic needs, such as food, water and shelter[4] survivors of the disasters see the restoration of their livelihoods as their most important need. Restoring livelihoods and the real economy is a critical element of the recovery process. It not only moves victims from dependence on aid to self-sufficiency, but also has the important psychological impact of returning to people the ability to control their daily activities. Fisheries, agriculture, and small enterprises, three of Aceh's key driving economic forces prior to the tsunami, were the sectors most heavily affected by the disaster.

The transition from relief to reconstruction requires careful monitoring of livelihoods to ensure that those in need receive sustained support. Cash-for-work programs, financed by many donors and NGOs, have played an important role in supporting livelihoods and revitalizing the economy. However, many of these programs are being phased out, as housing construction picks up and other employment activities are launched. Until adequate employment opportunities are available, some will need continued assistance.

Information on the impacts of the disasters on livelihoods is still emerging, revising damage estimates up and down in different sectors. A preliminary assessment in January estimated the total damage and loss to the productive sectors at close to US$1 billion[5], (attributing US$511 million damage in fisheries, US$225 million in agriculture, and US$218 million in the enterprise sectors). As more information becomes available, it seems that in some cases, damage and losses may be lower. For example, it was initially estimated that 5000-7500 hectares of land were permanently lost – about US$40 million in value – but an FAO assessment in April suggested that the area is more likely to be 2900 hectares[6]. However, in some areas, recovery costs will be higher than original estimates. In many locations, salt will remain trapped in poorly drained areas and will be a chronic problem until the land is rehabilitated through a combination of tillage, leaching and drainage. The cost of the rehabilitation of 17,500 ha of heavily impacted paddy fields was estimated preliminarily at more than $25 million to return production to previous levels. For many sites, rehabilitation may not be economically viable, and a change in land use may be a better option. About 10,000 ha of moderately damaged land will also require significant investment to rehabilitate. Recent studies suggest that the real costs could be as high as US$65 million.

Agencies must recognize that restoring livelihoods is more than rebuilding physical assets. While the replacement of assets such as boats, ponds and hatcheries, has received much attention, the challenge is to provide comprehensive livelihood support for sustainable recovery of the affected communities. Clearing land or building a new boat is only the first step. A livelihoods approach should be a core driver of the recovery process, but capacity to deliver effective livelihood-based support is deficient. With the necessary skills mix, the opportunity exists to rehabilitate livelihoods in line with the changing social and economic background of Aceh and Nias.

The economy of Aceh and Nias was already declining prior to the tsunami and earthquakes. During the years prior to the tsunami there had been a significant shift in the workforce back to the agriculture and fisheries sectors as urban and service-based industries declined. The restoration of previous livelihoods should take place with an understanding of current and future needs and resource base. Over the next three to five years there will be significant growth, driven largely by the construction sector. However, if the

underlying factors that caused the economy to decline over the previous three years are not addressed, there will be a significant impact once resources allocated to reconstruction start to decline.

FISHERIES AND AGRICULTURE

The fishing industry (including aquaculture) was the most severely affected of all economic sectors, with damage and losses estimated at US$511 million. Two thirds of all boats were damaged, destroyed or lost, and more than a quarter of ports, harbors and landing sites rendered inoperable. There has been a reduction in fish supply to local and export markets – particularly in the case of cultured shrimp for which Aceh was a leading producer. Large areas of land and tambaks (fish ponds) have also been eroded. The availability of safe harbors is a high priority for many owners of larger vessels. Estuaries and river entrances have become shallow, making access to landing places more difficult and dangerous. While much of the eroded material was carried out to sea, much was also deposited in estuaries, together with building materials and uprooted trees. While some estuaries and river entrances may ultimately stabilize through natural outflow of debris and sediment, in other cases active intervention and regular maintenance may be necessary to restore navigable conditions.

The disasters caused serious damage to coastal and marine environments. Mangroves in some parts of Nias are now above the high water level and are consequently dead or dying. Areas of reef have been damaged by the force of the tsunami or suffered uplift and died. The sinking of parts of Aceh Barat and Nagan Raya have badly affected coastal fish ponds and fisheries infrastructure. In other areas, newly uplifted and exposed estuary and seashore provide ample opportunity for foresting with mangroves, casuarinas and others, either to improve the environment, enhance fisheries habitats, or provide the basis for small-scale forestry enterprises.

Agricultural land suffered serious seawater inundation, marine deposits and other damage. Farmers in the affected areas lost their standing crops and livestock and will continue to incur losses in the longer-term due to sediment deposits and increased salinity. In many cases salinity will be overcome naturally through irrigation and precipitation. Damage to irrigation and drainage infrastructure is widespread and will require considerable clearing and rehabilitation. Technical assistance is needed for the rehabilitation of small community-based systems, and extension workers need to be trained to facilitate the process.

The tsunami also damaged 28,000 ha of plantations, a major part of the Achenese economy. Oil palm and rubber estates were particularly affected. Coffee estate crops in the Aceh highlands were already heavily impacted by the conflict, with more than 250,000 ha of smallholder estate crops left idle. A comprehensive strategy to revitalize the whole plantation sector is required and must be integrated into the strategy for livelihood recovery for rural families affected by the tsunami, earthquakes and the conflict.

Box 2.1 Making a Living from Agriculture in Paya Bakong

Paya Bakong in North Aceh was once known as a "black zone" because of the conflict.

"Before, when working in the fields, we would immediately lie down when we heard the sound of gunshots. If we are working in the rice fields, then of course we must lie flat in the mud. Thank God, it does not happen any more. We hope such conditions continue so that we can engage in livelihood activities again to support our family without feeling afraid," said Ismail, a farmer from the village of Cot Tufah and father of four children.

It is also known as a centre for the production of chocolate, betel nut, turmeric and soya beans. Rambutan and durian fruits from Paya Bakong are famous throughout North Aceh and the neighbouring areas for their sweet taste.

According to Muhammad Dahlan (36), the population of Cot Tufah consists of 60 families or around 230 persons. Almost all the citizens are dependent on the agricultural sector. "On average, the villagers own chocolate fields, but I don't remember how many. But clearly everyone here has a field," he said.

Now that there is peace, the villagers are beginning to work the fields once more. Unfortunately, at the time when the villagers have high spirits again, the prices of agricultural products have declined. "The price of dry chocolate is now only Rp. 7,000 per kilogram. Before, it was Rp. 12,000. The wet chocolate (chocolate bean) is even only Rp. 3,500." said Ismail

Besides the prices, the increase in living costs is another problem. Production cost, such as expenditure for fertilizer, is more expensive now. "Transporting the agricultural products from the village is very expensive. Going to the city of Matangkuli and back by RBT (motorcycle taxi) costs Rp. 30,000," said Dahlan.

Transportation is indeed expensive in Cot Tufah and other villages in Paya Bakong. To buy necessities and sell their agricultural products in Matangkuli, they must travel 15 kilometers on roads that are becoming more and more damaged by the day. Both Ismail and Dahlan hope that the government will repair the roads as soon as possible to help them access markets.

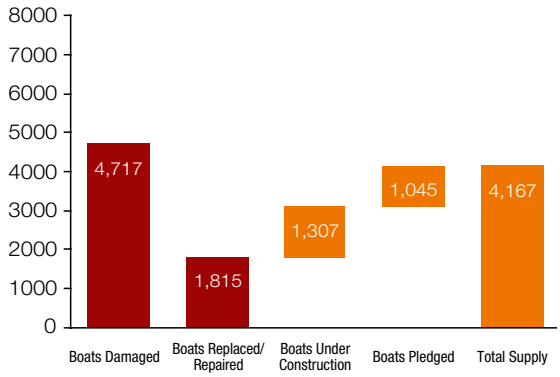
Source: BRR

LIVELIHOODS RECONSTRUCTION PROGRAM

Restoring fishing port infrastructure is a high priority. Vessels which used to be able to unload their catches at small ports now often have to ferry their catches, crew, and materials more than a kilometer to shore using small boats. Other ships are floating their catches to the beach in plastic boxes. Almost all landing places are expected to be rebuilt in the next one to two years.

There has been a major effort to replace lost small vessels but quality, safety and sustainability are major concerns. To date, about 1,800 boats have been replaced and rebuilt, while about 2350 others are being constructed or have been pledged. This supply will meet over 80 percent of the total need. Some boats are unsuitable in size, design and durability. In many cases, fishermen were not consulted first and sometimes those

Figure 2.1 Boats Damaged/Lost and Supply



Source: processed from FAO-Panglima Laut and Konsorsium Aceh Nias Bangkit-Panglima Laut database

that were, were ignored. FAO has trained boat builders and has introduced design modifications and improvements for local vessel types which should result in better construction standards and longer boat life. While smaller vessels have largely been replaced, the owners, skippers and crew of larger vessels remain unemployed. Several agencies are planning to assist with the construction of larger vessels, many of which will fish further offshore and thus reduce pressure on coastal fish stocks. In the west coast islands of Nias, Simeulue and the Banyak islands, nearly one year after the tsunami disaster, the poorest fishermen are still awaiting replacement of small boats for simple subsistence fishing.

Support to aquaculture has been limited, and largely confined to assistance with cleaning of small canals and some ponds. Around 5000 ha or 25 percent of the ponds are reported to be back in production, although less than 10 percent are operating at pre-tsunami levels. Further investment in rehabilitation of ponds, canals, and hatcheries will be essential to ensure the sustainability of this important coastal economic activity. On the west coast islands, pre-tsunami aquaculture operations, although limited, were almost totally lost.

Work has started in limited areas on rehabilitation of mangroves and protective green belts, and further investment will be required to restore damaged coastal ecosystems, particularly on the highly degraded west coast. Additional work is planned, partly in association with aquaculture rehabilitation, to create buffer zones between the ponds and the sea. Investments in coastal ecosystem rehabilitation have been marred by poor planning and implementation. Close cooperation between the fisheries and forestry sectors will be essential. ADB is supporting coastal planning, and building mangrove and coral rehabilitation programs into its investments in the rehabilitation of the fisheries sector.

Eleven-thousand hectares (over 55 percent) of paddy rice areas have been cleared of debris, over 25 percent of which had returned to production. However, 86 percent of the land rehabilitated still requires drainage, irrigation channels reconstruction and repair and farm roads. In Aceh Barat, Aceh Jaya and Nagan Raya over 70 percent of paddy land has not been supplied with land clearing, seed, equipment and fertilizer necessary for productive farming.

More than 40,000 farmers have returned to farming this wet season but there is significant regional disparity in assistance. Assistance to the East Coast districts reached over 70 percent of affected farming households. However, the picture on the West Coast is different, with less than 20 percent of affected farmers receiving sufficient support to make a profitable return to the land[7] . In Aceh Jaya, UNDP already supported the production of 325 hectares of rice and 40 hectares of corn and peanut plantations. Further assistance will assist 1,500 farming households

over the next 6 months. In Aceh Besar, the Lampaya ginger farming community of 400 producers is restoring their industry. NGOs are the dominant funding agencies, and will continue to provide substantial inputs in the coming year. There is a need for coordination under BRR of locations and types of support to avoid overlapping with other donor and government programs, particularly on the East Coast.

Estate crops reconstruction is underway. Through ADB an oil palm nursery has been established at Nagan Raya with 300,000 seedlings ready for planting in 2000 ha in mid 2006. In Aceh Besar, another nursery has been established with 3-month coconut seedlings sufficient for planting 1500 ha in 5 months time. In Bireun and Aceh Besar, 1,845 ha of old coconut groves have been rehabilitated to increase the standing stock. In Aceh Selatan, 726 ha of nutmeg have been planted with new seedlings while 1,850 ha of maize have been planted as an inter-crop in Aceh Besar (350 ha) and Bireuen (1500 ha).

LIVELIHOOD ISSUES FOR THE COMING YEAR

Pressure to quickly restore the fisheries industry has led to an inappropriate mix of fishing vessels and poor quality. Providers have aimed to deliver as many boats as soon as possible, resulting in the delivery of many low cost, smaller boats. In many cases this has been achieved by minimally trained boat builders. Lack of consultation and coordination with local fishermen, and poor quality construction, has resulted in many of the delivered boats being abandoned due to their unsuitability to local conditions (box 2.2).

Box 2.2 Donated Boats Can't Go Out to Sea

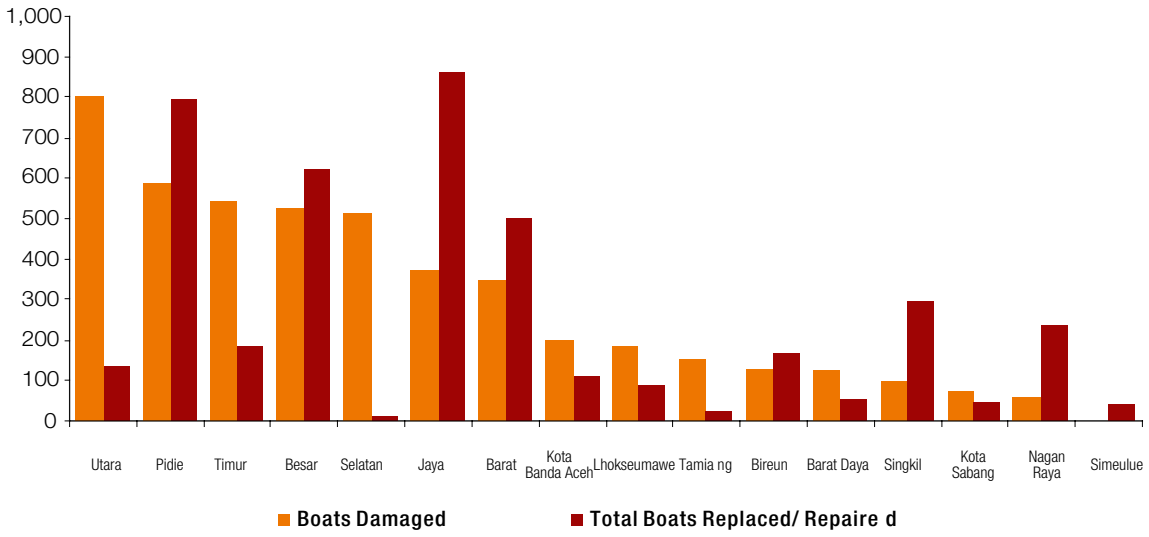
Fishermen from the village of Lambada Lhok, Baitussalam Sub-District in Aceh Besar, were relieved to hear that the Government of Kuwait would donate 300 boats. But of the 118 boats that have arrived, none can go out to sea. These boats, with a capacity of 8 people, have very low sides unable to cope with the high waves off the coast of Aceh and the fiberglass material is not strong enough to sail the waves of the Straits of Malacca and the Indian Ocean.

The chief of the Aceh Organization for Fishermen (Panglima Laut), H.T. Bustaman said he was not consulted in the production of these boats. "All were made in Makassar. We were never invited to speak," he said. The Ambassador of Kuwait for Indonesia, Muhammad Fadel al-Khalaf also expressed his disappointment to Tempo magazine last May. "I did not know that the seas of Aceh are different from that of Makassar," he said. In fact, there are many boat-building workshops in Aceh that can do a better job. "The carpenters here know more about the condition of the sea, the ideal design for the boats and the habits of the fishermen," said Musa, a resident of Padang Sirahet in West Aceh.

The problematic boats were later reconstructed by local hands and could finally set sail. Yet they are still not ideal. Not only are they small in size compared to the typical Acehnese boats - only 8 metres by 1.5 metres, these boats also cannot produce optimum results due to a lack of fishing facilities, according to the head of the Organization for Fishermen.

Source: Adapted from Ceureumen, edition 5

Figure 2.2 Distribution of Boats vs. Damaged/Lost Boats



Source: Processed from output of BRR-FAO-Panglima Laut workshop on boat needs and progress, September 2005

The distribution of the boats across districts has been uneven and supply driven. Several kabupaten including Aceh Jaya, Aceh Singkil and Nagan Raya have received or will receive many more boats than needed but others such as Aceh Utara, Aceh Timur, Aceh Selatan and Aceh Tamiang have not received that much attention. Banda Aceh, Aceh Besar, Aceh Jaya and Pidie – the four districts closest to Banda Aceh - account for 40 percent of boat losses but have received 75 percent of all boats distributed or repaired. Other districts such as Bireuen, Lhokseumawe and Simeulue still have large needs but have not received much attention (figure 2.2).

There is a growing concern that the current level of coastal fishing is unsustainable. At the same time there are rich stocks in deeper water. The priority should be to build and equip larger boats that can fish further out to sea. There also needs to be more emphasis on fish processing and ice plants, markets, cooperative development, training and other infrastructure so that fishing communities can reap greater rewards from their catches. Improved fisheries management is required together with the re-establishment of the fleet to prevent over-exploitation of fisheries resources.

The focus on boats has left major gaps elsewhere in the fisheries sector. Perhaps worse, it has not recognized the full dimensions of the sector and the livelihoods of people dependant on fisheries and aquaculture. The issue has disproportionately distracted the attention of donors and government agencies alike. Fisheries infrastructure, re-establishment of market chains, restoring of extension services, coastal environment rehabilitation and aquaculture infrastructure require a major effort and could have much more sustainable outcomes.

Extension services need to be strengthened to advise farmers how they can ameliorate soil constraints. Strategies to address soil salinity issues in the short-to-medium term have been identified. Those farmers who have lost their land altogether require land elsewhere and mechanisms for relocating. Agri-

cultural processing facilities such as rice milling operations that were lost due to the tsunami need to be replaced. Owners that lost such assets are finding it difficult to access credit capital for replacement.

Gender equity is weak in agriculture sector programs. Prior to the tsunami, many rural communities had more women than men working in agriculture, as the conflict caused more men to migrate to other parts of the country and greater male mortality. Women have traditionally played an important role in food crop agriculture but have lacked extension services and access to credit, and only been allowed limited participation in decision-making. The high mortality of women from the tsunami could pose a huge obstacle to the restoration of farming activities. All this means that integrating gender equity into agricultural programs needs special attention.

Problems associated with marketing are slowing down rehabilitation and recovery. Many markets already weakened by years of conflict were heavily impacted by the tsunami. Recovery in the marketing sector has been slow in many areas. Marketing needs to be integrated into the overall strategy for farmland rehabilitation.

The construction boom may take needed laborers away from the agriculture sector. As a result of the construction boom, laborers will be tempted to move to the more guaranteed and higher wages in the construction sector. This could result in labor shortages during the rice harvest and for rehabilitating farmland programs.

Agriculture and fisheries are essential parts of the economies of Aceh and Nias, and should be modernized. Even before the disaster, both sectors were characterized by a large number of small farmers and fishermen producing mainly for their own consumption or for the immediate local markets, with processing and packaging mainly done outside the region. There is a need to modernize both sectors through new technologies, finance, and business development services, and by encouraging a greater scale of production. Organizing people in cooperatives can be an important channel. Strengthening these two sectors may allow them to reap greater benefits from the expansion of the local demand for food and other basic goods that should accompany the coming construction boom, and set foundations for the strengthening of the local economy.

CREATING JOBS

The impact of the tsunami on employment in Aceh and Nias has been less severe than initially expected, but it has led to major changes in the composition and structure of the workforce. While there was a spike in unemployment in the immediate aftermath of the disaster, labor force participation has recovered rapidly. The participation of adult males in the labor force has returned to pre-tsunami levels, while the participation of women and youths (aged 15-24) has grown substantially. Many women and youths were left with little choice but to search for any type of work in order to survive.

Though these previously untapped labor sources could contribute to faster economic growth and recovery throughout the region, it will also raise new problems. Without access to decent employment opportunities in areas of sustainable growth, these new female workers may be unable to eke out enough to support their families. And there is evidence that young people may be leaving schooling prematurely, which could diminish their opportunities for training and education

Table 2.1 Employment Status for People 10 Years and Older

Age group	Employed	Seeking work	Available for work	Not in labor force	Total
10 – 14	17,255	5,337	4,437	418,209	445,238
15 – 24	243,793	78,847	52,556	452,982	828,178
25 – 34	392,458	49,099	34,281	173,139	648,977
35 – 54	579,355	36,480	32,197	190,178	838,210
55+	204,860	12,353	12,939	105,638	335,790
Total	**1,437,721**	**182,116**	**136,410**	**1,340,146**	**3,096,393**

Source: BPS 2005 Population Census

Box 2.3 THE NUSA DIARY: Livelihood projects

Within weeks of the tsunami, several people in Nusa had started mini-warungs (small shops) selling vegetables, cakes and coffee but this neither met all their needs nor covered more than a tiny handful of the population. The impact, therefore, of both the original cash-for-work scheme and then the longer-term livelihood projects organized by Mercy Corps - the lead NGO in the sub-district - on the fortunes of Nusa cannot be overstated. With about 70 per cent of the wage-earners farmers who lost everything and many of the remainder having lost their jobs when the tsunami destroyed the local furniture factory, the need for outside assistance was paramount.

Through lengthy consultation Mercy Corps ensured virtually every family was represented in one of the farming groups: cassava, chilli, peanuts, ginger and livestock. The gaping hole here was rice, which could not be planted due to a crucial floodgate remaining unrepaired (see the Water and Sanitation section). The NGO also ensured the village's cassava cracker industry - for which it had been famous throughout Aceh before the disaster could restart, provided sewing machines for 28 people and financing for a cake-making cooperative.

A few people secure assistance from the private sector; the most successful being Nelly Nurila who secured equipment and funding from a flour company in September to open a bakery. Within a couple of weeks she was employing eight people making 600 loaves a day and assessing what the best way to expand would be. Another example of private initiative was Mohammed Yassin who was selected to "host" one of the first televisions given to the village. He quickly opened a warung, charging food makers a commission to sell their products, and so helped at least half a dozen families supplement their earnings.

People who looked for work in Banda Aceh, struggled, however, unless they had a relative or friend with a functioning business. Many of the farmers also found it tough to make ends meet while waiting for crops to grow: many planted vegetables but the majority of the village were dependent on food handouts to survive right up until the end of the year. Conditions are likely to remain tough for perhaps another year because rice was not planted.

Source: *John Aglionby (The Guardian)*

which are essential for more productive jobs in the future that offer better remuneration. Recent evidence from the 2005 census showed that more than 17,000 children aged 10 to 14 were employed, contrary to government policy, and another 5,000 looking for work.

The latest census shows there is a large pool of labor either seeking or available for work, but not employed. Currently, nearly 20 per cent of the labor force (more than 300,000 people) are actively seeking work or are available for work. The highest rates were in the 15-24 age group, where nearly 25 per

cent were searching for work (table 2.1). The human aspects of livelihood loss is highlighted in box 2.3 on the village of Nusa.

PROGRAMS TO PROMOTE EMPLOYMENT

Many organizations implemented cash-for-work programs in the affected areas immediately after the disaster. Mercy Corps provided employment for more than 76,000 people in four districts, with an average participation of 35 days. UNDP's scheme to date has assisted more than 34,000 IDP households in 50 per cent of impacted villages. These activities provided valuable support to communities in terms of restoring livelihoods as well as rehabilitating public assets and farm land.

Over 10,000 jobseekers have been placed into jobs out of the 46,000 who voluntarily registered with the employment services network set-up by the government's manpower offices and the ILO. Approximately 30 per cent of the registrants were female (table 2.2).

CONSTRAINTS IN CREATING EMPLOYMENT

The construction boom is only just starting, but will have a large impact on the job market. Construction work in Aceh and Nias will be in range of US$100- $150 million per

Table 2.2 Top 20 Listed Professions by Gender in Employment Services Database

Males		Females	
Category	**No.**	**Category**	**No.**
No experience	3905	No experience	5572
Builders	3175	Tailors, dressmakers and hatters	1332
Car, taxi and van drivers	2534	Non-primary education teaching professionals	810
Painters and related workers	1746	Shop, stall and market salespersons	532
Carpenters and joiners	1606	Administrative secretaries and related	453
Production and operations managers	1437	Nursing and midwifery professionals	331
Bricklayers and stonemasons	1370	Cooks	327
Shop, stall and market salespersons	1022	Other office clerks	324
Administrative secretaries and related	983	Primary education teaching professionals	245
Building construction laborers	918	Weavers, knitters and related workers	226
Welders and flame cutters	867	Word-processor and related operators	175
Building and related electricians	787	Pre-primary education teaching professionals	148
Other office clerks	719	Cashiers and ticket clerks	137
Heavy truck and lorry drivers	695	Secretaries	122
Motor vehicle mechanics and fitters	670	Bakers, pastry-cooks and confectionery makers	119
Blacksmiths and hammer-smiths	612	Secondary education teaching professionals	97
Protective services workers	586	Bookkeepers	83
Plumbers and pipe fitters	578	Social work professionals	81
Stock clerks	557	Telephone switchboard operators	77
Plasterers	546	Computer equipment operators	68

Source: NAD Manpower/ILO Employment Services Database

month range for the two coming years, compared to less than US$10 million per month in 2003. To meet this demand, ILO estimates about 200,000 skilled labourers (carpenters, bricklayers, etc) are required as well as a significant number of unskilled workers. BRR and the Department of Labour have been working over the last six to eight months to address this challenge to ensure that a large portion of this demand is filled by workers from Aceh and Nias. Their focus has been to improve skills training. However, given the immediate demand for skilled workers and the time lag necessary for adequate training, as well as to prevent high inflation in wage rates, many of the highly skilled workers will have to be brought in from outside the region. Semi-skilled and unskilled workers should come predominantly from the affected areas. In addition, the construction boom will create a large secondary demand for goods and services.

Wage inflation needs to be managed even if it means bringing in labor from outside of Aceh and Nias. Excessive wage inflation will make it very difficult for the region to shift from being a construction-led economy to an economy competitive in external markets in Indonesia and abroad after the construction boom. Wage rates are much more flexible upwards than downwards— once they become too high in relation to the medium-term requirements for a competitive regional economy, it will be very difficult to bring them down again without causing extensive unemployment. It is especially important that the minimum wage rate is not increased relative to those in other provinces, in order to maintain Aceh's competitiveness in the medium-to-long term.

Opportunities for the development of a competitive supply of goods in Aceh and Nias should be exploited. Some of the rising demand for goods can be competitively supplied from Aceh and Nias if a healthy business climate is created and appropriate types of assistance is provided to potential suppliers. It is critical that when the construction boom ends and demand dramatically declines, existing and newly-established firms in Aceh and Nias be able to compete in external markets. A strategy needs to be formulated in order to realize this potential.

EMPLOYMENT ISSUES IN THE YEAR AHEAD

A labor market monitoring system should be developed in order to prepare for the coming construction boom and longer-term. Building on existing national labor force surveys, a quarterly update on employment and livelihoods for Aceh and Nias is required as a basis for decision making. This should provide information on employment, income etc. Statistics Indonesia (BPS) and BRR should take the lead on this along with other donor partners.

Effective labor market mediation and proactive administration services should also be developed to facilitate the matching of labor supply with the demand for workers. The existing network of four employment service centers run by the government's manpower office and the ILO can be reinforced with additional mobile placement officers who can assist contractors in recruiting suitably-qualified local labor. The principal activity of these employment centers would be to register job seekers and link them to potential employers, based on a comprehensive skills database. The network of employment centers could also be used to start labor administration functions such as labor inspection and promotion of harmonious industrial relations.

To enhance the employability of the people of Aceh and Nias, skills training must be demand-driven and linked to jobs in the

market, with a particular focus on short-cycle training for workers certain to be engaged. The BRR, DISNAKERTRANS and a range of partners (ILO, GTZ, MDTF, ADB, IOM, and numerous NGOs) are already implementing vocational training programs that need to be expanded and sustained. A vocational training coordination center should be set up to ensure standard setting, quality control, consistency in curricula, and portable certification of competencies.

Attention should be given to special needs. Although much training is likely to be through mobile training centers, specific provision should also be made to take training to those that cannot participate in away-from-home courses, for example single-parent households and disabled people. The special needs of out-of-school youths should be incorporated in all training plans as well as opportunities for women in both the technical and vocational fields.

Box 2.4 Training in carpentry in Lamlumpu

Azhar, 17, comes from the village of Lamlumpu in the sub-district of Peukan Bada, Aceh Besar. He came back to his home to learn the trade of a construction worker. At an abandoned building he and a number of youthful villagers can be seen making door and window casings.

"I have got to bring myself up again. We can't count on other people's help forever. They won't be here forever. We must count on our own strength to live," said Azhar, who has worked as construction worker since he was 15. "I can't depend on my family very much because we're poor. I must support myself."

Before his home and village was wiped away by the tsunami last year, Azhar lived with his parents and seven siblings. "My home used to be over there," he said pointing to a wasteland that was once Lamlumpu. In the distance, all that could be seen was a mosque and rubble.

"After the tsunami there was only the three of us. My father, my brother and myself. My father has moved in with my grandmother. My brother is living in a tent with his friends. I remain here to follow a training course to become a construction worker. I am being taught how to make door casings, window casings and the like," he said while observing his work.

There is something else that keeps him around the village. "Should there be an NGO coming around to start building houses I can represent my family and claim for one too. In that way our scattered family can come together again," he said with hope.

Source: BRR

SMALL AND MEDIUM-SIZED ENTERPRISES

Many SMEs lost their assets during the tsunami and now face difficulties in reviving their business activities. While several financial products are reported to be available for new SME start-ups, there has been a lack of financial support to SMEs severely affected by the tsunami. Although there have been some successful examples of SME recovery mechanisms, local banks, while increasingly offering some loan-restructuring options for affected SMEs, are generally reluctant to provide new credits to SMEs that cannot provide collateral. However, for most businesses affected by the tsunami the availability of uncollateralized loan or loan collateral substitution schemes is often the only chance for affected businesses to recover.

Urgent assistance is needed to help SMEs destroyed by the tsunami get back to business. Currently constrained by a lack of working capital and destroyed capital assets, and with exposure to previously-held bank loans, many pre-tsunami entrepreneurs currently have absolutely no one to turn to for assistance. In many cases, this has resulted in a demoralised entrepreneurial spirit (box 2.5).

Access to capital is also a major concern for the many small entrepreneurs in displaced communities. NGOs such as Oxfam and Mercy Corps are currently playing a vital role in this regard by providing links to sources of funding. They also plan to launch the issuance of guarantees of up to 85-100 percent of the amount of credits extended by commercial banks. Mercy Corps and the ILO are working together on providing credit guarantee funds to selected Bank Pembangunan Daerah (BPRs, or local banks) in NAD, which will reduce the BPRs' risk in lending to SMEs and thus increase lending productivity.

The provision of microfinance will need to carefully balance sound business principles and humanitarian aspects. Aid agencies and NGOs have to carefully design the right mix of loan and grant elements in providing financial aid at the village level in order not to distort the market for financial services. It is important that the supply of funds for microfinance projects and programs does not outstrip requirements or demand.

Box 2.5 No access to credit for a car sales business damaged by tsunami

A successful car sales business in Banda Aceh was decimated by the tsunami in December. The three-year-old enterprise was established with capital from the owner's savings and a Rp. 50 million loan provided by a local commercial bank. The business owner established a highly reliable repayment record and received a favorable initial response to an application for an extension to the existing loan to expand the business.

Following the tsunami, the business-owner requested assistance from the bank to refinance the existing loan and to 'fast track' the extension application in order to relocate the car cleaning operation and for some working capital. The bank refused both and demanded that the outstanding loan be repaid in full. In the meantime the entrepreneur has a poor credit rating and does not know whom to approach for help. He is currently a local driver with no prospect of restarting his enterprise.

Box 2.6 Getting Becaks Drivers Back On the Roads

Dark clouds hover overhead and the rain lashes down, but that doesn't deter the becak –or motorbike taxis - waiting for passengers in the center of Banda Aceh. They know they are a vital means of getting around this crowded city. And among them is Amir, a veteran driver now back in business with the support of the International Rescue Committee, (IRC).

Amir knows the back roads of Banda Aceh inside out. He has been driving a becak since 1980, but the tsunami took a devastating toll. As he explains: "I lost my motorbike taxi and my beloved son driving it on the tsunami day last year."

Many other taxi drivers lost their loved ones and livelihoods on 26th December 2004. But now, as the city is being rebuilt and people start to look forward, the becak drivers also want to resume their business and regain their economic independence.

Becaks are a popular means of transport in Banda Aceh because minibuses often get stuck in traffic jams, while taxis are too expensive for everyday travel. The becak drivers offer a cheap and useful service to the local community, and the IRC has been supporting them with small grants as part of its Quick Impact Projects, paying the advance payments and the drivers settle the balance over 24months. Now Amir and his fellow drivers can resume their former jobs and start earning money to meet their daily needs.

"With this new becak, I can work and have a constant income again. It's much better than waiting for help in the barracks [temporary living centers]. I thank God there are some people willing to help me. We are all very thankful," says Amir.

Source: International Rescue Committee

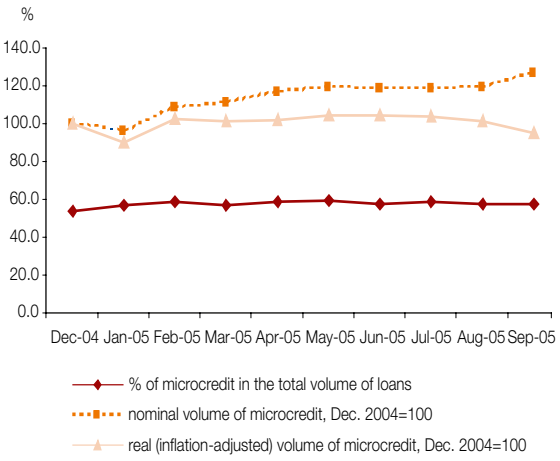
PROGRESS IN REVITALIZING SMES

The main focus in reviving the SME sector has been to assist small enterprises quickly re-establish their operations. This assistance is focused on the replacement of lost assets, provision of small cash grants, and extension of entrepreneurship start-up and business management training courses. A wide range of activities is being undertaken to address these issues (box 2.6). In addition to NGO programs, the International Finance Corporation (IFC) has established an SME Facility in Aceh (PEP-Aceh) to identify and remove constraints for SME development. UNDP has assisted in the re-establishment of more than 7000 small businesses and is expected to have helped about 20,000 small businesses by June 2006. ILO has supported the establishment of a network of entrepreneurship and business management trainers, which deliver 'Start Your Business' (SYB) training courses throughout the province with more than 600 people completing the training courses. In addition, more than 2000 people were provided with technical and vocational training courses.

Several programs with substantial resources have been launched to support the development of sustainable microfinance for Aceh and Nias. Many donor organizations have launched microfinance programs, including ADB, GTZ, ILO, IFC, the German Savings Bank, Save the Children, Mercy Corps and World Vision. BRR, in cooperation with Dinas Kooperasi, has launched the Aceh Microfinance Forum program designed to set up BQs (Syariah Financial cooperatives) in all kecamatans of Aceh.

Other activities are providing technical assistance and market linkages.

Figure 2.3 Trends in the provision of micro-credit by local commercial banks



Source: Bank Indonesia , World Bank Staff calculations

Swisscontact has initiated a "Business Recovery" project targeting the creation of 5,000-10,000 jobs, and the Asia Foundation has helped the Aceh government introduce a one-stop-shop model to help reduce costs and waiting time for business owners who need to have lost business licenses re-issued or to apply for bank loans.

Local commercial banks have been assessing the conditions of their SME clients affected by the disaster. For outstanding loans to businesses that are considered potentially viable, banks often offer an extended repayment period, grace period for the repayment of the loan, and reduced interest rate. In some cases they also ask for the repayment of principal only. However, for SMEs that lost most of their assets, even these more flexible terms of repayment are impossible to meet. Although the provision of micro-credit since January 2005 has increased in nominal terms, it has been stagnant in real terms (figure 2.3).

SUPPORTING SMALL AND MEDIUM BUSINESSES IN THE COMING YEAR

President Bill Clinton, UN Special Envoy for the Tsunami Recovery, has emphasized the vital importance of promoting livelihoods through SMEs in the coming year. In order for SMEs to recover they will need improved access to financial services. However, existing banks in the region have a limited outreach and tend to disregard loan applications from small entrepreneurs and even more from applicants without guarantees or collateral. There is a need to build the capacity of financial institutions and the promotion of collateral substitute products such as micro leasing and the constitution of guarantee funds.

There is also a need to provide non-financial services to SMEs in the form of business development services and in general develop such a market where enterprises are able to source various types of services that will help small scale entrepreneurs to start and grow their businesses.

Rehabilitation of key infrastructure is linked to SMEs' recovery. Most assistance is focusing on providing small businesses with access to credit markets. However, donors and the government must identify ways to enable distribution and marketing chains, which includes the rehabilitation of key infrastructure.

Insurance and other risk financing mechanisms should be developed to protect SMEs. Most of the SMEs could not recover their losses because standard insurance contracts do not have clauses for losses from natural disasters. Considering the hazard exposure of Aceh and Nias, the availability of affordable insurance against the respective loss or damage of assets is critical for mitigating negative shocks. If the premiums offered by private insurance companies are judged to be too costly for SMEs to operate, the government may want to explore participating in some special risk-sharing arrangements which would reduce insurance costs for businesses.

NOTES

[4] IOM, "Settlement and Livelihood Needs and Aspirations of Disaster-Affected and Local Communities in NAD", May 2005.

[5] BAPPENAS and the International Donor Community, "Indonesia: Preliminary Damage and Loss Assessment – Technical Annex," January 2004.

[6] FAO, "Indonesia Post-Tsunami Consolidated Assessment", April 22, 2005 (URL: http://www.fao.org/ag.tsunami/assessment/indonesia-assess.html,

[7] Dinas Pertanian data from 8 affected districts Aceh-Sumatra Workshop 5-7 December 2005.

Part I

ONE YEAR AFTER - WHERE DO WE STAND?

Chapter 3 | RESTORING PUBLIC SERVICES

The disaster had a devastating impact on public infrastructure and the delivery of public services:

- Up to 40,000 students and 2,500 teachers lost their lives; more than 2,000 schools were reported damaged or destroyed.
- Six hospitals, 41 puskesmas, 59 pustu, 44 posyandu and 240 polindes were severely damaged or destroyed. In Nias, the damage included 2 hospitals and 14 puskesmas
- Major water treatment installations, the piping network, wells and Banda Aceh's only sludge treatment facility were destroyed.
- Local level drainage systems were rendered ineffective by land settlement and shallow wells became contaminated and inundated with saline water.
- Extensive portions of the road network were destroyed and many coastal bridges were washed out, especially along the west coast in Aceh.
- Fourteen of the 19 seaports and eight of the 10 airports were damaged.

Immediate action helped to restore essential services to a large proportion of the population.

- Schools reopened one month after the tsunami, sometimes with emergency schooling facilities so that education could be provided to almost all students, including those living in IDP camps.
- Health services were quickly restored at existing serviceable health facilities through the provision of staff, equipment and medical supplies. Temporary field hospitals were established in areas of critical need.
- Emergency water and sanitation services were provided to more than half a million people displaced by the tsunami.
- GoI carried out emergency repairs to roads and erected an extensive system of temporary bridges.

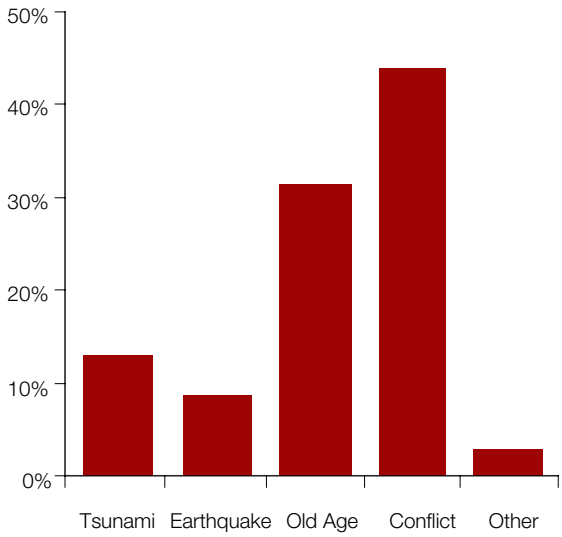
But public services are not yet fully restored. Reconstruction is being held back by shortages of materials and labor, and is constrained by a damaged transportation system, particularly on the west coast. The enormity of the task and the large number of agencies involved is also overwhelming the management capacity of both local government and international agencies.

EDUCATION

The earthquake and tsunami of December 26th took the lives of almost 2,500 teachers and tens of thousands of students. In addition, many children experienced, and continue to suffer from, trauma-related stress which impacts all aspects of their daily lives and impairs their ability to concentrate in school. More than 2,000 schools were reported as damaged or destroyed but this figure includes schools damaged or destroyed during conflict or due to old age.

The initial success in getting children back to school represents a considerable achievement. A school clean-up program was launched and educational material distributed including schools tents, text books, 'Schools in a Box,' locally procured teaching/learning materials and recreation kits to almost one million children in tsunami-affected districts[8]. This joint effort enabled schools to reopen on January 26, one month after the earthquake and tsunami, and for emergency schooling to be provided to almost all students, including those living in IDP camps. In addition to government contracted teachers, a number of organizations recruited, hired and mobilized contract teachers to the tsunami affected districts, including 1,100 teachers by UNICEF.

Figure 3.1 Cause of Damage to Schools in Bireuen District



Source: Dinas Pendidikan Kabupaten Bireuen

Teachers also received specific training in how to implement structured, psychosocial activities with their students, and several organizations established safe play areas where children could overcome their fears, release their stress, and simply be children once again. Such activities were particularly important not only right after the tsunami but also over time, especially since a number of strong earthquakes continued to shake the region and to psychologically affect survivors throughout the year.

However, much of the school infrastructure was in a poor state before the tsunami and earthquake, and while school enrollment rates were high for young children, considerable disparity existed between urban and rural areas. Enrollment rates for Nias were especially low.

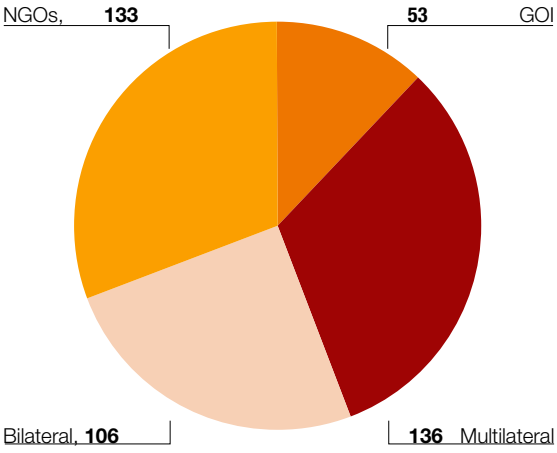
The conflict was also responsible for significant damage to schools, while low levels of public investment and poor maintenance are also concerns. Even before the disasters, the education sector in Aceh and Nias was characterized by poor quality school buildings, a lack of adequately trained teachers, poor performance of students in national examinations, poor management, and low levels of community participation. A UNOPS survey concluded that most damage to school buildings and collapses was due to improper construction methods, bad workmanship and the use of poor quality materials[9]. There is already anecdotal evidence that new school building construction is not meeting the required government standards.

A major challenge for reconstruction will be to develop adequate education facilities and service for all communities of Aceh and Nias. Careful planning will be required to ensure equity and sustainability of the system. Planning will need to consider targeting, accessibility for the disabled, and disaster risk management. There is a need for greater understanding of the required construction standards, and close supervision of the construction phase. In addition, facilities built by the recovery program will need to consider the local authorities' capacity for maintenance of educational facilities.

PROGRAMS TO RESTORE AND IMPROVE EDUCATION

BRR's priority is to coordinate the activities of a large number of agencies that are active in the affected areas while at the same time maintaining close dialogue with the Ministry of National Education (MoNE) and the Ministry of Religious Affairs (MoRA). In early February 2005, an education sector working group was set up in Banda Aceh, providing a coordination forum for government agencies and their partners to avoid overlaps and to provide an effective response. To date, regular meetings - hosted

Figure 3.2 Composition of Financing in the Education Sector (US$ million)



Source: BRR, World Bank staff estimates; see also Annex 6

by the provincial MoNE office and facilitated by UNICEF - continue to provide an effective forum for coordination and information sharing for all stakeholders, and MoRA. A similar forum has also been established in Nias.

Information management is critical to coordination. The need for reliable information was addressed by developing an education data pack, available on-line and led by UNIMS and UNICEF in cooperation with the MoNE office. BRR also put in place a mechanism to develop an EMIS database in collaboration with UNIMS. Increasingly, data collected by other parties, including MoNE and UNICEF are also verified by BRR to complement their database. The development of the BRR operations center will facilitate improved sector management information and BRR coordination of education activities in 2006 as the planned UNIMS database transfer to the center occurs in the first half of 2006.

From July through December, efforts focused on the rehabilitation and reconstruction of schools. In the meantime, and as school tents wore out, temporary learning spaces were introduced to fill the gap until the rehabilitation and reconstruction of permanent schools could be completed. IOM has constructed 101 temporary schools on behalf of UNICEF in various locations through Aceh to meet the immediate need for more appropriate school facilities. In addition, the Chinese government has provided 52 temporary schools and support for their construction. Twelve are in Banda Aceh, 30 in Simeulue and the remainder on the west coast. MoRA administers the Islamic education sector where some 19 percent of religious school were damaged or destroyed. Among a number of donors and NGOs, AIPRD is supporting the reconstruction of eight madrassah and one dayah and is planning to assist up to 15 more. It is also helping to strengthen education management, teacher support and training and school retention programs.

Box 3.1 THE NUSA DIARY: Education

Nusa was lucky that both the state primary school (SD) and the pesantran (Islamic boarding school) - run by the orthodox Islamic organization Hidayatullah from Kalimantan - are on high ground and so survived both the earthquake and the tsunami.

Three of the nine teaching staff, including the school principal, and two of the 115 pupils at the SD were killed. Within a few weeks the education ministry replaced the deceased teachers with staff from nearby schools which had been destroyed but it took several weeks for the new principal's official appointment letter to arrive so the school was a little rudderless until March.

Other promised government support, such as mending the furniture broken by the hundreds of refugees who sought sanctuary in the school for a couple of weeks, either never materialized or took months to arrive. One of the classes was forced to decamp to a shed in the yard for the first couple of months because their room was being used as a store for emergency relief. The school roll initially swelled from 115 to 147 after taking in pupils who had nowhere else to study but then it slowly dropped as school facilities were rebuilt elsewhere.

Overall, the new principal admitted to me, the SD is now better off than it was before the tsunami. This is thanks to numerous donations, ranging from UNICEF who provided crates of supplies, through domestic organizations like Dompet Dhuafa who gave materials and did extra-curricular activities for several months, to a slew of gifts like Mickey Mouse school bags from the United States. By May the school was charging fees again. It was a similar picture at Hidayatullah. Additional teachers arrived from around the archipelago and coped well with the extra students. The staff opened a kindergarten and by April 2005, 45 students were attending.

Nusa residents attending high school in Lhoknga suffered much greater disruption to their education. Most facilities which weren't destroyed were badly damaged and students reported equipment being looted. They also had to cope with many of their friends and teachers dying - more than 50 per cent in some cases - which exacerbated their already massive psychological trauma.

Source: John Aglionby (The Guardian)

Reconstruction is underway or completed in 331 schools and preparatory work is being conducted in another 400 locations. In Nias, 10 schools have already been reconstructed and almost 400 schools (51 percent of the total number of damaged schools) have been adopted by various donors. As of December 2005, around 800 school sites (70 percent of those worst hit by the tsunami and earthquake in NAD and Nias) have been adopted for reconstruction or rehabilitation by various organizations. So far, donor assistance focused on the worst damaged schools but significant gaps remain for schools that are less damaged but still in need of repair.

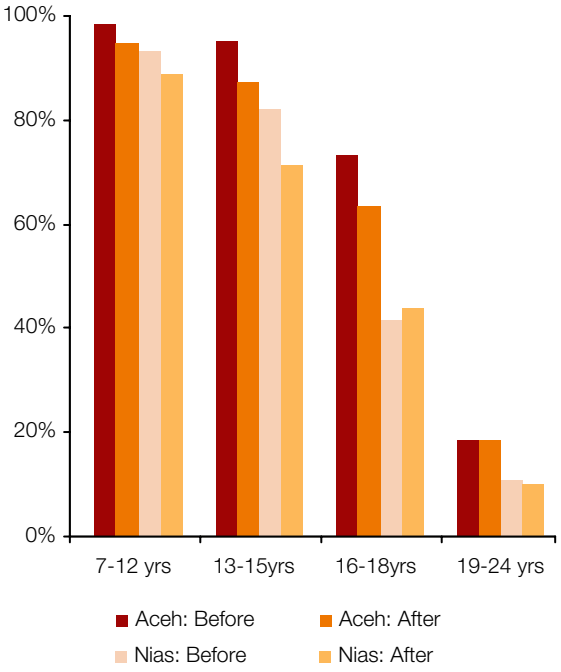
Since July 2005, supplies of textbooks and other learning materials have continued to pour in. BRR data show that more than 1.7 million text books were distributed from a target of 1.16 million. An additional 557,000 textbooks will be supplied in early 2006 with ADB support.

Local governments organized a wide variety of training for teachers and students with assistance from Save the Children, UNICEF and others. The training includes: training of trainers for primary and secondary teachers on new teaching methodologies and School Based Management; tutorials for more than 18,000 secondary school students to prepare for national exams; vocational training for youth and equivalent training for school dropouts; life skill workshops for youth; leadership training for scouts; psychosocial training for teachers; vocational training for adults (men and women) covering block making and house masonry; stress-relieving activities for children and youth; and study tours for educational staff of good practices in School Based Management in other provinces. In addition, community learning centers were established in a number of tsunami affected districts, providing non-formal programs for senior education.

A number of scholarships were provided to students from vulnerable families as well as those living in barracks to allow them to access education. Scholarships were also provided to university students to undertake a short program in neighboring polytechnic institutions. By October the government launched the School Operation Fund by providing a block grant for all schools in the country.

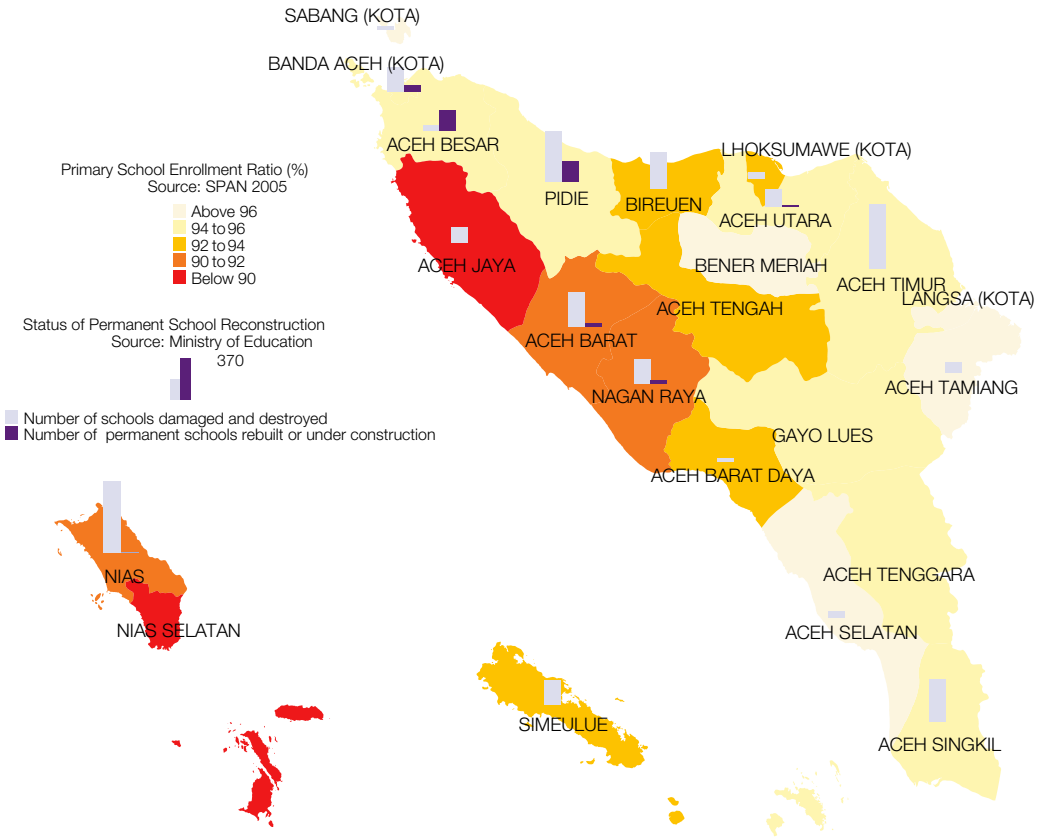
School enrollment rates are lower in 2005 than in 2004. In Aceh 5 percent of children aged 7-12 do not now attend school; for Nias the figure is 11 percent. For the population aged 13-15 the non-attendance rates are 13 percent and 29 percent, respectively[10] . There is concern that children may be forced into work to help restore livelihoods; 4 percent of children aged 10-14 are employed and another 1.2 percent are seeking work.

Figure 3.3 School Enrollment Before and After the Disasters



Source: Susenas 2004, BRR Nias and SPAN 2005.

Map 3.1 Reconstruction of Schools and Primary School Enrollment



Shelter Working Group estimate 82,000 new houses are required based on the IOM damage assessment with adjustments for numbers of survivors; BRR survey in November identified 111,000 new houses required based on each Camat capturing housing requirements from displaced people in their respective sub-district

EDUCATIONAL ISSUES FOR THE COMING YEAR

Some donors prefer reconstructing primary schools due to higher visibility and long-lasting nature of the support, but overlapping is a problem. The reconstruction of primary schools is highly concentrated in urban areas such as Banda Aceh and Meulaboh as well as along the main roads in rural areas, while significant needs remain unmet at the level of junior and senior high schools, particularly in the less accessible rural areas, including Nias. BRR's 'fast-track project' review meetings are increasingly used as a coordination forum. So far, these efforts have led to a redistribution of school reconstruction by various agencies.

There are varying standards of school reconstruction in Aceh and Nias. BRR, supported by UNOPS, is coming up with a set of minimum requirements that GoI will enforce in all school construction projects. This standard will also cover accessibility factors. A workshop on construction standards is planned for early 2006.

Temporary schools will continue to play an important role in a transitional strategy. As families still move around in search of better living environments, the population of school-aged children remains fluid. Demographic mobility is observed in the context of temporary schools before permanent schools are reconstructed.

Coordination, while improving, will need to be tightened further. Currently, there are more than 60 agencies claiming to be working in Aceh's education sector. Many of these organizations were 'cash rich' and keen to start their individual activities with limited need and incentive to coordinate with local government or with other actors. In addition, the lack of clear directions from the representative authorities of different government agencies created confusion and misunderstanding.

Physical bottlenecks will need to be addressed. In a projection exercise, BRR shows that the physical reconstruction of various sectors (including school reconstruction) will reach its peak in the second semester of 2006. A number of challenges are already identified: lack of construction materials (especially timber), the rising price of construction materials (which will affect the target committed by various donors), and a scarcity of skilled workers. BRR, with the help of the sub-working group on construction standards, will share information on construction unit price in order to come up with the most efficient price.

A greater emphasis on providing quality education will mark the rehabilitation efforts. As many teachers have little or no training, both in-service and pre-service training needs to be improved. For teachers in the system, meaningful training should be based on the principle of continuous improvement and periodic supervision and assessment to ensure that the teaching of curriculum subjects is accompanied by appropriate updated teaching methodologies.

Education management systems will need to be strengthened. In addition to improving the physical facilities and quality of educational services, focus is needed to strengthen capacity to manage the education system, to ensure the maintenance and sustainability of quality services. BRR will support the revitalization of the school cluster system for both MoNE and MoRA and the integration of schools in the same cluster where this is appropriate. Both MoNE and MoRA have recognized the need to work in a more coordinated way. To this end a joint strategic plan will be developed early in 2006 to ensure improved coordination and more effective use of limited resources.

The recent signing of a peace agreement between GAM and GoI will extend the rehabilitation efforts to the areas seriously affected by conflict. Currently, most organizations are focusing their assistance on tsunami-affected areas. Yet the number of schools that have been damaged either directly or indirectly (e.g. through lack of maintenance) during the conflict is significant in certain areas. In Bireun, for example, 75 percent of the recorded 239 damaged/dilapidated schools in the district were either burned down during the conflict or suffered from old age or lack of maintenance. The peace agreement provides more security in the area, which might attract communities to resettle and raise the demand for schooling facilities.

HEALTH

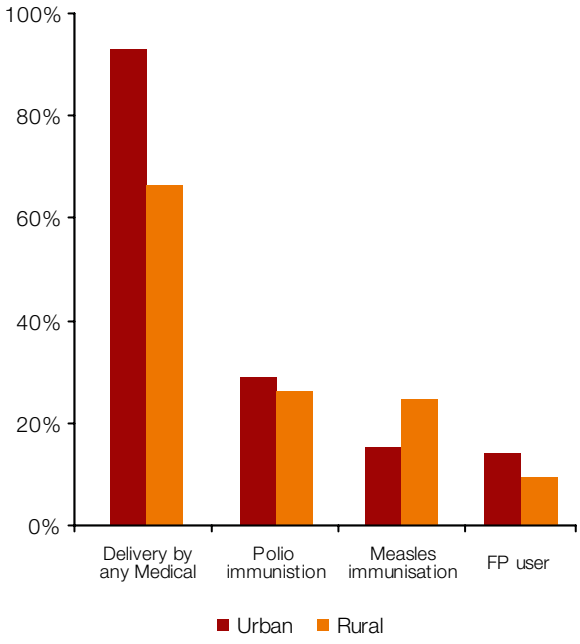
The earthquake and tsunami of 26th December caused widespread destruction in the health sector, damaging or destroying six hospitals, 41 puskesmas, 59 pustu, 44 posyandu and 240 polindes. Seventeen doctors, three dentists, 49 midwives, 30 nurses, two pharmacists and 104 support staff lost their lives. In addition, 489 health staff were still reported missing by the provincial health office in April. In Nias, the March 28th earthquake damaged both hospitals and destroyed 14 puskesmas. In Simeulue, the medical stores were destroyed and 25 of 47 health facilities were either destroyed or rendered unusable.

The disasters caused widespread physical injuries and left hundreds of thousands traumatized, increasing the demand on a depleted health system. The displacement of half a million people with poor quality housing, water and sanitary conditions exacerbated mental trauma and increased the potential for outbreaks of communicable diseases. The widespread devastation of food supplies and livelihoods also increased the risk of malnutrition.

The immediate local and international health response was rapid and substantial. Health services were quickly restored at existing serviceable health facilities through the provision of staff, equipment and medical supplies. Temporary field hospitals were established in areas of critical need. Some resources were provided in more than adequate quantities. By the end of January, field hospitals had bed occupancy rates of only 40-50 percent while some 350 physicians and 500 nurses had been deployed by NGO's, a surplus of 150 and 200 respectively. Despite some oversupply and gaps in service provision, relief efforts were generally well coordinated and successful in preventing widespread communicable disease and famine.

Public health facilities were in a state of neglect before the tsunami. Reconstruction cannot simply aim to replace what existed. Low levels of public investment, poor maintenance and inefficient use of resources meant that pre-tsunami health services did not fully meet the needs of the population and the quality of such services was generally poor. The coverage of key public health programs such as child immunization was low. Rural populations had inferior access to maternal health services.

Figure 3.4 Health Service Delivery in Aceh Before the Earthquake and Tsunami



Source: Susenas 2004

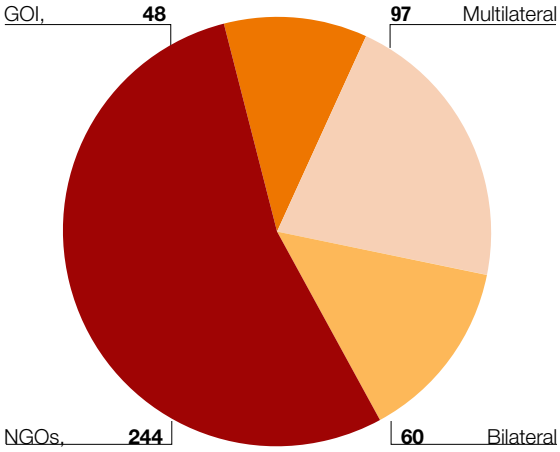
The loss of experienced administrative and health staff has added further capacity-building needs at all levels of the health system. These problems were exacerbated by decades of conflict, which added to disrepair and discouraged staff from working in certain areas. As attention turns to rebuilding the health system, the challenge is to provide sustainable improved quality health services to the population, while at the same time being careful not to overbuild and create a future burden on the Government in terms maintenance and staffing. Reconstruction needs to consider the assistance required by the private sector – more than one fifth of curative services in urban areas and one tenth in rural areas were privately provided before the tsunami.

Conditions that promote increased rates of disease transmission persist. Around 67,500 individuals are still living in tents and are prone to communicable diseases (as well as mental stress), particularly during the rainy season.

PROGRAMS TO RESTORE AND IMPROVE HEALTH SERVICES

The resources available to the health sector are likely to exceed what is needed to rebuild services to what they once were. NGOs and other donor projects may exceed 50 percent of sector funds required for reconstruction. In 2005, UN agencies spent US$44 million out of US$56 million pledged for the health sector, on rebuilding and equipping health infrastructure, capacity building, supporting public health campaigns, providing services and donations in kind such as vehicles (22 ambulances, 46 cars and 450 motorbikes), and cold chain equipment.

Figure 3.5 Composition of Financing in the Health Sector (US$ million)

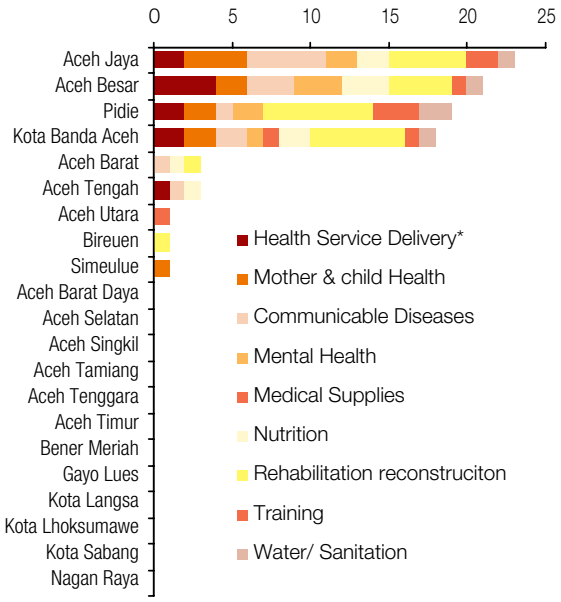


Source: BRR, World Bank staff estimates; see also Annex 6.

NGOs have broadly covered health sector needs in most areas but several gaps are evident. More than 35 NGOs and international organizations are working in the health sector. The chart shows areas of activity and their locations. Comprehensive programs being developed with ADB support aim to reduce inequity and will target gaps.

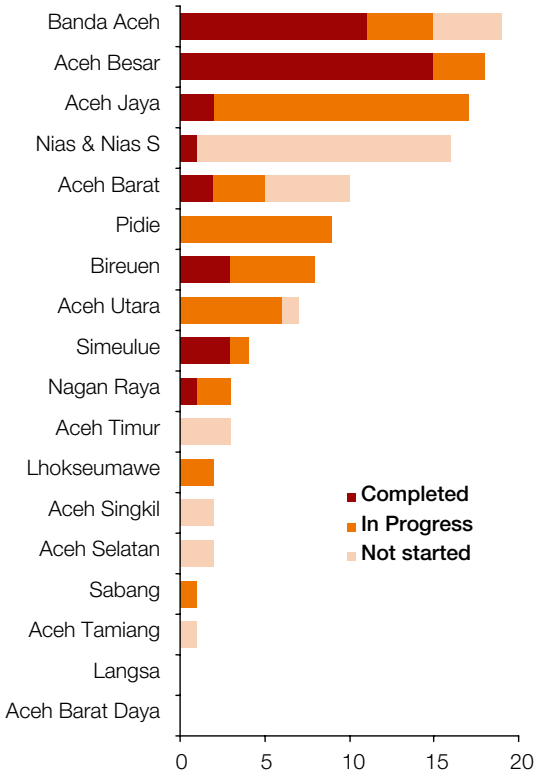
Reconstruction and rehabilitation are underway in most hospitals, supported by donors and NGOs. At Aceh's major referral hospital, Zainoel Abidin, the rehabilitation process has included major works such as rebuilding and equipping the emergency department by AIPRD, which was opened on December 8, 2005. AIPRD is also replacing the pharmaceutical warehouse. KfW have refurbished the polyclinic, operating theatres and provided equipment while GTZ has supported capacity building and systems. The Turkish Red Crescent has rehabilitated the pediatric ward. A master plan has been prepared for the hospital.

Figure 3.6 Number of Agencies by District



Source: BRR and UNIMS, December 2005

Figure 3.7 Status of Rehabilitation and Reconstruction for Damaged and Destroyed Hospitals, Health Centers and Sub-health Centers



Source: BRR and UNIMS, December 2005

Some 70 percent of damaged or destroyed hospitals, health centers and sub-centers are under renovation while 30 percent have been completed. Progress is greater in Banda Aceh and Aceh Besar where transportation networks were less damaged. Reconstruction is slower in Aceh Jaya and Nias. In some areas, NGOs involved in health facility construction are also involved in other sectors and this may delay the progress of reconstruction as higher priority is given to housing. For Nias it is partly due to fewer agencies being involved.

Forty-two satellite health posts have been built (37 by IOM) to serve IDP communities and all are operational. An additional 14 posts were originally planned, but have been deemed unnecessary given the size of the population or access to suitable alternative facilities. Islamic Relief has developed another four satellite clinics and MEDCO one clinic. Several NGOs also provide mobile clinics to IDP locations, notably World Vision, MSF (France and Belgium), AMI France, Yayasan Sosial KREASI, and Union Aid Abroad. Some operational satellite posts have proved popular with non-IDP populations who sometimes by-pass the existing puskesmas and pustu to obtain services. Many staff initially recruited to work in these facilities left the health service owing to non-payment of wages; BRR are now paying salaries.

District health offices and other support services have been assisted in various ways. BRR, WHO, UNICEF, AIPRD, and SCF have continued to support the Provincial Strategic Planning Process for 2005-2009.

The process has involved participation of District Health Offices and BAPPEDA in relevant workshop activities. It is anticipated that the Plan will be finalized for implementation in 2006. An emergency disease surveillance system was established by WHO in collaboration with the PHO to provide weekly reports on the incidence of 9 diseases. Routine disease surveillance is also being strengthened. Capacity building and management training were provided to all districts in Aceh by WHO, UNFPA and Save the Children, as well as other donors and NGOs. Forty-two districts health offices (21 in Aceh and 21 in North Sumatra) were provided with cold chain equipment (refrigerators, freezers) by UNICEF to strengthen immunization services. Save the Children Fund, in collaboration with the Indonesian Midwives Association (IBI) and JHPIEGO, has revitalized 9 clinical training sites in Banda Aceh and three sites in Aceh Besar. WHO has supported four training schools - environmental health and nutrition, dental, nursing and midwifery - in Banda Aceh, a nursing school in Meulaboh and has funded JHPIEGO with US$1 million to support the Poltekkes and Muhammadiya midwifery schools. International Aid has established a Medical Equipment Service Center, opened on November 15 in Kota Aceh, to provide maintenance and support for medical equipment for Aceh province and beyond.

Special campaigns have been undertaken to provide essential health protection. Around 225,000 insecticide impregnated mosquito nets were distributed by various NGOs, WHO and UNICEF. A range of agencies has been involved in vector control and prevention activities e.g., Mentor, World Vision, MSF Belgium and Save the Children. Nearly 4 million children aged six months to 59 months received Vitamin A. UNICEF and WHO assisted health authority to immunize some 1,113,494 children under 15 against measles in March. A national polio immunization

Box 3.2 THE NUSA DIARY: Health

Crisis, what crisis? That's the overall impression of the health situation in Nusa during the year. In the initial emergency phase the village received many more visits from foreign medical teams than their health warranted: doctors from Japan, Germany, the United States and China were amongst those who checked up on the villagers' health. Relatively minor ailments like diarrhoea, itchy skin, respiratory tract infections and mosquito bites were the main problems. It appeared very much to be a case of there being too many medics with little else to do.

A large Turkish delegation set up a well-staffed and well-equipped field hospital in the sub-district in February from where mobile teams visited the village every week for at least six months but no major illnesses or outbreaks of disease were reported. At the end of March, the government opened a clinic in Nusa as part of a larger program. Run by newly-qualified doctors, it was also staffed by nurses, midwives and environmental health officials. There were initially about 15 patients a day but this dropped slightly as the year went by. In August, Red Cross/Red Crescent signs appeared in the village explaining how to maintain basic health standards.

A significant reason for good health standards being maintained was the continuous distribution of basic foodstuffs, primarily by Care International but also by other groups and a little by the government. Many villagers said that without this aid, which continued throughout the year, the health picture would have been very different.

John Aglionby (The Guardian)

day on August 30 succeeded in immunizing 4,853,297 children aged less than five years old. But despite achieving immunization coverage of more than 98 percent, rates in some districts remain below 90 percent (Aceh Barat, Aceh Jaya, Nagan Raya, Aceh Barat Daya, Kota Lhoksemauwe), and the threat of immunizable disease cannot be disregarded (three cases of polio have been detected - in Aceh Utara, Aceh Timur and Lhokseumawe).

The tsunami had a significant impact on women's health and related issues. Women, particularly pregnant women, youth and children living in tents and barracks are vulnerable. Priority has been given to pregnant women in health services and training was given to district, puskesmas and posyandu by agencies including UNFPA, UNICEF, MSF Belgium, and Save the Children to ensure prenatal care and safe delivery. UNFPA and UNICEF have been particularly active. More than 200,000 personal hygiene kits for women have been distributed and sufficient emergency maternal care kits to cover the needs of approximately 500,000 over a six-month period. UNICEF and UNFPA have distributed some 2000 and 500 midwifery kits respectively, in collaboration of the PHO and the Indonesian Midwives Association (IBI). The electronic media (Radio Republik Indonesia, Suara Aceh radio, Suara Muhammadyah radio and TVRI, and Serambi Indonesia daily, have been responsive in supporting messages on reproductive health, gender and mental health. Activities were also conducted in camps and barracks to sensitize officials and residents on gender issues, exploitation and violence. To further support reproductive health and related services, UNICEF is planning to construct 250 integrated health, nutrition and early education centers at the community level, of which 100 will be constructed in 2006. An integrated health and education center, with an attached Polindes and resident midwife, provides a good combination of maternal and child health services at community level and can serve as a vehicle for other health and community development programs such as early childhood development and health promotion programs.

Many disaster victims are still traumatized, and programs are underway to help them. The census indicated that 1.7 percent in Aceh and 2.7 percent of the population in Nias suffered some mental problems as a result of the tsunami and earthquake. WHO facilitated the implementation of psychological support programs to the survivors and the community as a whole through the coordination of agencies working on mental health. WHO incorporated this coordination to support the development and related activities of PHO for the newly developed Community Based Mental Health Services program being finalized by MoH. Many NGOs have provided psychosocial programs including WHO, IRC-Cardi, LDS, MSF, IOM, IMC, Red Cross Red Crescent, CARE, UNFPA, UNICEF and local NGOs and religious organizations. Initial support was in the tents and camps working with survivors and was later extended to the wider community. Programs are of varying quality and give rise to some cultural issues in a few cases.

Box 3.3 Easing the Pain

A team from IMC has been helping 12-year-old Yusuf, whose two sisters and several cousins died in the tsunami. Since the disaster, Yusuf has had post-traumatic stress disorder. In the months after the tsunami he hardly spoke at all, and suffered from palpitations and sometimes lost consciousness.

Time with a clinical psychologist, as well as small doses of sedative and anti-depressant, have helped control the symptoms, and he is now talking a lot more and has gone back to school near his home in Lamno.

"Lamno was very badly hit in the tsunami," says Dr Asare. "Most of the inhabitants have suffered from a range of psychiatric disorders, predominantly post traumatic stress disorder, depression and delayed grief reaction. A lot of them have not received any help. "Through regular community education sessions, we are supporting them to diagnose and manage these illnesses so they know what symptoms to look out for and how to seek help."

Psychosocial support comes in many forms, depending on what communities feel they need. It could be starting up tailoring businesses as in Gle Jong, counseling and community support services such as those at Lamno or organizing sports matches and planning mourning ceremonies. "Our approach is to ask communities what they want to help them move on, and then work with them to put this in place. That way we are following the Acehnese ethos of 'gotong - royong' [working together]," says Dr Mohanraj, an IMC psychiatrist.

Source: International Medical Corps

HEALTH ISSUES FOR THE COMING YEAR

The level of resources available for health sector reconstruction may overwhelm the management and implementation capacity of provincial and district level health offices. While it is positive that so many (particularly NGO) resources have been made available for recovery, the situation requires careful planning and coordination. Coordination of the many actors is a challenge for BRR but agencies must work together to smoothen health infrastructure and service delivery, identify gaps and seek donors and NGOs to respond to identified needs. There is a need to follow up on NGOs who are not known to relevant authorities and ensure that networks are established and that relevant information is shared.

Reconstruction of the health sector requires a holistic approach. The current separation between community based services and hospital services does not support rational development of the Aceh health system, nor does it take into account the role of the private sector in delivering health services and the reintegration of GAM areas. The current structure, role and functions of the health management system as a whole requires strengthening if the reconstruction of the health system is to be sustainable in the longer term. Such a vision is difficult to attain because the structure of local government does not allow for a strong coordinating role of the provincial health office. The separation from hospital planning and delivery and the managerial capacity of district health offices was only beginning to develop after the rapid decentralization of responsibilities to district level, was overwhelmed by the level of international assistance.

While many agencies are engaged in reconstruction of facilities and service provision, comparatively few are concentrating on developing the capacity of district, provincial health offices and hospital management. The re-establishment of the health workforce, building its capacity in both management and improved quality service delivery, and development of an effective plan for transition of services from NGOs to local institutions are all persistent concerns. The development of the strategic plan for the PHO is a necessary first step, but it is not sufficient. Community based health services and hospital services should be more closely coordinated at the provincial level and some of the more difficult structural issues need to be addressed (e.g. job descriptions, career paths, and use of contracts for particular services). While short term gains have been achieved through special campaigns, including an increase in immunization coverage, there is a need to ensure that routine services are strengthened. This will require support from the provincial administration.

There is inadequate planning for maintenance and sustainability of what is being built. Many NGO budgets do not accommodate recurrent costs, yet much of the reconstruction envisages improved facilities demanding more staff, equipment and running costs. A medium-term expenditure framework that takes into account the recurrent costs of current capital investment and explores different options for financing the health sector needs to be developed.

The lack of functioning information systems prevents a clear assessment of which agencies are supplying what services to different populations. The health sector will need to establish a consistent information base from which to plan and monitor services, including routine information systems, periodic surveys, sentinel sites, and effective surveillance systems (including nutritional surveillance). It will be important for BRR to draw on existing resources for monitoring and evaluation rather than set up duplicate systems, and ensure that information is also available to those who provide the data.

Health services need to be extended beyond tsunami-affected areas. The health sector needs to be responsive to the needs of populations affected by the tsunami while also establishing clear and fair guidance on the extent to which services can be offered to all citizens of Aceh and Nias. The peace process should enable many more services to be expanded into areas that previously were deprived owing to the conflict. Nutrition interventions may now be expanded to cover non-IDP populations. Other services may also be needed to be made more accessible to communities not directly affected by the tsunami, particularly where populations have inferior health indicators.

The risk of communicable disease outbreaks remains. Large population movements, including displaced families, military personnel, returning combatants and international aid workers, can potentially increase the risk of MDR-TB, HIV transmission and AIDS. There is a need for effective surveillance systems and active programs against communicable diseases. In connection with HIV transmission, there is a need to strengthen safe practices, for example with syringes and blood transfusions. Another challenge is the occurrence of avian influenza and the need for a multi-sectoral approach to deal with it.

WATER AND SANITATION

The earthquake and tsunami severely damaged the limited water and sanitation network. The damage included treatment installations, water tankers and vacuum trucks, the piping network, and wells. Banda Aceh's only sludge treatment facility was destroyed. Local level drainage was rendered ineffective, exacerbated by earthquake-induced land settlement. Many of the widely used shallow wells and aquifers in coastal areas have become contaminated and saline; it is unknown when they will stabilize or decontaminate. The greatest damage was suffered by individual households with more than 150,000 homes being destroyed or so severely damaged they lost water supply and sanitation facilities.

Damage impacted human resources and the ability to respond. Twenty-eight municipal water utility (PDAM) staff lost their lives, many of whom were department heads. The loss of the capacity of local governments and PDAMs precluded rapid restoration of the larger networks. However, the government, NGOs, donors, and local communities reacted swiftly to provide basic services. Their response focused on providing emergency water and sanitation services to more than half a million people initially displaced by the tsunami. Basic water and sanitation needs are now largely being addressed in all affected areas, including the needs of those living in tents and barracks. The absence of outbreaks of water and fecal-borne disease confirms the success of these efforts. However, some of the early work, notably for the temporary living centers (TLCs), was designed to be temporary, and now needs to be upgraded.

The water and sanitation infrastructure throughout the province was in poor condition before the tsunami. Years of conflict limited investment in urban networks, and reduced access to services in rural areas in Aceh. The PDAM for Banda Aceh was estimated to have less than 30 percent service coverage. Over the entire province, only 9 percent of the population had piped water connections. In general, PDAM service was irregular and water quality poor. Much of the equipment was in neglect. The utilities were in debt, and institutional capacity was low. Urban residents within the PDAM coverage still relied on private vendors and shallow wells for drinking water. All sanitation in Aceh was on-site, mainly using septic tanks or pit latrines, both in urban and rural areas. A central challenge for reconstructions is not simply to build back as before, but to build back facilities that adequately serve the needs of the population and to develop systems that enable their efficient continued operation.

Relief agencies and NGOs are still providing basic water and sanitation services to IDPs living in tents and barracks or other temporary housing. The focus now is to move these IDPs into TLCs. There is also a need to build more TLCs and upgrade their services. 'Umbrella' service delivery approaches are now being coordinated, where one agency is responsible for all services (water, sanitation, drainage, solid waste, etc) at an assigned TLC.

PROGRAMS TO RESTORE AND IMPROVE WATER AND SANITATION SERVICES

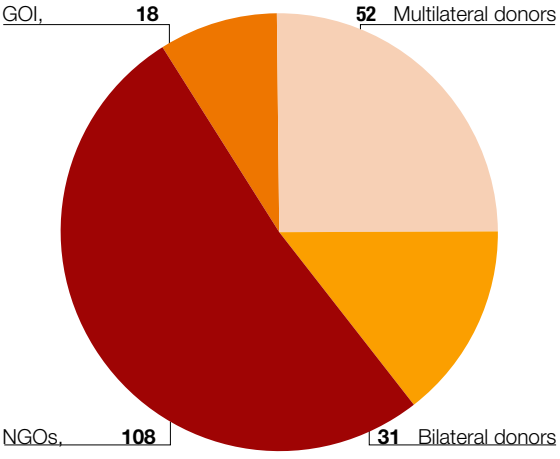
Not all needs will be met with available funding. Available funding from NGOs and donors for water and sanitation activities in Aceh and Nias is estimated at US$213 million. The majority of funds originate from

NGOs and internal agencies. The damage and loss assessment estimates are US$64 million, or US$77 million when adjusted for inflation. These indicate a sector balance of $137 million, and $131 for core needs. But this 'surplus' is calculated on the cost of building back the previous, vastly insufficient piped water system, and poorly designed and unsustainable on-site household water and sanitation services. Building water distribution and sewerage networks and household level infrastructure that is adequate for current and future needs will require more funds than the replacement costs of the original assets. The need may be even greater if the current ad hoc and decentralized nature of program delivery persists and issues of inadequate coordination, strategic planning, and technical capacity are not addressed.

Several programs to restore and improve services are planned or operational:

- **Rehabilitation of drinking water treatment plants.** The Swiss Government is financing the rehabilitation of the main Lambaro water treatment plant while UNICEF and GTZ are financing works at Siron 1 and Siron 2 with both supplying water to Banda Aceh and Aceh Besar. UNICEF is planning to repair 20 other water treatment plants in Aceh. The Spanish Red Cross has repaired and increased the capacity of the intake of the treatment plant in Meulaboh.

Figure 3.6 Composition of Financing in the Health Sector (US$ million)



Source: BRR, World Bank staff estimates; see also Annex 6

- **Design and reconstruction of Banda Aceh's piped water network.** The primary and secondary water supply network for Banda Aceh is being rehabilitated over the next 10 months with support from JICS to the value of US$5 million. The 177 km network will follow the existing alignment, and will include pipes, valves, water meters and standpipes. The new network is designed to supply 90 percent of the 279,000 projected population of Banda Aceh (2009) through house connections.

- **Rural water supply.** The ADB has allocated US$27 million for rehabilitation of community water supply and sanitation facilities, and construction of new facilities based on community demand, coupled with capacity building and training of water, sanitation, hygiene and health staff at provincial, district and village level. It is also providing hygiene and sanitation programs for communities.

- **Rehabilitation of Banda Aceh's septic sludge treatment plant.** Repairs and upgrades to the original sludge treatment plant were scheduled to be completed by mid-December (funded by JICS/JICA), increasing the original capacity from 30 to 50 cubic meters per day UNICEF is financing a new sludge treatment plant (60 cubic meters per day capacity) to be built next to the existing plant in 2006.

- **PDAM capacity building**. Training for PDAMs has been initiated by UNICEF, USAID-ESP, IRD, Switzerland (the City

of Geneva), and Netherlands/SAD-SAS, focusing initially on the operation of new equipment and later for longer-term programs.

BRR's infrastructure program unit is now fully established. It is engaged in seeking and coordinating donor support, and reviewing and prioritizing proposed programs. It aims to (i) forge working partnerships with provincial dinas, (ii) work with local governments who are operating at significantly reduced capacity, (iii) mobilize the right mix of technical assistance and human resources to implement projects (iv) establish and enforce design standards and guidelines including those agencies engaged in housing projects (v) develop the spatial, planning and strategy documents to guide infrastructure programs and to coordinate donor assistance.

Solid waste management (SWM) programs have been established to support reconstruction. Following the dramatic initial post-tsunami clean-up by local authorities, the UNDP implemented a successful program of tsunami waste clean-up, focusing on recycling of solid waste. All shelter providers have been instructed through BRR guidelines to allow for provision and financing of SWM systems, including local collection points, and planning for collection and disposal. The spatial planning and local government reconstruction program objective is for each settlement to have a basic SWM collection system and designated sanitary landfill for disposal.

Box 3.4 THE NUSA DIARY: Water and sanitation

NGOs responded commendably well to the return of displaced families to their damaged homes. Within weeks Mercy Corps, Oxfam and Islamic Relief were on the way to completing eight toilet blocks and a public outdoor washroom.

Clean fresh water was more of a problem. The government water utility reconnected the water supply by early February but its operation proved inconsistent until the third quarter of the year when a 4 km- pipe connecting Nusa and a few other villages to the newly-repaired plant was finished. Until that happened, villages had supply problems because the water from the 20-plus wells which were sunk quite regularly became too saline to drink, even after boiling - leaving people with little choice but to walk several hundred meters to the closest source of water for clothes washing since the water tankers - usually sent daily by Islamic Relief - only provided enough for drinking and cooking.

A large part of the problem was because the fields were still being regularly flooded with seawater in October due to a critical floodgate remaining unrepaired. This gate regulated water flow to the fields around Nusa and several other villages and its prolonged state of disrepair not only increased the salinity of the groundwater but also meant hundreds of farmers missed the 2005 rice-planting season. Even in October, Public Works officials could shed no light on when it might be repaired so, Care International and Mercy Corps were amongst those considering taking over responsibility for the project.

The accelerated progress of housing construction is often outpacing local development planning and water and sanitation provision. In urban and semi-urban areas, poorly planned housing will create risks, including inadequate water and sanitation infrastructure, difficulty tapping into

the network, and the need for costly retrofits of infrastructure.

Not all completed work complies with established standards. Field surveys indicate poor quality of sanitation work, with septic tanks built too close to shallow wells, or overflowing into open drains. Opportunities to utilize communal septic tanks are being missed. The relative difficulty of constructing proper sanitation (versus water supply) is creating an imbalance – with some shelter providers neglecting sanitation. Water and sanitation design standards (from the Ministry of Public Works) exist, but are not well known or utilized by some agencies involved in shelter work. Septic tanks will be the sanitation choice in urban areas – the correct design, layout and construction is a top priority, as this will establish the foundations for public health till 2030.

ISSUES FOR WATER AND SANITATION

There is a lack of spatial plans at the district level to guide water, sanitation and shelter construction. Until this is addressed, houses will be built without network connections, infrastructure will later have to be retrofitted, and some major works will simply be put on hold. BRR alone does not have the capacity to undertake or assist the participants in this complex task, but this is a key bottleneck for all infrastructure and housing. ADB will provide support for village-level and kecamatan reconstruction planning in severely affected ones. Work on this is already underway in one kecamatan.

Accurate base maps are still not available. There is a need for maps to a scale of 1:1,000, with 0.25-meter contour intervals for infrastructure work in urban areas. Ground levels are reported to have changed in many

Box 3.5 Piping Water to Villages

Trócaire and its partner Catholic Relief Services (CRS) collaborate with other NGOs to improve conditions for the people living in the hills of Aceh Besar. What is happening today is true community mobilization and community spirit.

Every village has to provide 20 men who will work on the pipe laying operation, connecting pipes, often digging the ground and at times building bridges to carry the supply. The water is taken from high in the hills and the piping will cover 33 km, a huge distance in rugged territory. The communities are helping each other and have not received any money for their work.

Pak (Mr.) Din and his friends have been working there since April. “Before the tsunami we were fishermen but now we are training to lay pipes and we will go home to our respective villages and teach others,” he says. “Our village once had 351 people and now there are only 130 left so we must help provide a better quality of life for the survivors.”

The water will be piped into each of the 22 villages covered by the scheme where a communal filling station will be located. Each household will have the opportunity to take their own feed from the pipe and run water into their individual houses. “Before the tsunami, each house had its own well but now all the wells have salty water and are unusable,” says Pak Din.

areas, sinking up to 0.4 to 0.6 meters in Banda Aceh. The implications for the water table changes and provision of sewerage and local level drainage are formidable.

A strategic plan is needed for implementing essential water and sanitation works. The large volume of donor projects and the need to initially focus on relief operations have made it difficult to efficiently allocate responsibilities, coordinate donor works, enforce uniform minimum design guidelines, and ensure overall water and sanitation sector needs are covered.

Existing databases are not yet effective budgeting, programming, monitoring and coordination tools. UNICEF is funding a rapid district level appraisal which should yield results before the end of 2005 and serve as a base for future monitoring. Improving data collection and monitoring will improve sector coordination, project selection, asset management, and quality of works.

Technical assistance is needed to support project design, review and preparation works. Preparation work is beyond the scope of BRR's mandate and the sheer volume of proposals submitted for review is already taxing. Local governments, utilities, and the provincial technical agencies lack the resources to handle the load. Donor support is urgently needed in these areas to ensure BRR's budget for 2006 (US$600 million) is adequately programmed, earmarked, and effectively managed and disbursed.

The capacity of local governments and water utilities is insufficient to address the reconstruction demands. All reconstruction activities need to address capacity building to ensure local governments can manage facilities in the future. A key task will be balancing the appropriate mix of local government or utilities involvement, with the recognized need for a more turn-key approach to service provision. BRR's preliminary proposed sector strategy is to create a new urban water supply utility as part of the reconstruction, rather than assume that former PDAMs will be rebuilt and re-staffed, and carry on in the same way as before the tsunami.

The sector is still difficult to coordinate. UNICEF was charged with coordinating the emergency water and sanitation activities, and has continued to play a key role in sector coordination after the emergency phase. Cross-sectoral coordination, especially with agencies involved in housing projects, has begun to be addressed since the establishments of BRR. However, many projects pre-date BRR, so the sector is still largely decentralized.

There is a need to develop institutions not just infrastructure. Future efforts should focus on operations, management, efficiency and PDAMs' financial sustainability. The strategy should take forward the lessons of PDAM reform elsewhere: commercial behavior, management autonomy, customer orientation, capacity building and regionalization of small non-viable PDAMs. The regional PDAM of Medan in North Sumatra may be an example to follow. New efforts to emphasize corporate governance and public disclosure of efficiency indicators to make PDAMs more accountable are necessary. Rescheduling or writing-off PDAMs' debts should be implemented, and the phasing out of operational subsidies over the time should be considered. In rural areas, the community-based model, with communities fully in charge of choosing and managing the appropriate facilities should be encouraged (see chapter 1).

Greater emphasis needs to be given to sanitation. The lack of demand and political will for improved sanitation, low willingness to

pay, and the lack of priority given to sanitation has resulted in low coverage and only small scale successes. Public awareness for sanitation and environment, and public health and hygiene training should be launched without delay, with a strong focus on the responsibility of local government to improve sanitation services, treatment and disposal, and to facilitate the development of sustainable service delivery. The reconstruction phase will enable supporting agencies to work with local stakeholders to adopt a range of new models exploring sanitation marketing, hygiene and solutions for meeting the requirements of condominiums in urban and peri-urban areas. The community-based sanitation system developed over recent years provides a locally-devised model for urban sanitation that is achievable within a few years and can be developed alongside more conventional approaches and on-site sanitation. A critical element of a successful sanitation strategy, which is often overlooked, will be to develop sustainable sludge removal and treatment systems.

Local level and major basin storm drainage is a big challenge, exacerbated by the changes in ground levels. While water networks are relatively flexible to retrofit in the absence of mapping and planning – drainage systems depend on levels and layouts. Until progress is made (including with the design of roads to dictate local street level drainage), flooding will be a significant problem affecting public health and progress of the shelter reconstruction program.

TRANSPORT

The earthquake and tsunami destroyed extensive portions of the transport infrastructure, with the west coast road in Aceh suffering the most damage. About 454 km of national, provincial, and local roads were severely damaged or washed out and will need to be rebuilt. Banda Aceh alone reported that 380 km of secondary urban roads were severely damaged. Throughout Aceh and Nias coastal bridges were completely washed out or severely damaged and will need to be replaced. Among the 19 seaports in Aceh and Nias, 14 were classified as badly damaged. This, combined with the damage to the ferry terminals and inter-island boat stations, has limited small boat or landing craft type (LCTs) vessel access in many places. Of the 10 airports in Aceh and Nias, eight were damaged. On the island of Simeulue, four were badly damaged, leaving two inoperable.

The early response ensured that relief operations could be conducted. The Ministry of Public Works and the Indonesian Army carried out emergency works to reestablish strategic transport links on the west coast, including placement of an extensive system of temporary bridges and construction of 40-50 km of new temporary by-pass sections. Temporary Bailey bridges were established on the Tapaktuan-Bakongan link, access roads were reestablished from Lhok Nga to Meulaboh, and emergency work was conducted on the Banda Aceh to Meulaboh link.

Emergency repairs are failing and delaying relief and reconstruction work to communities on the west coast. The

Indonesia Army did a commendable job restoring access through emergency road works. The emergency repairs were mainly temporary, and critical sections of the west coast road are already crumbling, with the quick fix coconut timber bridges not sufficient for current loads and volume. Some sections of the west coast road are again impassable due to on-going tidal over-flooding, damaged sea defenses, and heavy rain. Many communities along the west coast are now only accessible by boat, with overland routes cut-off. These areas require urgent repairs to ensure supplies can be delivered to support ongoing and future relief and reconstruction work. The Multi Donor Fund is financing an immediate Action Plan in an effort to prevent a severe logistics bottleneck, impacting both reconstruction and on-going relief operations.

The maintenance of emergency roads exceeds the current capacity of local and provincial governments. To date, implementation of transportation programs coordinated through BRR has lagged. Hence, to ensure flow of supplies for their projects, most road rehabilitation activities are being implemented separately by donor agencies and NGOs, many of which are not infrastructure specialists.

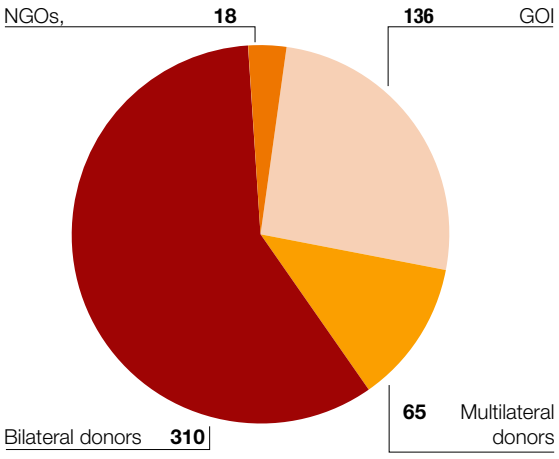
Only small portions of the roads on the eastern coast were affected by the tsunami, but the heavy volume of overloaded trucks is accelerating the pace of damage to the network. Maintenance is critical, and pavement strengthening is required to handle the expected traffic volumes.

Most of the access roads connecting communities to the west coast road were washed out. With a major realignment planned for the new road from Lamno to Meulaboh under USAID funding, the need for new access roads will be substantial. Currently, there are very few programs for reconstruction of the substantial number of access roads which will be needed.

RESTORING TRANSPORT SERVICES

BRR is updating the GoI master plan for transportation in Aceh and Nias. Transportation projects are currently being developed in the absence of a coordinated regional transportation plan. Local governments and BRR are in general agreement on the vision of the future transportation plan, and BRR has prepared a list of road projects as a basis for the 2006 budget. However, official planning documents with project justification, prioritization and backup information have not yet been drafted. An initial appraisal of the damage to the kabupaten roads network is expected to be conducted as early as December 2005. This will be extended to Nias. Should any gaps be found in the provincial road network these should also be met. This is a positive step forward and the information will be utilized to assess the requirements of the FY2006 program.

Figure 3.9 Composition of Financing in Transport (US$ million



Source: BRR, World Bank staff estimates; see also Annex 6

BRR has a budget of US$ 61.972 million for transportation for Aceh and Nias in FY 2005. Tenders have been issued and the execution of projects will be carried out by the provincial dinas. The minister of public works has appointed project managers for roads and bridges projects, while the minister of communication will appoint project managers for land, sea and air projects. In the FY 2006 budget, BRR has a budget of US$61.972 million. The budget covers important links to and within the central part of Aceh. These investments are important both for transport reasons and for equity reasons to balance the major investments in the coastal regions.

Map 3.2 Rebuilding Aceh Transport – Current Works, Critical Issues, and Solutions

PROGRESS IN TRANSPORT

Road reconstruction from Banda Aceh to Meulaboh has begun. USAID has signed an MOU with the Ministry of Public Works to reconstruct the roads from Banda Aceh to Meulaboh. The road alignment from Lamno-Meulaboh will be a new alignment, which is still under selection. The new road will be Asian Highway Standard (seven-meter carriageway with two-meter shoulders) and will be 240 km long. The construction period is proposed as four years. The project will be implemented in two phases. Phase 1 (80 km) will undertake rehabilitation of the section from Banda Aceh to Lamno, with construction lasting a period of one year. During the period of construction, the contractor will repair and maintain the existing temporary road, although bridge strengthening is also needed to ensure the passage of 20 ton trucks. This program is progressing on schedule and the road from Banda Aceh to Lamno should be complete by August 2006. Phase 2 (160 km) will extend the road from Lamno to Meulaboh along a new alignment – the alignment selection process is underway and is expected to be finalized soon. However, the design is likely to take six to 12 months to prepare before tendering for construction works can take place.

Rehabilitation of the existing road (115 km) from Calang to Meulaboh is a priority. Japan International Cooperation System (JICS) has committed US$45 million to rehabilitate the existing road (115 km) from Calang to Meulaboh. JICS is procuring the civil works contractor, and the design and supervision team is already in place. Bridge strengthening and replacement should be a priority under this contract to ensure 20-ton truck passage along this route as soon as possible.

Repairs to east coast road between Banda Aceh and North Sumatra are also being addressed. The Asian Development Bank plans to spend at least US$17.8 million to rehabilitate and repair the 490 km east coast road between Banda Aceh and the border with North Sumatra. This route is heavily trafficked and many of the trucks operating on it are significantly overloaded. Because of funding constraints, rehabilitation will mainly be for selective parts of the section between Banda Aceh and Sigli; essential repairs will be undertaken for the remaining sections. It is likely that, once the rehabilitation and repairs are completed and traffic normalizes, this route will likely need full reconstruction. In addition to the east coast road, the ADB will also finance a comprehensive rehabilitation program for the access roads for Krueung Raya and Ulee-Lheue ports.

Small scale bridges, secondary roads and other transport investments are key constraint to delivering the reconstruction program. Currently, the movement of supplies into and throughout Aceh is extraordinarily challenging. This is hampering humanitarian and reconstruction efforts in the areas of food, water, and housing. As a result, several NGOs, most notably Catholic Relief Services and the International Federation of the Red Cross, in cooperation with BRR, are undertaking to support the operations.

Funding for airports has been committed but reconstruction has barely started. A preliminary assessment has determined that due to difficult access and road conditions there is an immediate need to repair the existing airports, and to develop new temporary basic landing facilities in order to reach these affected areas. This will allow the use of fixed-wing aircraft which are more economical to operate than the current helicopter system operated by UNHAS and private operators. There is committed funding for the following airports for FY2005 through BRR: Meulaboh,

Sabang and Rembele, but there is no sign of work having started. Construction work at Singkil Airport was temporarily halted during the last three months for budgetary reasons, but is expected to resume during FY2006. BRR funding for Sinabang is committed for FY2006. Also programmed for FY2006 are the airports at Tapak Tuan and Pulau Tuanku, However, there is no committed funding for these airports.

Handling capacity at affected ports is slowly being restored. Measures include:

- Refurbishment of the ferry terminal and general cargo berth at Ulee Lheue: partly operational by the end of 2005
- Refurbishment of the ferry terminal at Balohan
- Construction of a jetty at Malayahati by government of Netherlands, operational within a few months
- Construction of a jetty at Meulaboh by Singapore Red Cross
- Repair of facilities at Sabang, to be operational within a few months
- New facilities for cargo and fish landing at Lamno
- New facilities at Calang, Sinabang, Nias, Meulaboh

Construction of new facilities will take time to complete and, to meet immediate requirements for landing facilities (particularly in view of the volume of aid and reconstruction materials), plans are on hand to immediately construct foreshore ramps for the use of landing craft at Calang, Meulaboh, Malayahati and Sinabang.

Sea transport plays an important role in the ongoing relief but also the recovery effort. Much of the relief effort is transported by two 400 ton capacity Landing Craft Transport (LCTs). These vessels, operated by WFP, are being fully utilized and are the main transport mode for movement of cargo outside the greater Banda Aceh area. They presently carry food and, will continue to perform that function but excess space will be used for other cargo. There is no accurate projection of how much cargo must be brought into Aceh by sea, but this is being actively researched by BRR. In view of the magnitude of the rehabilitation and reconstruction effort, it appears the number of landing craft that are currently available will be inadequate.

TRANSPORT ISSUES IN 2006

More coordination is needed to achieve appropriate standards and joint objectives. Coordination of donor works and proposed projects has improved. There was a difficult transition period as BRR assumed responsibility for coordination, planning, and programming of transportation projects – carrying out many of the functions previously dealt with by the Ministry of Public Works (national roads) and the provincial dinas binamarga (provincial roads). BRR's vision is to work closely with NGOs, donors, and provincial authorities to plan and deliver the needed construction.

There is no updated regional transportation development plan. BRR, donors, and NGOs are implementing projects, but not according to a plan that prioritizes projects, coordinates aid and allocates budgets, or one that takes into consideration local access roads.

The dinas binamarga lost 39 percent of its staff in the tsunami, and this loss, coupled with budget issues and the enormous reconstruction demands, has significantly reduced its capacity for design and supervision activities. There is a pressing need therefore to provide BRR with a team of project management experts, as well as engineering design and construction

supervision expertise to support the provincial processes already in place.

Maintenance and repairs are critical to avoid a logistics bottleneck and keep earlier emergency roads and bridges functioning. Priorities are the whole of the west coast, the sections most in need on the east coast and the more strategic of the central provincial links such as those out of Meulaboh. Emphasis should also be given to increasing the load capacity of existing bridges since many are only five to six tons. Key sections should be upgraded to accommodate 20-ton loads. The delivery in March 2005 of more than 1,000 meters of Bailey bridges from NATO has not been fully utilized and can be used to assist in these efforts, along with the on-going maintenance efforts of the JICS and USAID. The provincial network too must not be forgotten, especially the two inland links from Meulaboh to Geumpang/Keumala and to Takengon.

Fuel supplies outside the greater Banda Aceh area are in short supply. Fuel is scarce, limiting the effective range of land, air, and sea transport operations. Fuel shortages for civil works outside the Banda Aceh area is also constraining construction activities and ensuring availability of adequate shipments and storage facilities is required. Currently, contractors, NGOs and international aid agencies often have to negotiate with Pertamina (the national fuel supplier) for specific shipments on an ad hoc basis.

The road network needs to be extended to non-tsunami impacted areas. Future works also need to support the recent peace process, by improving the transportation links to more remote areas that were neglected during the conflict.

Immediate repairs and improvement of access to ports is critical. Supplies must continue to flow for reconstruction work. A long-term strategy also needs to be developed to define the role for the private sector in port development and management.

NOTES

[8] UNICEF: 830,000 students, Save the Children: 150,000 students, 5,000 teachers.

[9] UNOPS: “Structural Survey of School Damaged by the Tsunami and Earthquake in Aceh.” March-August 2005.

[10] Children never attending school and children who have dropped out, SPAN 2005

Part I

ONE YEAR AFTER - WHERE DO WE STAND?

Chapter 4 | SUSTAINABLE GROWTH

Long-term prospects for the people of Aceh and Nias depend on achieving sustainable growth by creating steady employment opportunities and lifting people out of poverty. Inevitably, the loss of life, destruction of housing, displacement of communities, damage to infrastructure and disruption to public services that overwhelmed Aceh and Nias following the disaster, severely affected the economy and environment. Economic impacts became evident in the loss of productive assets, a decline in per capita income, rising prices of goods and services, an increase in the share of non-performing loans, and rising reconstruction costs. The environmental impact was immediately evident in the significant waste crisis left by the tsunami (more than six million cubic meters of solid waste and debris) as well as damage to marine eco-systems, agriculture and mari-culture lands.

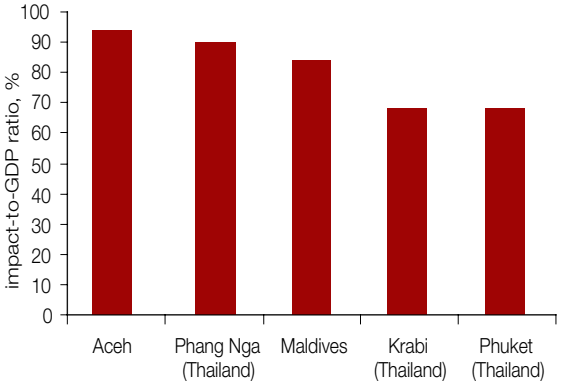
The sustainable growth of Aceh and Nias will depend largely on the removal of the obstacles affecting the long-term development of the region. Many of these constraints were present prior to the disaster. Policy actions will need to focus on modernizing the economy, diversifying exports, capitalizing on the peace agreement, improving the investment climate, and maximizing employment opportunities.

Sustainable growth and livelihood opportunities are only possible if immediate economic recovery and long-term development are environmentally sustainable. The reconstruction phase itself presents environmental challenges that need to be carefully considered – first and foremost, the potentially damaging effects of the increasing demand for timber and masonry. Environmentally-sustainable reconstruction and development will require planning and good coordination among the actors involved. Only if the economic and environmental issues go hand in hand will the region prosper.

THE ECONOMY

The impact of the earthquake and tsunami was greater in Aceh than in any other province of the affected countries. The impact (damage and losses) to GDP ratio in Aceh province comes close to 100 percent. It is followed by Phang Nga province in Thailand (90 percent), the entire Maldives (84 percent), and Krabi and Phuket in Thailand (68 percent each), as Figure 4.1 indicates. The impact of the March 28, 2005, earthquake on Nias and Nias Selatan has been less than 10 percent of the total economy of North Sumatra province. The total impact, relative to the overall size of the economy in Indonesia, is about 2 percent. It is higher than in India (0.2 percent) and Thailand (1.4 percent), but much lower than in Sri-Lanka (7.6 percent) and the Maldives (83.6 percent).

Figure 4.1 Province-Level Impact-to-GDP ratios, %



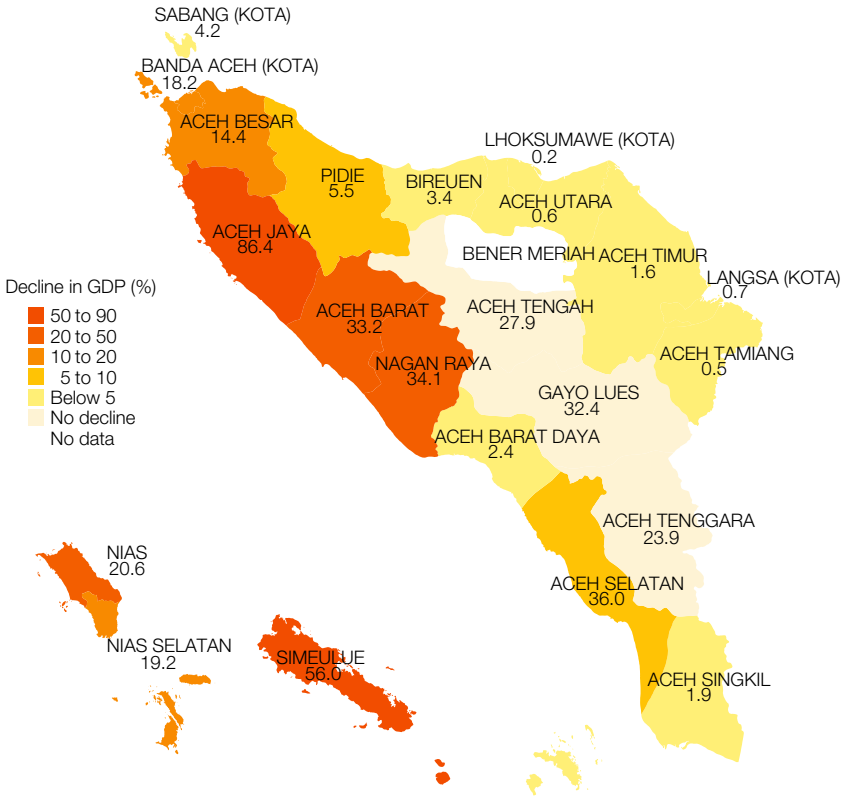
Source: World Bank Staff calculations

GROWTH

Current estimates indicate that in 2005 Aceh's GDP will decline by about 5 percent, and Nias's GDP will decline by about 20 percent. However, these aggregate numbers conceal substantial variation of the impact across kabupaten (Map 4.1)[11].

In Aceh, the estimated impact on GDP varies from about a 0.5 percent decline in Aceh Utara and Aceh Tamiang to 56 percent and 86 percent declines in Simeuleu and Aceh Jaya respectively. In Nias island, the impact on GDP is estimated to be relatively equal between the two kabupaten, with a 21 percent decline in kabupaten Nias, and 19 percent decline in Nias Selatan.

Map 4.1 Projected Decline in 2005 GDP (%), by kabupaten



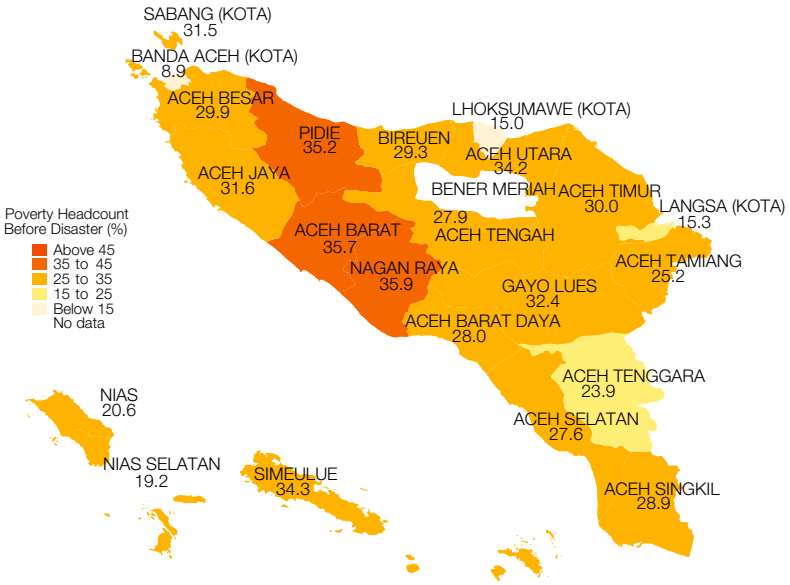
Source: World Bank staff estimates

POVERTY

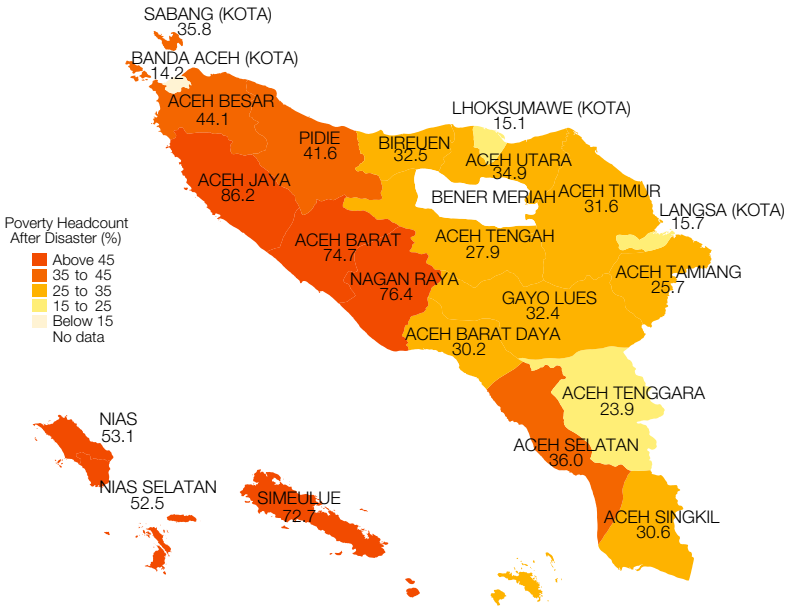
Some 325,000 people in Aceh, and 149,000 in Nias and Nias Selatan combined will fall below the poverty line in the absence of mitigation mechanisms[12]. The actual pre-disaster poverty headcount vs. estimated post-disaster poverty headcount by kabupaten is presented in Figure Map 4.2[13]. It is important to bear in mind that the estimated increase in poverty does not

Map 4.2 Poverty Headcount Before and After the Disaster, %

Panel A. Poverty headcount before the disaster



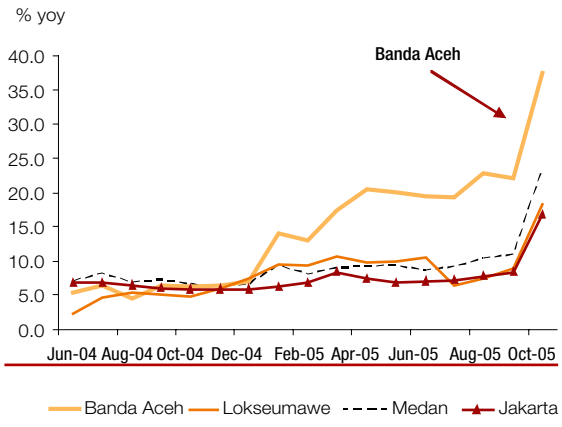
Panel B. Poverty headcount after the disaster



Source: World Bank staff estimates

take into account the mitigating impact of food aid, cash-for-work programs, and other mechanisms of lifting people's welfare. The estimated increase in poverty is also likely to be temporary rather than permanent. However, these estimates can definitely serve as a good proxy for the increase in the number of people vulnerable to poverty.

Figure 4.2 CPI Trends (Various cities)



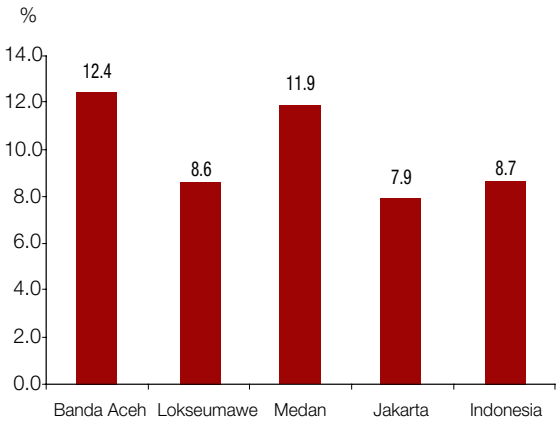
Source: BPS, World Bank Staff calculations

Inflation

Since the tsunami, prices in the affected regions have increased more sharply than the national average. The most dramatic increase has been in Banda Aceh, which serves as the regional hub for the reconstruction activities. Year-on-year inflation in October 2005 reached 37.5 percent in Banda Aceh, 23.4 percent in Medan, and 18.3 percent in Lhokseumawe, compared to 17.9 percent nationwide (see CPI trends in Figure 4.2). The major increase in prices occurred immediately after the tsunami. During the first four months the CPI in Banda Aceh registered an increase of 14.7 percent. The increase in prices during this period was mostly driven by damaged or destroyed roads and supply constraints. For instance, the cost of one-way transportation between Banda Aceh and Meulaboh rose from Rp 30,000 in December 2004 to Rp 350,000 in January 2005, before declining again to Rp 150,000 in April.

Prices then stabilized but increased dramatically with the fuel price hike. After the substantial increase immediately following the tsunami, prices stabilized as transportation improved and market supply of major goods increased[14]. Between April and October 2005 prices in Banda Aceh increased by only an additional 3.5 percent, making the total price increase since December 2004 an estimated 18.7 percent. The nationwide fuel price increase in October dramatically increased

Figure 4.3 CPI Increase in October 2005

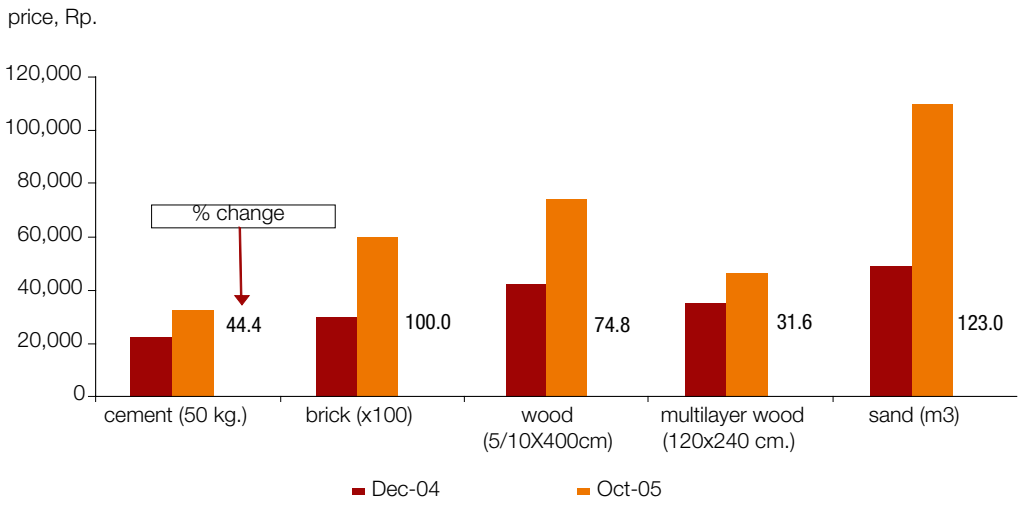


Source: BPS, World Bank Staff calculations

prices in the disaster-affected region. The CPI index in Banda Aceh increased by 12.4 percent during October alone, a figure much higher than the nationwide increase (Figure 4.3). This spike in inflation contributed to the overall increase in prices in Banda Aceh of 33.6 percent since December 2004[15].

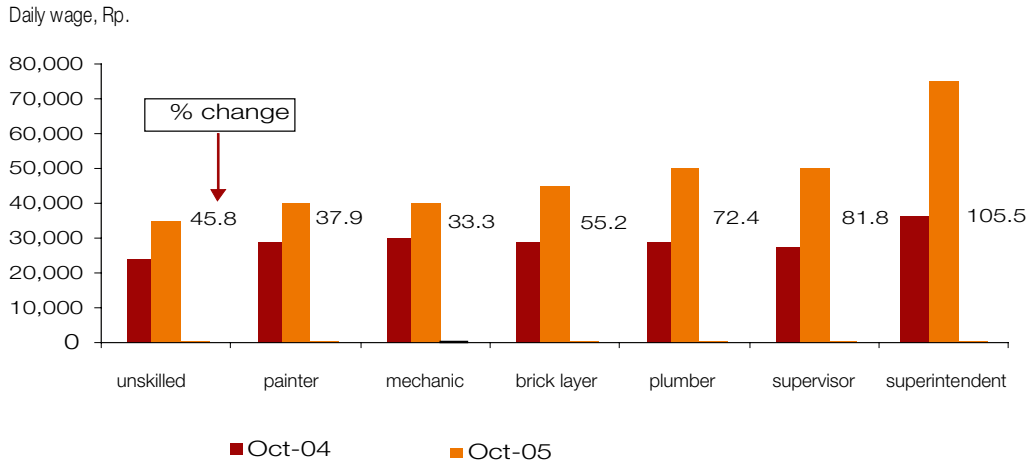
The transition from the relief to reconstruction phase pushed up the prices of construction materials and construction workers' wages. Since December 2004, prices of materials increased on average by about 50 percent (see

Figure 4.4 Prices of Selected Construction Materials, Oct. 2005 vs. Dec. 2004



Source: BPS, World Bank Staff calculations

Figure 4.5 Construction Workers' Wages, Oct. 2005 vs. Oct. 2004



Source: BPS, World Bank Staff calculations

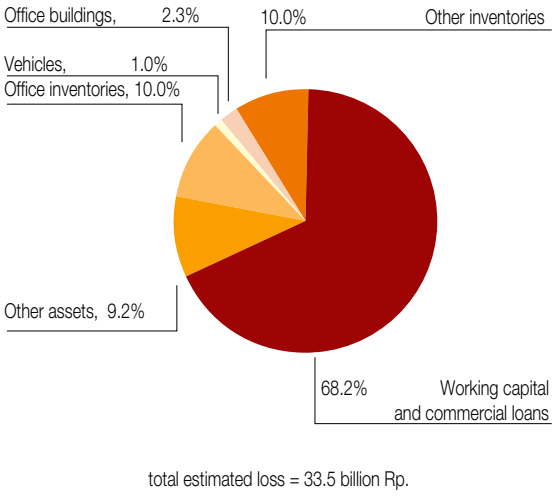
Credit

The banking system responded rapidly despite significant loss and internal difficulties. The actions by Bank Indonesia (the central bank) in the aftermath of the tsunami resulted in the rapid restoration of basic payment operations, customers' access to their accounts with easy identity verification processes, and the issuance of new bills in exchange for damaged bills. None of the commercial banks in Aceh and Nias requested liquidity support from Bank Indonesia. When liquidity was needed, the local banks received it from their respective headquarters.

Total assets of the banking system declined by 10 percent in the immediate aftermath of the tsunami but have partially recovered. By the end of September 2005

assets had exceeded their pre-tsunami levels by 14.1 percent in nominal terms, but still remained 4 percent below the pre-tsunami levels in real terms (Table 4.1). The composition of losses indicates that the greatest loss resulted from unrecoverable loans and the loss of major inventories. This is illustrated for the local Bank Pembangunan Daerah (BPD) (see Figure 4.6) which lost 33.5 billion Rupiah, 66 percent of which was attributed to commercial loans and working capital. But these numbers illustrate only material losses. The earthquake and tsunami also caused huge loss of human capital. For instance, 45 employees, or 7.2 percent of the Bank BPD workforce, were killed in the tsunami.

Figure 4.6 The Composition of Disaster-Related Losses by Bank BPD



Source: BPS, World Bank Staff calculations

The tsunami has left many debtors incapable of repaying loans, which has reduced banks' income and increased the number of non-performing loans (NPLs). The percentage of non-performing loans in the Aceh banking system increased from 2.8 percent in December 2004 to 11.3 percent in May 2005, but it declined to 7.8 percent in September 2005, partly because many NPLs were restructured or written off (Table 4.1). In the worst-affected areas NPL reached rates as high as 40-50 per cent. Most of the banks' losses resulted from commercial loans, since assets were not insured for loss from natural disasters. Losses on consumer loans have been covered through life insurance payments by insurance companies.

For those loans that are still potentially recoverable, banks are offering various types of restructuring. These include: (i) extending the repayment period (ii) reducing the interest rate (iii) requesting only payment of principal (iv) offering a grace period. For write-off loans, banks are trying to partially recover losses by selling existing collateral through the special auction agency.

Figure 4.4 Prices of Selected Construction Materials, Oct. 2005 vs. Dec. 2004

	Dec-03	Dec-04	Mar-05	Jun-05	Sep-05
Total Assets, billion Rp. (in current prices)	9880	10783	10061	11092	12301
Total Assets, billion Rp. (in Dec. 2004 prices)	10226	10783	9160	9754	10357
Outstanding Credits, billion Rp. (in current prices)	2123	3201	3327	3514	3605
Outstanding Credits, billion Rp. (in Dec. 2004 prices)	2197	3201	3029	3090	3035
Deposits, billion Rp. (in current prices)	7656	7952	8298	9465	10236
Deposits, billion Rp. (in Dec. 2004 prices)	7924	7952	7554	8323	8618
Loan-to-deposit ratio (LDR), (%)	28	40	40	37	35
Non-performing loans (NPLs), (%)	2.7	2.8	6.7	10.0	7.8

One of the main concerns has been the lack of a coordinated government strategy on NPLs, and debtors who have no assets now to repay loans: An initiative[16] has been undertaken recently to provide the write-off procedures for debts incurred by state-owned enterprises. However, private enterprises, including commercial banks, are left to deal with this problem on their own.

A recent Bank Indonesia regulation[17] provides more latitude for banks in treating debtors affected by the earthquake/tsunami, but it does not fundamentally solve the problem of bad debts accumulated by commercial banks. The regulation allows commercial banks to provide debt restructuring and/or new credit to disaster victims. Nevertheless, it is ultimately the decision of the commercial bank – one which depends on the bank's credit policy and the debtor's business prospects. Managers of commercial banks have indicated that the losses suffered by branches affected by the disaster will be borne by the nationwide system of branches.

Despite causing substantial losses to local banks, the bad debts accumulated by banks in the disaster-affected areas will not impact macroeconomic stability. The main reason for this is that the size of the banking system in Aceh/Nias is only a very small part of the national banking system. For instance, Bank Rakyat Indonesia (BRI) has only 1.5 percent of its total nationwide loan portfolio in Aceh, and out of this 1.5 percent only a small share has been affected since not all credit activities were in the disaster-affected areas.

Banks are reporting an increasing volume of operations with new customers. These customers consist mostly of: (i) individuals buying durable consumer goods, including cars that are often used for small business purposes or leased to NGOs (ii) small scale traders stocking up (this category is more than 50 percent of the total) and (iii) construction contractors who need working capital.

In their lending practices, several banks appear to have become more flexible in their collateral requirements. For instance, Bank BPD accepts a letter from the village head stating that the land belongs to the loan applicant. This flexibility is important since land certificates/titles were either destroyed during the disaster, or did not exist in the first place. Bank Mandiri allows for less than 100 percent collateral, but requires the uncollateralized part of the loan to be insured, which adds about 1.5-2 percent to the cost of the total volume of the insured loan. However, for most commercial loans 100 percent collateral is still a standard requirement.

The recent increase in deposits has not yet kick-started significant lending activities. Total deposits increased in real terms by 10.2 percent in the second quarter of 2005, and by a further 3.5 percent in the third quarter of 2005 as financial resources from donors started to flow in. However, although the amount of credits extended by banks between March and September 2005 increased by 8.3 percent in nominal terms, it remained practically unchanged in real terms. By the end of September, 2005, the outstanding volume of credits, in real terms, was still 5.2 percent lower than pre-tsunami volume (table 4.1).

Banks in both Aceh and Nias are confident the reconstruction phase will stimulate the revival of the banking sector[18]. Most bank managers expect profits in 2006 since the reconstruction activities will be in full bloom. Banks in Aceh also have great expectations about the peace agreement, since the conflict

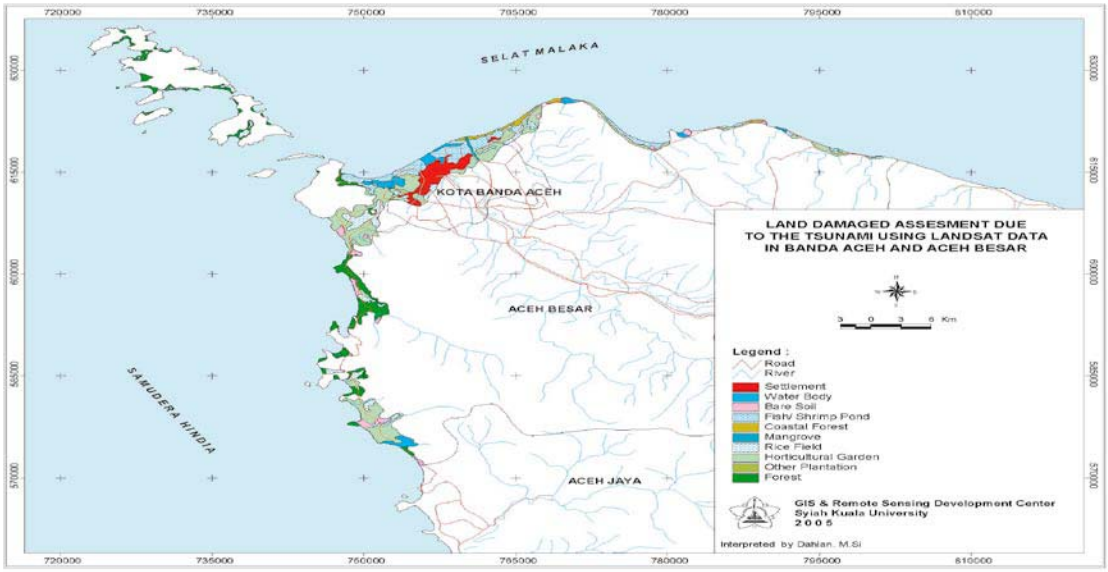
had depressed economic activity and thus banking sector development in the region for a long time.

ENVIRONMENT

The tsunami and earthquakes caused substantial environmental damage in Aceh and Nias, but with some variation across the affected region. The effects of the tsunami varied considerably, correlating with proximity to the fault line and the predominant direction of the tsunami wave. The areas on the west coast were more damaged than areas on the north-east and eastern coasts. Marine and terrestrial areas along the west coast that were in the path of the tsunami have experienced almost total destruction. From the infrastructure and settlement perspective, the most severe damage was in the urban and peri-urban areas of Banda Aceh, Meulaboh and Calang where 70,000 hectares were damaged and above-ground infrastructure was erased (see Figure 4.7 for an example of damage in Banda Aceh and Aceh Besar). Table 4.2 summarizes information on environmental impact throughout Aceh and Nias.

The disaster generated large amounts of solid waste and it is estimated that nearly six million cubic meters of debris accumulated in Banda Aceh alone. This solid waste material (predominately composed of saline waters, sands and clay particles contaminated with a mix of chemicals, oil, sewage, building materials and decomposing bodies) constituted a major environmental health problem, blocking river courses and other surface water drainage channels. The environmental problems created by the tsunami were exacerbated during the initial clean-up. Some of the tsunami waste was dumped in inappropriate areas. Rice

Figure 4.7 Surface Coverage of the Damaged Area by Function, Banda Aceh and Aceh Besar[19]



fields, fish/shrimp ponds and other areas of sometimes unaffected land became dumping grounds for this waste.

Drinking water wells and rivers were heavily contaminated. A complex amalgam of mud-laden residues infiltrated natural and man-made water sources. Heavy clay soils, which were predominant in the affected region, were inundated with salt water. Moreover, solid particles from debris and dried mud reduced the air quality.

Severe damage occurred to marine ecosystems. In many places, the coastline was physically altered, with losses of beaches, changes in riverbeds and the rise and fall of large tracts of inter-tidal land. In Nias for instance, several jetties and piers associated with fishing activities were left high and dry above the water line, indicating the severity of the change. While it is known that coral conditions in the region varied widely prior to the tsunami, rapid EIA studies conducted in January reported that shallow coral reefs were lodged with solid waste as were other marine ecosystems.

Table 4.2 Environmental Damage Indicators

Indicator	Magnitude of Damage
Mangrove	2,711 ha
Coastal forest	50,000 ha
Coral reef	19,000 ha
Coastline	800 km
Aquaculture	20,400 ha
Agricultural land	64,000 ha
Groundwater/soil contamination	167,324 ha
Tsunami waste	5,765,000 m3

Source: BRR, UNHIC, FAO, UNDP

The most significant environmental damage to the local economy is the loss of shrimp/fish ponds, rice fields and land classified as horticultural gardens. Mariculture infrastructure including banks, dyke walls and gates were completely destroyed. Although most of the affected agricultural areas can be recovered for cultivation in a reasonable time, soil fertility is one of the main concerns in the short to medium term. To revive agriculture and the livelihoods of many, an integrated approach is required to repair the physical damage and revitalize farming systems. Critical problems include subsidence and water-logged land, impact of sediment deposits over topsoil, severe erosion, saline conditions and the lack of efficient drainage due to blocked channels. Rapid reclamation is achievable in low to medium affected areas but it will require time to leach salts through a combination of rainfall, irrigation and drainage.

Local environmental agencies suffered severe losses in capacity in the disaster. BAPEDALDA, the local authority responsible for environmental assessment and management, suffered a high level of staff loss (30 percent of the employees died in the tsunami). Buildings, records, office equipment and mobile laboratories were also destroyed or damaged, including those of the Environmental Center at Syiah Kuala University. BAPEDALDA needs to urgently reinforce its capacity so it can successfully collaborate and ultimately take ownership of, the critical environmental rehabilitation work that is being programmed[20].

Environmental damage in Nias is marked. The damage in Nias has both similarities and differences to that reported in Aceh. On the one hand, like Aceh, the main concerns are poor quality of water and inadequate sanitation due to damaged infrastructure. On the other hand, large tracts of coastal lands have been lifted, changing the coastline. Unconfirmed estimates indicate that more than 250 hectares

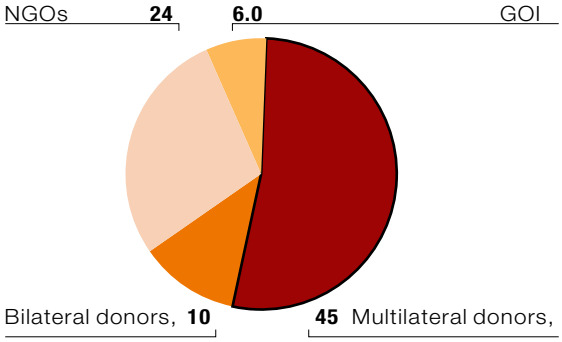
of coral reefs near Nias have been destroyed, but anecdotal reports confirm that fish have migrated further away from the coastline and many fishing communities have lost their livelihoods (see further information on Nias in chapter 6). However, in light of recent coral reef field work, it is not clear whether this damage was caused solely by the disaster or by previous human activities.

THE RECOVERY PROGRAM AND PLEDGED RESOURCES

The minimum costs of restoring environmental infrastructure have been estimated at US$175 million. This includes rehabilitating damaged ecosystems and rebuilding capacity for environmental management. Environmental recovery represents a significant proportion of the rehabilitation and reconstruction works and will require long-term commitment. The effort is not expected to be easy, not only due to the scale of the damage but also due to the lack of resources and immediate skills needed for ecological rehabilitation. Successful recovery depends on the revival of livelihoods and the involvement of communities in decisions that affect them.

There is currently a shortfall of the funds needed for the rehabilitation and restoration of the environment to pre-tsunami conditions. To date, only about US$87.3 million has been committed for rehabilitation and protection of the environment. US$44.8 million has been committed from multilaterals (including US$ 28.6 million from the Multi-Donor Fund), US$22.1 million from NGOs, US$10.4 million from bilateral donors and US$10.0 million from domestic sources.

Figure 4.8 Composition of Financing in the Environment Sector (US$ million)



Source: BRR, World Bank staff estimates; see also Annex 6.

PROGRESS IN ENVIRONMENTAL REHABILITATION AND RECONSTRUCTION

Detailed assessments of the damage were carried out by a range of national and international environmental actors. A number of donor efforts supplemented the Ministry of Environment (MOE) preliminary site assessments, data collection, sampling and analysis that were conducted for the purposes of emergency planning and coordination process, and subsequent recovery and rehabilitation planning.

- UNEP conducted an early rapid environmental assessment (REA) and developed a joint proposal for strengthening environmental disaster assessment and response capacity within the MOE.
- FAO conducted initial aerial surveys of impacts on agriculture and fisheries as well as ground sampling.
- UNESCO initiated a voluntary Environmental Assessment Coordination Network comprising local and international NGOs and academic institutions to assess coral reefs, mangroves and sea grasses.
- UNDP conducted a survey on environment and human health.
- USAID conducted a coastal assessment. This presents an integrated approach for preserving environmental assets, developing sustainable coastal resources and mitigating

environmental impacts of coastal development along the Banda Aceh to Meulaboh road corridor.

The cleaning up of the massive solid waste is now largely complete. The first stage in environmental recovery has been led by local governments utilizing local contractors, military vehicles and heavy equipment. Community recycling activities and 'cash-for-work' initiatives supported the process. With international support, the huge effort resulted in most debris in Banda Aceh and Meulaboh being cleared by end-March, 2005. During the last six months, a large portion of the solid waste was moved to managed sites, particularly in Banda Aceh. However, in some parts of the west coast (where a great deal of debris including vegetation, soil and building masonry was swept out to sea) the cleaning up operations is still continuing.

Several initiatives to enhance the environmental assessment of the recovery program have already been undertaken. Germany (GTZ) has a project to enhance the planning and impact assessment capacity of BAPEDALDA in order to facilitate a sustainable recovery process and respond to the environmental needs of the Master Plan of Aceh Rehabilitation and Reconstruction. With support from CIDA, ADB and others, BAPPENAS has been collaborating on a Strategic Natural Resource and Environmental Assessment (SNREA) to complement the Master Plan and assist BRR in their implementation activities. BAPEDALDA is working with Syiah Kuala University, Panglima Laot and local NGOs to coordinate environmental efforts. WWF is also working to strengthen representation from Aceh in the current planning process through the engagement of civil society representatives from the region. They are also highlighting environmental issues that may be associated with the recovery and rehabilitation process, in particular potential deforestation caused by high demands for reconstruction timber.

Government has adjusted procedures for environmental impact assessments to support environmentally-friendly reconstruction. The Minister of Environment has decreed new legislation to cope with the pace of reconstruction activities needed in Aceh and Nias. BAPEDALDA is coordinating with donor agencies to organize an informal forum to discuss the need to support environmental services during the relief, rehabilitation and reconstruction periods.

ENVIRONMENTAL ISSUES FOR 2006 AND BEYOND

The major environmental challenges in the recovery effort include waste management, restoration of damaged ecosystems and mitigating the environmental impact of reconstruction. Waste management continues to be a priority in the long term. Without economically viable demolition waste recycling initiatives, waste debris will continue to present a physical barrier to housing and agricultural redevelopment and remain a constant psychological reminder of the disaster. UNDP has taken the lead in this field through the Tsunami Recovery Waste Management Program with the aim of installing an effective and practical waste management system, including the selection of proper dumping or recycling sites[21].

A primary environmental infrastructure challenge is the safe disposal of sewage. There was almost no sewage treatment in Aceh and Nias before the tsunami; septic tanks were the most common form of sanitation, invariably leaking sewage and contaminating water from wells. The potential of health risks from sewage contamination and environmental stress due to dumping of domestic garbage in rivers is a central issue in the waste management reconstruction

program. USAID, through International Relief and Development (IRD), is addressing short-term sewage treatment needs with the repair of Banda Aceh's sewage treatment plant and provision of sludge trucks (for more details on Water and Sanitation see chapter 3).

Rehabilitation of damaged ecosystems will be achieved by facilitating natural regeneration and investing in restoration. Where possible, all programs with potential environmental impact are required to pass through the AMDAL procedures as well as additional EIA requirements of individual donors. This includes the potential impact of road reconstruction projects such as that adjacent to the Leuser Forest, but also the potential contribution of public spaces to the landscape. Such an approach can be linked to bioengineering of coastal protection features such as sustainable fish/shrimp ponds (strongly linked to replanted mangrove systems) and coastal forestry systems.

Mangrove restoration is a particular priority in the long-term and will require ongoing commitment and monitoring from all stakeholders. Restoration has been initiated in Banda Aceh and Aceh Besar with assistance from local and international NGOs[22]. BRR recently hosted the launch of a major support program for mangrove re-establishment, with a particular focus on sustainable livelihoods and community participation.

The Ministry of Environment is promoting local restoration initiatives using eco-village and eco-town concepts. The ADB Spatial Planning and Environmental Management program is presently working at both the provincial and kecamatan level to improve planning initiatives for reconstruction and rehabilitation program. The AIPRD Spatial Village Planning program is assisting in land validation and ownership issues in many villages. A number of NGO initiatives are involved with ecologically-friendly and bottom-up site planning in greater Banda Aceh area. Encouraging protection in association with human settlements reduces the pressure on land and helps preserve upland watershed forest areas critical for flood protection and improving water quality within the watershed. UNEP has prepared a project on coastal re-vegetation at three sites damaged by the tsunami in Simeulue, Sabang Island and Aceh Besar. At each site, local people will be provided with the knowledge and skills needed to design and implement rehabilitation programs.

A major concern in the reconstruction and rehabilitation program is the environmental impact of reconstruction. There is much concern from all agencies of the potentially severe damage to the environment associated with the demand for building material, especially timber and masonry.

- BRR has estimated a **demand for timber** of around 1.5 million m3 of timber. FAO estimates that 70 percent of this timber will be required to fuel the rudimentary and highly inefficient brick kilns in the region. If this was to be supplied from local sources, it would mean logging between 125,000 and 250,000 hectares of forest.
- Estimates vary but some research indicates that only one in ten logs sourced across Indonesia can be considered to be legal. It is therefore inevitable that some timber being used in current recovery works would be illegally sourced and, as a result, cause **increased deforestation.** Illegal logging and consistent shortfalls of domestic timber production could mean that natural areas close to the tsunami-affected zone[23] would be vulnerable to exploitation.
- BRR has committed to using **legal timber** for the reconstruction process, prioritizing the source from national production. To respond to illegal logging issues, the BRR plans to

design a Task Force on Wood Supply, Forestry and Environment involving Government, local and international NGOs, and other related institutions. Donors can provide some timber from sustainable sources as part of their aid programs. Alternative resources will also be considered such as coconut trees, bamboo and recycled debris.

- There is also evidence of accelerated and uncontrolled **quarrying of stone** and unwashed river aggregates in reconstruction project areas such as the Banda Aceh Sea Defence System. This sea wall alone could use up to 330,000 m3 of stone. These quarrying operations can further degrade forest ecosystems and do not promote the recycling of demolition debris (including the concrete floor slabs).

Environmentally-sustainable reconstruction requires planning and involves a range of actors committed to environmental objectives. The FFI and the Leuser International Foundation are working on the largest initiative to protect and manage the Leuser and adjacent Ulu Masen ecosystems, with US $17.5 million to be provided by the Multi-Donor Fund. Leuser National Park will complement this effort with assistance from UNESCO to increase its capacity to monitor and manage. The Indonesian Eco-labeling Institute (LEI) is available to develop a simple, transparent and inclusive Chain of Custody system and has the necessary support. CIDA is also helping to facilitate the shipment of timber from Canada. USAID is supporting WWF's Timber for Aceh Initiative to ship donated timber to Aceh. The Multi-Donor Fund housing project is introducing a timber procurement monitoring system to track and report back on timber procurement patterns during the initial phase while the ADB's SPEM program is producing guidelines to assist eco-friendly procurement of building materials.

Efforts are being made to mainstream the importance of the environment and create a coordinated response. The Indonesian State Ministry of Environment, UNEP, national and international NGOs held a Green Aceh conference in June 2005 in Banda Aceh. The conference was conceived as a marketplace of ideas on how to integrate good environmental practices into reconstruction plans in tsunami-affected areas. It focused on practical steps for environmentally-friendly reconstruction, the urgency of 'green reconstruction', coastal and sustainable fisheries management; waste management, water and sanitation as well as community participation, monitoring and local laws[24]. Augmenting this conference, USAID's Environmental Services Program and BAPEDALDA held training for construction managers from a range of organizations to build practical skills in environmentally-sound design.

The political goodwill and financial resources generated by the tsunami should be used to build economies and societies that are socially and ecologically resilient. The damage to marine and terrestrial resources needs to be addressed but should not distract attention from the persistent problems of regional resource management. Neither conservation priorities nor short and long term land utilization and management issues have been changed by the tsunami, but the reconstruction presents an opportunity for building back in a manner that is both better and more environmentally sustainable.

NOTES

[11] The methodology of estimating the impact on GDP at kabupaten level is presented in the Annex.

[12] The poverty line is grounded in the concept of consumption. It represents the monetary value of the typical food basket that provides 2100 calories per capita per day plus the necessary non-food expenditures. The poverty line is equal to Rp 129,615 (US$13) and Rp 108,535 (US$11) per capita per month for Aceh and Nias, respectively.

[13] To estimate the changes in poverty at the kabupaten level we have used the elasticity of poverty with respect to growth whereby a 1 percent decrease in per capita GDP transforms into 1 percentage point increase in the poverty headcount ratio.

[14] Food aid – via Dolog's market operations and food-aid program of agencies such as WFP – also helped to stabilize food prices.

[15] The price developments on Nias in the aftermath of the March 28, 2005 earthquake are discussed in a separate chapter on Nias.

[16] The Ministry of Finance, regulation no. 31/PMK.07/2005.

[17] No. 7/45/PBI/2005 (issued on November 11, 2005). This regulation replaced the previous BI regulation No.7/5/PBI/2005 dated January 20, 2005.

[18] More discussion on the banking sector in Nias is provided in a separate chapter.

[19] Maps of other areas are not presented here due to space constraints.

[20] Since October, BAPEDALDA has been organizing a regular coordination meeting of donors and organizations active in the environmental sector.

[21] The project is being executed under UNDP's Emergency Response and Transitional Recovery (ERTR) Program in partnership with BRR. The project budget is estimated at US$60 million. The ERTR and Multi-Donor Fund commitments are US$14.5 million and US$15.2 million, respectively. Other actors working in the waste management scheme are UNEP, GTZ/ProLH and Danida via support to provincial and district BAPEDALDA. ADB has contributed US$15 million for Spatial Planning and Environmental Management Program while CIDA is working with Canadian consultants on waste management guidelines and strategies. Also included are international NGOs (Oxfam, IRD, Mercy Corp, AusCare, ACTED) and national NGOs (Yehdua, YBI, IDEP).

[22] International NGOs inlcude Pugar, Yagashu, Japan Surf, Islamic Relief and Oxfam. FAO has funding from the EC for mangrove replanting. Support may also be provided by Koica (Korea), Oisca (Japan) and others to Wetlands International Indonesia for the development of sustainable livelihoods. The Multi-Donor Fund has been identified as a potential mechanism to support mangrove reforestation through community-based schemes.

[23] The Leuser ecosystem—a major habitat for Sumatran orangutans, tigers, elephants and rhinoceros—is already under pressure from illegal logging, and could be a target for accelerated logging processes in a worst case scenario.

[24] Aceh's Governor Mr. Azwar Abubakar recently declared Aceh a designated "green province," with 40 % of the area to be protected as limited-use areas so the need to obtain timber for reconstruction does not destroy remaining forests.

Part I

ONE YEAR AFTER - WHERE DO WE STAND?

Chapter 5 | THE PEACE PROCESS AND RECOVERY

The tsunami of December 26, 2004, occurred in a province that was already experiencing a large-scale disaster, albeit one of man's own making. A conflict lasting almost 30 years between the Government of Indonesia (GoI) and the Free Aceh Movement (GAM) had left 15,000 people dead and triggered a large-scale population displacement. Much infrastructure was destroyed during the conflict. Schools were particularly targeted[25]. Insecurity was high amongst a population caught between two warring sides and movement restrictions had considerable negative impacts for farmers and fishermen.

On August 15, 2005 the GoI and GAM signed a peace agreement (the "Helsinki Memorandum of Understanding," or MoU). It resulted from changes in the political environment, the fluctuating fortunes of both sides and, in part, the impact of the tsunami. This agreement is the best hope for peace in Aceh for many years. Both the negotiators in Helsinki and the EU- and- ASEAN-led Aceh Monitoring Mission (AMM) have learned the lessons from the failed Cessation of Hostilities Agreement (CoHA) of 2002-2003. Many of the social, political, and economic factors that have kept Aceh in a state of perpetual war were considered in the MoU. A few months later, important progress has been made and people are increasingly confident that peace will hold.

Box 5.1 THE NUSA DIARY: Impact of the Conflict and Peace Process

According to the villagers, Nusa had never witnessed fighting during the Free Aceh Movement (GAM) insurgency but since rebels regularly passed through the vicinity, Indonesian military (TNI) patrols had become a part of life.

This became a problem in March when one man claimed he was accosted by a group of soldiers during a trip up to the hills above the village to tend his crops. He said he was questioned for 90 minutes during which time he was repeatedly threatened even though he was carrying his identity card. "Their parting words were that if I told anyone about what happened they would slit my throat," he told me. As a consequence, everyone else who had plots up in the hills became too frightened to tend their fields precipitating a mini food crisis which added to the extremely high levels of stress.

Some soldiers were deployed to the village shortly after the tsunami but they did virtually nothing to help, which bred further resentment towards the TNI. This was mollified slightly in August when 14 troops arrived for unexplained "security reasons" -and they did help with village activities. Sympathy for GAM was hard to gauge but I would say it was on the minimal side. Having said that, the two former GAM members who returned to the village after being released as part of the peace process were welcomed back without any fuss and appeared to settle well into village life. Their reintegration was undoubtedly helped by the fact that their respective families were popular. But their presence has a tenuous basis and if the conflict flares up again matters could rapidly become complicated. "I'm following orders, that's why I've returned," one GAM intelligence operative told me. "If I'm ordered to resume the struggle I'd do it immediately."

John Aglionby (The Guardian)

The tsunami created an unprecedented opportunity for peace and recovery in Aceh, but many challenges remain. Unlike the past there are now substantial resources – human and financial – in Aceh that can be a foundation for the consolidation of peace. Yet, such an opportunity can only be sustained if continued attention is given to the many issues that will arise in the implementation of the agreement. While this peace agreement is more holistic than previous ones, the MoU outlines just the bare bones of a settlement (Box 5.2)

Implementation details are often unclear, and many issues remain unresolved. Next year should see the passing of a new governance law that will affect the relationship between Banda Aceh and Jakarta. The law, to serve as implementing legislation for the MoU, will almost certainly be contested. Elections for the position of governor, and for many of the Bupati (district heads), are also due for the coming year, and will provide the first fora for open political competition involving GAM personnel.

Box 5.2 The Memorandum of Understanding

The MoU has six sections which cover the following areas:

- Governing of Aceh
- Human Rights
- Amnesty and Reintegration into Society
- Security Arrangements
- Establishment of the Aceh Monitoring Mission (AMM)
- Dispute Settlement

See Annex 7 for the full text of the MoU.

The period following the Aceh Monitoring Mission's (AMM) departure – currently scheduled for March 15 - will be critical. Over time, development assistance, both national and international, will need to target the specific needs of those in conflict-affected areas of Aceh in addition to tsunami-affected regions. Given the fact that many communities have suffered from both the tsunami and conflict, the recovery processes clearly need to be integrated more deeply.

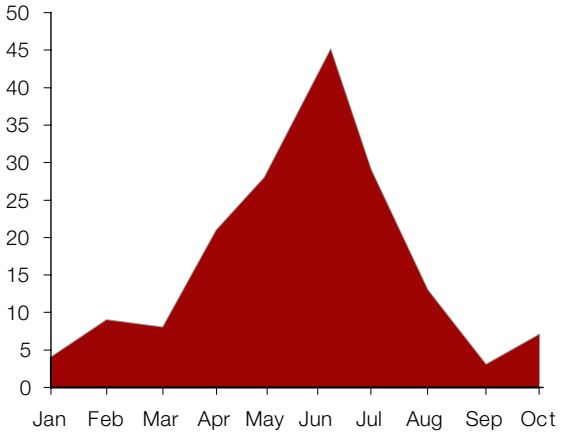
Ensuring that peace holds in Aceh is key for the security and well-being of the Achenese people. Even before the tsunami, GDP was falling in Aceh due to the conflict. Without a successful and sustained peace process, it will be hard to create a stable investment climate and to reinvigorate economic growth. A post-conflict program which addresses the conflict's symptoms and attacks its underlying causes is thus fundamental to the success of the transition from the current promising, but fragile, short-term recovery to longer-term reconstruction and development.

CONFLICT DYNAMICS POST-TSUNAMI AND MoU

Conflict was on the increase after the tsunami till the signing of the peace agreement. Immediately following the tsunami, the number of incidents between GoI and GAM tailed off almost to zero since both sides had lost troops, diverted their attention to help victims, and took time to adjust strategies. However, as the emergency reconstruction started and then moved into the rehabilitation and redevelopment

phase, conflict incidents became more common (see Figure 5.1). Despite increasing conflict levels, few international agencies focused attention to the conflict context in which they were working, raising risks that insufficient consideration would be given for how aid flows influenced pre-existing tensions on the ground[26].

Figure 5.1 GAM-GoI conflict incidents by month, 2005



Source: Newspaper monitoring dataset

As it became apparent that an agreement was imminent in Helsinki, the number of conflict-related incidents dropped significantly and has remained low. From the signing of the MoU until the end of October, there were only 13 incidents involving GAM and Government forces, resulting in four deaths. These were spread across 11 sub-districts. There was a slight increase in the number of incidents in October but at present the situation looks positive. The surrender of GAM weapons and withdrawal of non-organic (those not based long-term in Aceh) troops and police has progressed largely as planned, with decommissioning and troop withdrawal on-target to be completed by the end of December. While the conflict had restricted access to certain areas of Aceh, all areas can now be accessed safely. Local populations are cautiously confident that the conflict has really ended and both parties appear to be strongly committed to the peace agreement.

Box 5.3 Peace in Cot Tufah

Citizens in Cot Tufah in the sub-district of Paya Bakong, North Aceh, are now facing life with new hopes. This village in the hinterland is known as one of the locations where armed contact frequently occurred.

"The last armed contact took place two months ago. Since the peace agreement between the Government of Indonesia and the GAM, no gunshots are heard anymore. We can now sleep peacefully. And we are no longer afraid to go out at night," said Muhammad Dahlan (36).

A number of citizens said there were significant changes since the MoU was signed. Shoot-outs no longer happen. Indonesian Army troops no longer patrol the area. GAM members are no longer seen carrying weapons.

"We can work without feeling anxious. There are no identity examinations and no more night guards. Since the peace agreement, we can work without feeling afraid that a gunfight will break out" explains Suwaibah, a mother of four children.

Source: BRR

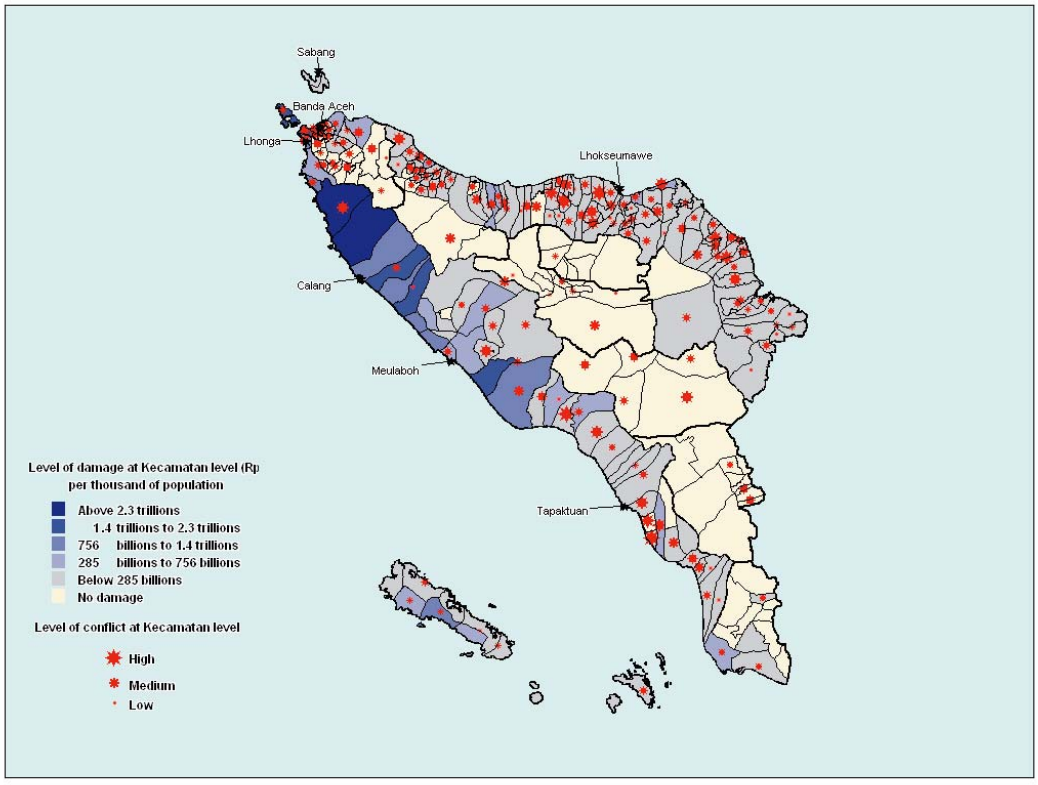
THE GEOGRAPHIC SPREAD OF CONFLICT AND NEED

Conflict locations suggest the extent to which tsunami and conflict responses must be tightly coordinated and, in some cases, integrated. At the same time, many areas badly affected by conflict have been untouched by tsunami aid. Establishing precise levels of conflict damage and the geographic distribution of need must be a priority.

Conflict is spread across all of Aceh and is not concentrated in particular districts regarded as being conflict-prone. While conflict-related incidents have been relatively concentrated this year, the conflict's impact on human security, perceived as well as real, has been felt across the province. As Map 5.1 shows, sub-districts in Aceh Jaya, Bireuen and Aceh Barat (all areas heavily affected by the tsunami), show high levels of insecurity. There are two basic implications. First, the delivery of aid for recovery and reconstruction must take into account the impacts of, and their impacts on, conflict in tsunami-affected areas. Tsunami interventions must be conflict sensitive. This includes ensuring different groups perceive themselves as being treated equitably, using interventions to help build local institutions, and focusing on processes as well as outputs. Second, in many areas, the issues of tsunami and conflict reconstruction cannot be divorced. In many areas, it may be possible to extend existing projects into villages in-land that have a history of conflict.

Conversely, many of the most conflict-affected areas were not affected by the tsunami. In particular, the center of Aceh, where tensions remain high, has seen almost no development aid. Yet in many such areas, the needs are great. In Aceh Tengah, an estimated 4,000 buildings were destroyed in the conflict. In one sub-district in neighboring Bener Meriah, 75 percent of the ethnic Acehnese population fled due to the conflict, although many are now returning. Map 5.1 shows the extent to which areas affected highly and very highly by conflict overlap with areas of tsunami damage[28].

Map 5.1 Conflict and Tsunami-Affected Kecamaten in Aceh



Strong institutional coordination – across agencies and levels of government – will be necessary if reconstruction and post-conflict programs are to be effectively integrated. The current trend has been to separate reconstruction assistance and post-conflict reintegration. BRR does not yet have a mandate to work on post-conflict issues, with post-conflict programs currently being overseen by the governor's office and Jakarta-based ministries. To date, responsibilities for the peace and reintegration process remain vague. It would be useful to set up joint working groups at the district level made up of representatives from regional BRR offices, from district government, and with input from GAM, to help coordinate tsunami and post-conflict programming.

Box 5.4 Days of Doing Nothing

The days have become longer for Fauzi (26), after the signing of the Memorandum of Understanding between the Government of Indonesia and the Free Aceh Movement (GAM) on 15 August. He does not carry out any significant activity other than hanging out with friends whom he has not met for a long time. "After the peace agreement, we handed over our weapons to the leaders. We then went home to our villages, reunited with our family and community. But there is nothing for us to do," said Fauzi, who joined GAM in 1998.

"I do not know what kind of job I can do. Obviously I can't possibly become a civil servant, especially if they ask me for the red and white coloured identity card, I do not have one," Fauzi said. When asked what he can do, he laughed and replied "fighting".

Another returnee, Maulana Nurding (18) from Sama Gadeng Village, Jeunieb sub-district has been spending most of his time in Lhokseumawe because there is nothing for him to do in his village. "I have many relatives and friends in Lhokseumawe. I prefer to visit them rather than feel depressed in my village," he said. According to him, many of his fellow GAM members in Bireuen also need jobs.

Although the first reintegration packages have been distributed before Idul Fitri (the celebration of the end of the fasting month), Fauzi has yet to receive his. He can only wait passively as the money flows through his commander. On the other hand, Maulana had only received Rp 160,000 before the beginning of the fasting month.

The community hopes that the government can respond to the needs of the former combatants immediately. "The regional government should not underestimate this issue. If the government responds too late, we are worried that the GAM members would look for other means to make money," said Zulfikri Yavon (50) from Lhokseumawe.

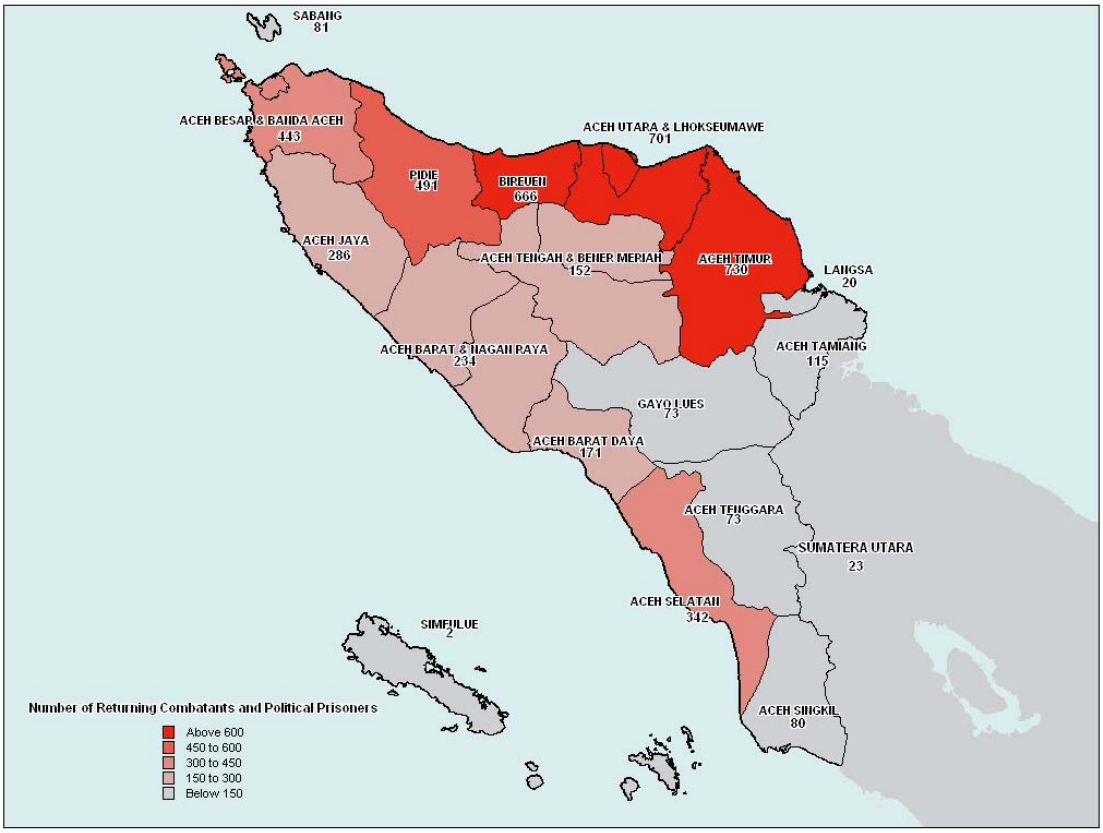
The son of a former leader of DI/TII (Darul Islam/Tendara Islam Indonesia) Aceh, Yacob Ali said the government must act immediately on the issue of extortion which has resurfaced lately. He suggested that policies should be made to provide employment for ex-GAM members and that the pledges should be fulfilled on time, so that the people would gain trust in the government. "The livelihood issue is the biggest threat to the peace agreement. Regional leaders such as the district heads shouldn't underestimate this," said Zulfikri.

Source: adapted from Ceureumen edition 7

SUSTAINING PEACE AND RECOVERY IN ACEH: POLICY ISSUES FOR 2006

A key component of the peace process is the development of a comprehensive strategy for supporting the reintegration of former GAM combatants and political prisoners into Achenese society and linking this to a long-term development strategy. Map 5.2 shows the location by district of 'returnees', i.e. those combatants and prisoners specified in the MoU.

Map 5.2 Location of Returnees



Targeting the different groups (combatants, prisoners and the affected population) outlined in the MoU is difficult. First, there is no consensus on the numbers comprising the different groups in the agreement. Second, at the time of writing, a list of eligible beneficiaries has still not been provided, preventing the government and IOM – which is running an initial 'reinsertion' program with EU funding – from providing benefits to former combatants. Third, the MoU provides benefits for 'those affected by conflict' though the delineation of this group is extremely vague. In reality, almost every Acehnese has been a victim of conflict, whether it is through a lost family member or friend, through abuse of human rights (by either side), or lost property or livelihood. Sourcing accurate data on these various groups will be crucial, as will ensuring that corruption is minimized.

Establishing a strong and effective complaints handling mechanism is crucial for the reintegration program. The MoU

(clause 3.2.6) calls for the establishment of a joint Claims Settlement Commission to deal with unmet claims, yet there has been no action towards setting up such a body.

In parallel to targeting individuals, and to avoid growing resentment amongst villagers, communities affected throughout the conflict also need to be supported. International post-conflict experience clearly shows the need to complement assistance targeted at particular groups with wider community assistance to avoid triggering local tensions and conflicts. IOM, charged with delivering the initial reintegration package, have developed a basic matrix of reintegration programming. This combines both individual and community-targeted programming for both the short- and medium-term.

While there is broad agreement on the necessary components of the program, much work remains on fleshing out overall strategy and implementing the different components. Work on this will start soon through a new USAID-supported joint forum on reintegration that includes the above parties plus four Acehnese civil society coalitions.

There has been limited funding for the post-conflict program. The largest donor has been the European Union, which has provided around EUR 20 million, including a substantial contribution to the IOM reintegration program. The next largest donor is USAID which, at the time of writing, has committed almost US$10 million. Other donors who have or will provide money include UNDP, World Bank and DfID. The government has approved Rp. 200 billion from the 2005 budget and, as requested, Rp. 600 billion for next year. While these sums are not insignificant, implementing a comprehensive longer-run recovery program will require additional resources.

NOTES

[25] This happened for a number of reasons. First, GAM thought that the education system propagated a distorted view of Acehnese history and saw schools as a symbol of the Indonesian state. Second, both sides were viewed as using schools as bases for combatants; this meant that both sides thought they were legitimate targets. Third, there is some evidence that Government troops deliberately burned schools and then blamed it on GAM to try to de-legitimize the organization.

[26] Burke, Adam and Afnan (2005). "Aceh: Reconstruction in a Conflict Environment." Indonesian Social Development Paper No. 9. Jakarta: World Bank/DfID/DSF.

[27] The conflict data is based on an index that combines perceptions of insecurity and incidents of conflict in 2005. See Barron, Patrick, Samuel Clark and Muslahuddin Daud (2005). Conflict and Recovery in Aceh: An Assessment of Conflict Dynamics and Options for Supporting the Peace Process. Jakarta: World Bank/DSF.

Part I

ONE YEAR AFTER - WHERE DO WE STAND?

Chapter 6 THE IMPACT OF THE MARCH 28 EARTHQUAKE – A SPECIAL FOCUS on NIAS

In the middle of the night on March 28, the second most powerful earthquake[28] in decades, struck Nias, Simeulue, and Singkil. In Nias, the disaster leveled the business district of the capital Gunung Sitoli. Almost 1,000 lives were lost. In Simeulue, the southern and western coasts were hardest hit. The island of Simeulue is alleged to have sunk 1 meter as a result of the 26th December earthquake and then risen 2 meters due to the one on 28th March. The damage in Nias was greater than in Simeulue. The Singkil district on the southwest coast of Aceh was also hit. On both islands, government and religious buildings, schools, health clinics, and key transport infrastructure were damaged, leaving both populations vulnerable without medical services (see map 6.1).

Damage to the islands' infrastructure severely hampered relief efforts. This delayed the timely distribution of urgent aid to the victims of the earthquake. Entire villages moved to camps or erected small huts made of palm fronds in front of their houses. Ninety percent of Simeulue's 78,000 people moved to high ground, only returning to their homes during daylight hours. On the Pulau Bayak Islands one island, Pulau Balai, is underwater at high tide. This island was its administrative centre which was then forced to move to Pulau Tuangku. In Singkil, half of the town is underwater during high tide.

Map 6.1 March 28th Earthquake-Affected Areas [29]

Nias suffered the most and reconstruction plans are now underway. In Nias, the donors and the international agencies are now coordinating their efforts more to reconstruct and rehabilitate as quickly as possible. The island will require greater participation of the international agencies and the NGOs in the coming months as current allocations are insufficient cover the damages suffered.

NIAS: DISASTERS HIT AN ISLAND SUFFERING FROM EXTREME POVERTY

The devastation and destruction was severe. Almost 13,000 families – 10 percent of the total households – lost their homes. The earthquake paralyzed an economy that was already weak before the disasters struck. The total damage, estimated at US$ 392 million (see table 1), represents almost 150 percent of the whole economy of Nias.

Table 6.1 Estimated Damage and Loss Assessment for Nias

Sector	Estimated damage (millions of US$)
Social sectors	56
Education	23
Health	23
Community, culture, and religion	10
Infrastructure	306
Housing	160
Transport	70
Electricity, water and sanitation, and communication	76
Productive Sectors	1
Cross-sectoral (governance and environment)	29
TOTAL	**392**

The damage was widely distributed across rural and urban areas. Unlike Aceh, where the damage caused by the tsunami and earthquake was heavily concentrated on coastal urban areas, the destruction in Nias from the second earthquake reached inland and occurred in the evening. Almost 9,300 houses, or 72 percent of the 13,000 houses required, need to be rebuilt in rural areas. Despite this, the loss of life was particularly marked in the towns where poorly constructed masonry housing and public facilities in densely populated areas were severely damaged.

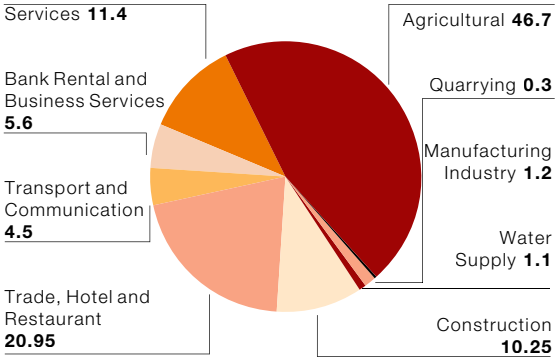
Some nine months later, Nias is still in emergency mode. Although the emergency phase officially ended on June 1, activities are still focused on short term relief rather than the long term reconstruction effort. Some agencies continue providing emergency relief such as food distribution, temporary shelter, medical care, and water and sanitation, while others engaged in the initial emergency effort have withdrawn or down-sized their programs. This includes large donors such as USAID, IMC, WFP, and WHO.

Nias was among the poorest regions in Indonesia. More than one third of the population – twice the national average – lived below the poverty line when the tsunami struck. Human development outcomes were low and were not showing the signs of progress achieved elsewhere. An estimated 7 percent of children from the age of 7 up to 12, and 18 percent from 13 to 15, did not attend school. Many villages lacked access to basic health services, despite the existence of clinics throughout the island. Access was limited by poor infrastructure, and clinics were not delivering an adequate service.

Nias' economy is largely dependent on agriculture. Compared with the national average of 11 percent, agriculture accounts

for almost 50 percent, and manufacturing accounts for only slightly more than 1 percent of the total local economy (see figure 6.1). In addition to being predominantly rural, the lack of infrastructure and services on the island created significant problems for access and mobility, detaching villages from markets and resulting in low levels of economic development.

Figure 6.1 Structure of the Nias Economy



Source: BPS

The tsunami and earthquake further deepened the social and economic problems of a lagging region. The current situation is now characterized by:

- Inadequate housing and shelter. Like Aceh, the lack of adequate and safe housing is extremely serious in Nias. Out of the almost 13,000 familes, an estimated 7,500 are living with host families, 4,000 have rebuilt their homes or occupy self-improvised shelter (which is unlikely to endure the rainy season) and 1,500 are living in 41 camps. Currently, about 14 agencies are providing support, but the needs of the Nias people are not being fully met.

- Shattered livelihoods. Even though rural assets were only partially destroyed by the earthquake, the disaster had a profound impact on the livelihoods of the population because many of them lost their homes. The earthquake also took a heavy toll on local traders, particularly in the capital town of Gunung Sitoli. It also forced the fish to migrate to deeper waters further away from the coast impacting the daily lives of fishermen (see box 6.1).
- Increasing poverty. Current trends suggest that poverty is likely to increase to above 50 percent in the short-term. Food aid, cash-for-work programs, and transfer programs will mitigate the full impact of economic decline but a large share of the population remains vulnerable. In the education sector, almost 87 percent of schools were damaged to some extent – many students are yet to return to a properly functioning school and many are studying in makeshift circumstances.

THE ECONOMY OF NIAS

Given the magnitude of the damage and losses, the economy of Nias is expected to contract by 20 percent in 2005. The March 28 earthquake also caused a severe but short-lived increase in food prices. The price of basic food staples, such as rice, increased

Box 6.1 Tired of Chasing Fish

Although not as devastating as in Aceh, the earthquake in Nias, North Sumatra, caused massive destruction to buildings and huge loss of lives. Yet reconstruction on the island, also known as the dancing island, remains unapparent. This is specially so in Alora - a fishing village on the island - where the earthquake has not only destroyed buildings but also given rise to a new problem.

"After the earthquake, the fish here migrated further to the middle of the ocean, we are unable to go after them," complained Darni, 35, a fisherman from Alora. They still follow a very traditional way of fishing with rowing boats. These boats not only have no engine, they also have no sails to withstand the strong winds. All the fishing boats depend on manual labor.

"We cannot afford to buy engines," said Darni. What is considered a large boat in Alora is very different to that in Aceh. According to Darni, the large boats can only carry 10 people, whereas in Aceh a medium-sized boat can hold about 20 people. Before the earthquake, the fishermen of Alora usually went out to sea at 4 o'clock in the morning and returned at midday. Now, many fishermen are not working. Even if they do go out to sea, many return empty-handed.

"For the past three weeks I have not succeeded in getting any fish, this is terrible," said a fisherman who is the father of eight children. In the past, the people of Alora could at least earn around Rp 25,000 to Rp. 30,000 a day. It is difficult to earn that much now and some have not had any income for a whole month. Currently, most of the displaced people of Alora are seeking refuge at the Islamic Center complex.

A number of them said there has been no commitment from any NGO or government agency to help the fishermen. They also said that they have received no help for the rebuilding of their homes. "Previously there was someone who came to take down our data, but there has been no aid so far," said one woman.

Source: Adapted from Ceureumen, Edition 6

by more than 50 percent in early April but returned to their pre-earthquake levels by May (see figure 3). Food market interventions by the government and food aid by NGOs and WFP helped to contain the increase in prices until September, but with the nationwide increase of fuel prices on October 1, food prices jumped again by 15 to 20 percent.

The banking system has also been severely affected by the March 28, 2005 earthquake. All four commercial banks operating in the island (BNI, BRI, Bank Danamon, and Bank Sumut) reported a dramatic increase in the share of non-performing loans (NPLs) from about 1 percent to 40-50 percent. Most of these NPLs are commercial loans (used to purchase operating and fixed capital) and most were not insured. Banks plan to restructure viable NPLs but still expect to report significant losses in the 2005 fiscal year – in the magnitude of at least 5 percent of the total credit portfolio. With a rebounding economy in 2006, it is expected that banks will recover, but it is likely to take at least three years to get the sector back to pre-earthquake profitability.

Figure 6.2 Price Behavior after March 28 in Nias

Source: BPS, World Bank staff calculations

THE RECONSTRUCTION PROGRAM AND PROGRESS IN NIAS

Rebuilding Nias is as great a challenge as rebuilding Aceh. Whereas the destruction in Aceh was total in many areas, in Nias the widespread damage exacerbated already chronically weak public service delivery. Infrastructure and assets are now in complete disarray: 11 ports were destroyed, 403 bridges are unusable, and more than 1,000 km of local and provincial roads impassable. This damage occurred throughout the islands, and the lack of access and basic services has meant that it has become extremely difficult to deliver a reconstruction program that provides results rapidly.

Nias has not received adequate attention and resources. Out of a total US$ 4.7 billion dollars of programs and projects for both Aceh and Nias, only about US$ 205 million has been allocated to Nias (see table 2). Although more than 40 donors and NGOs are active in the island (see annex 1), their projects are comparatively small. Donors and NGOs have only allocated US$53 million to Nias which is equivalent to 2 percent of their total reconstruction spending for the tsunami and earthquake.

Compared to Aceh, the composition of financing is also fundamentally different. The central government's reconstruction funds, channeled through BRR, are covering more than two-thirds of the current reconstruction program. The above government financing does not include an additional US$ 17 million from the deconcentrated fund to be allocated separately for Nias. However, a large part of these funds will only become available with the 2006 government budget. NGO's are providing

Table 6.2 Summary of all Projects (million US$)

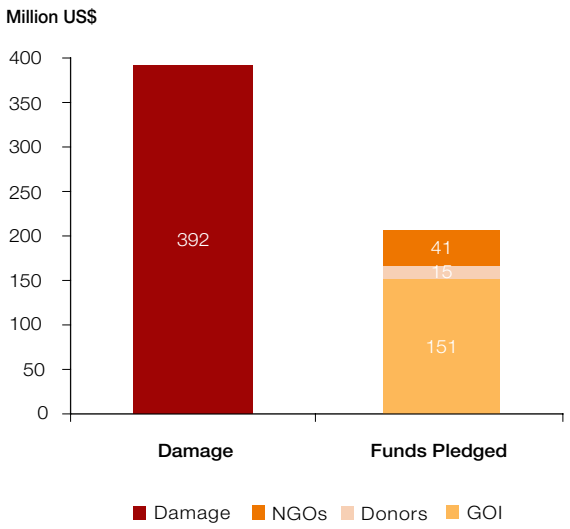
	Government	Donors	Private NGOs	TOTAL
Social sector	28	9	16	53
Education	14	0	8	22
Health	8	0	9	17
Community, culture, religion	6	9	0	15
Infrastructure	98	1	24	123
Housing	51	1	21	73
Transport	30	0	0	30
Electricity, water and sanitation, irrigation	17	0	2	19
Productive sectors	7	2	1	11
Cross-sectoral (governance and environment)	19	0	0	19
TOTAL	**152**	**12**	**41**	**205**

approximately 20 percent and donors less than 10 percent of the reconstruction program (see figure 4).

Most of the existing funds have been allocated to a few key sectors such as housing, transport, education, health. However, in each of these sectors, the financing envelope is low and funding by sector is also low: in housing, only US$73 million has been pledged for Nias and is far below requirements, and compares poorly with the US$702 million mobilized in Aceh which is considered sufficient to cover the housing needs.

Physical infrastructure, education, and health sectors still need much higher levels of financial support. The BRR will allocate 65 percent of the 2005 and 2006 budgets for housing and infrastructure. While this increase will fill some of the gap, the current total budget of US$205 million is still insufficient to meet the needs of the people of Nias and a major funding effort will be required from donors and other agencies.

Figure 6.3 **Nias – Comparison of Damage and Funds Pledged**



- Progress in housing will be the litmus test of the reconstruction effort. By end-November, only about 200 houses had been rebuilt. The lack of progress in getting people back in permanent dwellings is as marked in Nias as it is in Aceh: half the housing stock was damaged or destroyed and an estimated 10 percent of the population is still camped in dwellings without permanent roofs. The BRR and the Red Cross are focused on the rehabilitation of the medium and partially damaged homes, covering only a small proportion of the total shelter requirements. With regards to funding, the housing sector alone needs more than US$ 190 million to build at least 13,000 new homes and rehabilitate 58,000. Existing commitments will only be sufficient to build about 8,062 new homes (see table 6.3). The sector requires more actors to fill the gap of constructing the remaining homes. The current estimated shortfall is 4,938 houses.
- In health, almost 200,000 children were vaccinated against measles in a major drive in July 2005, achieving almost full coverage of the island. However, day-to-day implementation of other health programs is constrained by poor roads and communications. The main public hospital in Gunung Sitoli is being upgraded by a recently-formed consortium (WHO, Mercy Malaysia, UNICEF, IFRC). Just 4 health clinics (puskesmas) are provided by Mercy Malaysia, International Aid and Red Cross (one functioning, rest to start in 2006).
- Despite progress, half of the rehabilitation need of the education sector remains unfunded. In education, 214 schools are now operating out of tents with assistance from UNICEF; 43 temporary 3-classroom schools will be built between January and May 2006, which are expected to last between 5 to10 years (partnership IOM/ UNICEF). Reconstruction of another 160 schools is expected to start from May lasting 2-3 years.
- The lack of roads and transport continues to hinder reconstruction efforts. While the road between Gunung Sitoli and Teluk Dalam has been repaired (reducing

Table 6.3 Housing Commitments for Nias

Agency	No. of beneficiary familes
Red Cross Consoritum	2500
BRR (Reconstruction)	1100
BRR (Rehabilitation)	850
HELP	785
ACTED	520
Samaritan Purse	461
Zero-to-One/Dela Siga	389
CARITAS Sibolga	250
World Relief and Holiana'a	249
UNHCR	240
YTB	239
Others	479
TOTAL	8,062

the travel time by 50 percent), one major bridge is on the verge of collapse making this important route precarious. Large sections of the road network to the south and north are impassable, and village roads and local bridges - invariably in the worst overall condition due to a severe lack of maintenance and poor construction- are creating difficulties for NGOs to reach affected people. It is anticipated that the ongoing lack of attention to roadside drainage will lead to further and rapid deterioration of all roads until repair work and continuous maintenance programs can be implemented. While BRR will be prioritizing road reconstruction in 2006, the program covers only a proportion of the estimated need and must be utilized at least in part on routine, recurrent and emergency works in order to ensure that road access is restored and maintained all year round.

- In water and sanitation, major NGOs and international agencies such as UNDP and UNICEF are still urgently trying to restore clean water supply and sanitation to prevent an outbreak of disease. Large NGOs such as Oxfam, World Vision, and Red Cross are providing temporary bathing stations, building new latrines, and rehabilitating damaged water supply sources such as community wells. This sector is also not endowed with bilateral or multilateral donor support, and will result in coverage levels significantly lower than the ambitious universal coverage anticipated in Aceh.

DELIVERING RESULTS IN 2006 AND BEYOND: CHALLENGES AND OPPORTUNITIES FOR NIAS

Like Aceh, it is expected that the pace of reconstruction in Nias will accelerate in 2006. Although the emergency was officially lifted on June 1, the island is still in a transition phase and yet to begin the significant reconstruction required. It is widely accepted that progress this year has been slow adding further frustration and discontent to the population affected by two disasters. While the problems experienced in Nias are similar to Aceh, there are a number of major obstacles affecting the reconstruction.

- **Poor infrastructure is a serious bottleneck to project implementation.** Single-lane, partially destroyed roads slow down the movement of trucks carrying building materials and other heavy loads. It is estimated that the existing road network can only handle 20 trucks per day with maximum loads, half of what is required to meet housing requirements: it is equivalent to a shocking 2,000 days or 6 years to achieve a target of 13,000 new homes. The airport runway is limited in length and cannot accommodate larger planes ferrying materials and only 4 ports are capable of handling medium-sized vessels. The telecommunication network relies primarily on a cellular service which suffers from many blank spots across the island (fixed line phone density is currently less than 4 percent).

- **Land issues are not yet resolved.** Similar to the difficult land problems being tackled in Aceh, land demarcations have disappeared in areas of complete collapse. In the centers of towns, this has added to social tension between legitimate owners and local government. Records proving ownership are now difficult to find, many files were destroyed during the earthquake or have been misplaced since. The level of land-registration is very low and the RALAS concept has yet to be implemented in Nias.

- **The lack of coordination between BRR and the national, provincial and**

district governments in setting up work-units for implementation has delayed the commencement of planned projects. Approval processes have been slow because BRR-Nias approvals are routed through BRR in Banda Aceh for each project, and then must work their way through departments in both Medan and Jakarta. This has taken up to 4 months in some cases.

- Shortage of players for the reconstruction. There are only about 40 NGOs present in Nias compared to almost 300 in Aceh, and while this may be sufficient in number, their budgets are low. More actors are required in some key sectors such as health which presently has only 4 major players (YEU, IMC, IFRC, and WHO). NGOs are also limited in capacity in terms of personnel and the problem is further aggravated by lack of quality contractors and labor, not easily available on the island. There are a small number of technical high schools, but it is unlikely they will build significant capacity for recovery efforts.

But reconstruction presents the potential for enormous change in Nias. While the opportunities that can result out of tragedy are yet to surface in Nias, they lie on the horizon. Driven by the reconstruction efforts, the economy is expected to rebound. Local governments will be strengthened and become more involved in future planning and financing of their regions. With support from the major donors and agencies, the government in Nias can prioritize building back the island's infrastructure and thus for the first time, bring it on par with the rest of the country. In the short term, the focus will be on those sectors needed to sustain the rest of the reconstruction program.

The road is a long and difficult one requiring immediate action, careful planning and more funds. The reconstruction and rehabilitation will require more than 4 years to be completed and in the medium term, careful planning and attention is required to "build back better" in regions which were already lagging – poor and marginalized before the earthquake and tsunami struck. At present NGOs are lacking adequate financial and human resources to achieve the reconstruction targets and it is clear that major donors and NGOs will need to commit more to Nias in the future. In order to disburse funds quicker, one of the few active donor-supported projects – the Kecamatan Development Program (KDP) – has been restructured to disburse faster. KDP is active in 22 kecamatans (sub-districts) and will spend US$ 8.2 million.

Stakeholders are realizing that fundamental changes are needed to improve the pace of reconstruction in Nias. The planned reorganization of BRR will give greater autonomy to approve and execute projects in a timely and efficient manner. The central government has also directed that project managers move to Nias to speed up reconstruction. Priority will be given to housing and transportation to get people out from tents and into temporary and permanent homes and to achieve this, roads, ports, bridges will need to be repaired and built.

Careful planning with the communities and stakeholders is also essential and the BRR is developing a Kecamatan Reconstruction Plan framework with donors and local governments. Similarly, the construction industry forum needs to be set up quickly to address problems facing the rebuilding of homes and other infrastructure. The main issues which BRR and the donors and NGOs will need to coordinate and facilitate are quality assurance, availability of materials, strengthening the labor capacity, ongoing maintenance, and links between local and

national companies.

Reconstruction will create the basis for the first wave of economic development. Local material sourcing, fabrication and transportation, food and services for construction workers are all important keys to unlock the local economy. As construction progresses, more opportunities for work will appear, in reviving tourism and fisheries, in a better government, in regular trade, and in the growth of cottage industries.

NOTES

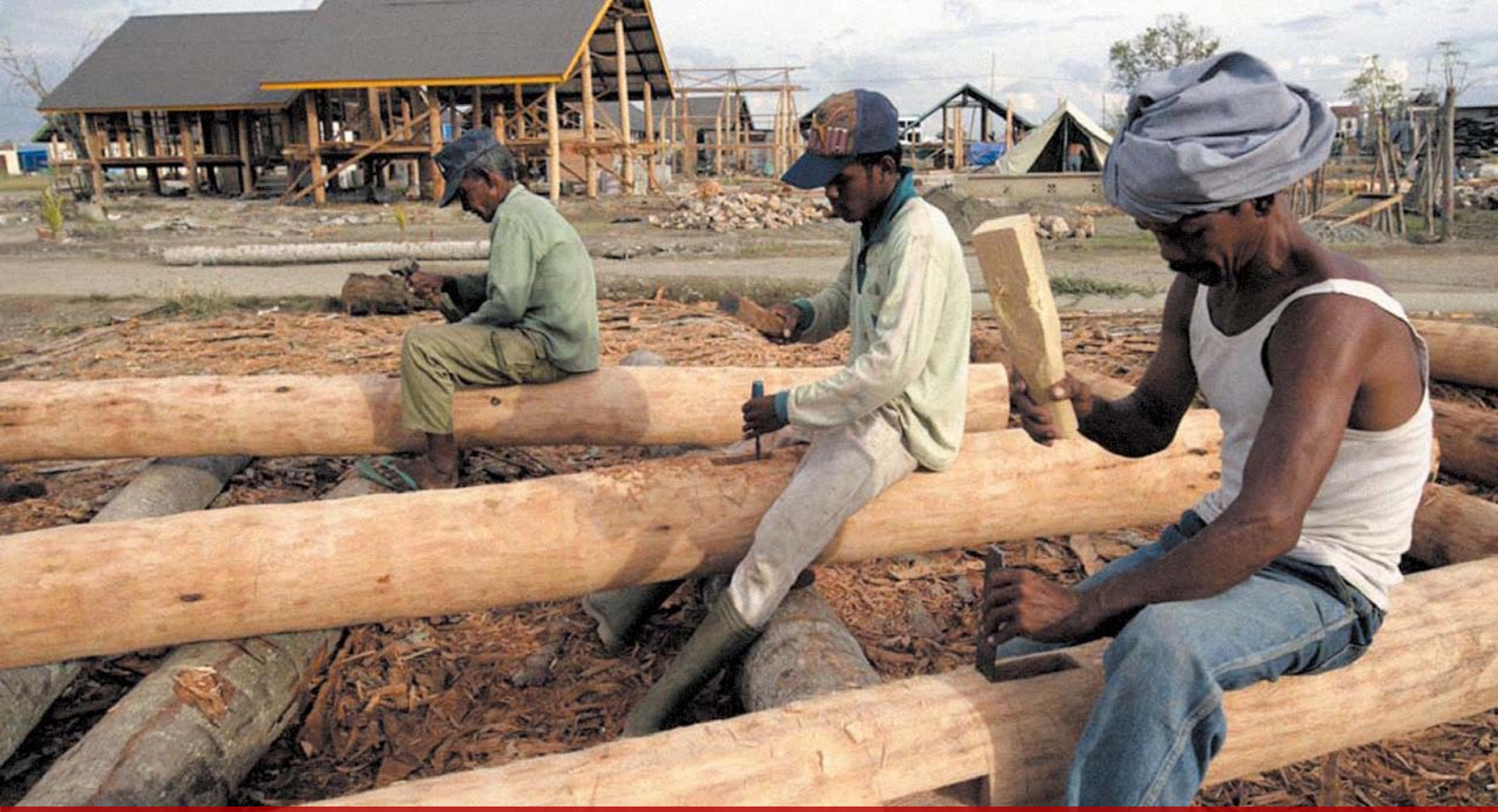
[28] 8.7 on the Richter scale; epicenter located 150 km off the coast of Sumatra.

[29] Source: © Indonesia-Relief-Org

[30] For the March 28 earthquake the most comprehensive damage assessment has been carried by IOM (IOM, June 2005). With the help of the IOM damage data, the aggregate sectoral and financial impact has been calculated in applying data international standard ECLAC-methodology that had also been used to estimate the magnitude and losses of the tsunami.

[31] Source: Draft Unicef Interim Report - Economic and Social Trends of Nias, Nov. 2005

[30] Source: “Produk Domestik Regional Bruto”, BPS Kabupaten Nias, 2004. Comparative figures apply to the smaller Kabupaten Nias Selatan



Part II

FINANCE AND COORDINATION

Chapter 7 | FINANCING THE RECONSTRUCTION

The reconstruction effort has introduced a new paradigm of financing, whereby the host government, official donors and NGOs are involved in equal measure. With at least US$2.5 billion to spend, and US$ 1.5 billion in projects already identified, NGOs are almost as significant contributors as classical reconstruction financing agencies[34]. In most natural disasters NGOs play a key role in the relief phase, but in this one, they are also central in reconstruction.

COST ESTIMATES

In addition to the March earthquake and the conflict, the cost of rebuilding will increase further due to rising inflation. The January 2005 damage and loss estimate of US$ 4.5 billion has remained surprisingly robust[35]. The March 28 earthquake affecting Nias added nearly an additional US$400 million. Rising inflation will increase the costs of delivering the reconstruction program by an estimated 20 percent, or around US$1 billion.

The people of Aceh and Nias will need at least US$5.8 billion to rebuild their lives (see table 7.1). This includes the damage and losses from the disasters taking into account rising inflation, particularly for reconstruction related goods. However, since the private sector and households will cover some of the reconstruction costs directly (as suggested by the Government's Master Plan) funding needs from the Government, donors, or NGOs would be lower

Further resources are needed to achieve the long-term goal of building back better for all of Aceh and Nias. Even though it is difficult to cost the concept of building back better Aceh and Nias may use the opportunity to upgrade facilities in all tsunami-, earthquake- and conflict-affected areas. The Master Plan put a heavy emphasis on public service provision, and added an additional US$3 billion for sectors such as education, health, transport and electricity[37]. In addition, the UN and NGOs will spend several hundred million US$ to provide humanitarian support in 2006, particularly for temporary shelter.

Table 7.1 Reconstruction needs: Rebuilding Aceh and Nias

	Estimated cost (in US$ million)	Comments and assumptions
Tsunami	4.450	Initial assessment that remains broadly valid; trends confirmed by IOM damage assessment; some sectors possibly overestimated (livelihoods, housing)
March 28 earthquake	392	Application of ECLAC-methodology to IOM and BRR damage data (see Annex [X])
Adjusting for inflation	964	Core assumption: At least 20% need to be added to reflect true cost[36].
TOTAL (Tsunami and earthquake)	**5.810**	

Source: Damage and loss assessment, BRR / IOM damage, Economic assessment (see chapter 4)

THE OVERALL RECONSTRUCTION AND DEVELOPMENT PROGRAM

The total reconstruction and development program for Aceh and Nias will amount to about US$ 8-10 billion (2005-2009) – the largest reconstruction program in the developing world. Funds come from three main sources, in nearly equal amounts:

- **The Indonesian Government is expected to contribute up to US$3 billion[38].** Official donors supported Indonesia in rescheduling US$ 2.7 billion for up to 2 years, which is equivalent to approximately US$350 million in net gain (or: Net Present Value) to Indonesia. Out of the US$3 billion, US$2.1 billion have been allocated to BRR. In addition, the central government is expected to channel at least US$300 million investment projects through ongoing projects (deconcentration funds). Provincial and local governments are likely to spend at least US$ 350 million. However, the potential of regional governments to contribute to the reconstruction effort is much greater (at least US$200 million per year) and their fiscal position will remain strong due to their revenue shares from oil and gas[39].
- **Donors are expected to contribute at least US$3 billion.** This includes bilateral and multilateral contributions of more than US$1.5 billion each, part of which has been channeled through the Multi-Donor Fund (US$ 525 million, box 7.1). In addition to Paris Club rescheduling, donors have also been channeling an estimated US$ 200 million to NGOs for reconstruction projects[40].

Box 7.1 The Multi-Donor Fund

The Multi-Donor Fund brings together a pool of over US$520 million (m) from 15 donors and is a partnership of the Indonesian government, international community and civil society to support the recovery in Aceh and Nias. At the request of the Government of Indonesia these donors came together to avoid duplication and reduce transaction costs for the central government, the BRR and the affected communities. The Multi-Donor Fund is co-chaired by the BRR, the European Commission and the World Bank. The World Bank administers the Fund and acts as its Trustee.

Country/Agency	US$ million
European Commission	250
The Netherlands	100
United Kingdom	44.5
World Bank	25
Norway	17.9
Denmark	17.5
Canada	11
Sweden	10.4
Asian Development Bank	10
Germany	10
United States	10
Finland	9.5
Belgium	9.5
New Zealand	8.8
Ireland	1.2

Table 7.2 Financing Aceh and Nias reconstruction (end-November 2005 data and projections, in US$ million)

	Domestic Government Funds			Donors(1)		Private	TOTAL
	BRR	Decon	Local	Multilateral (incl. MDTF)	Bilateral	NGO	
Total commitments to the reconstruction program (2005-2009)	2,100	300	350+	2,000	1,600	2,500	8,850+
Already allocated to specific projects	980	83	72	1,074	695	1,532	4436
Already disbursed	19	31	60	168	127	370	775

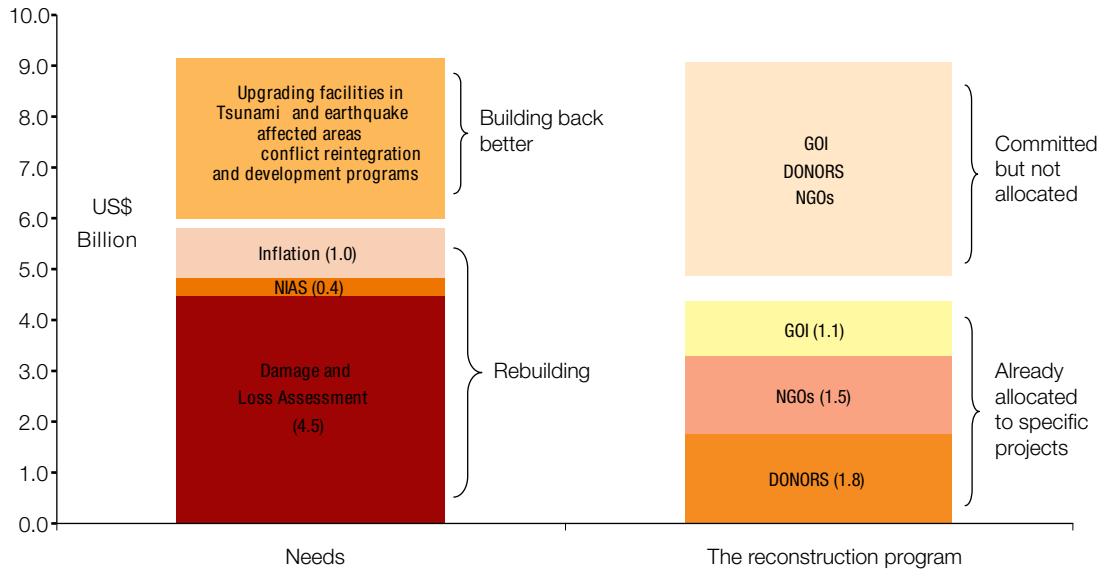
Source: BRR, CGI members, World Bank projections, OECD/DAC, Office of the Special Envoy of the Secretary General of the United Nations, World Bank Local Government assessment. See also Annex 1-3.

(1) Excludes US$ 200 million through NGOs, and Paris Club donations.

US$4.4 billion has now been translated into concrete programs[41]. This is about half of the expected overall program and these projects will represent the backbone of the 2006 reconstruction program. While these allocations are sufficient to match the initial damage and loss estimate, it is not sufficient to build back better, to address post-conflict needs or to account for increased costs.

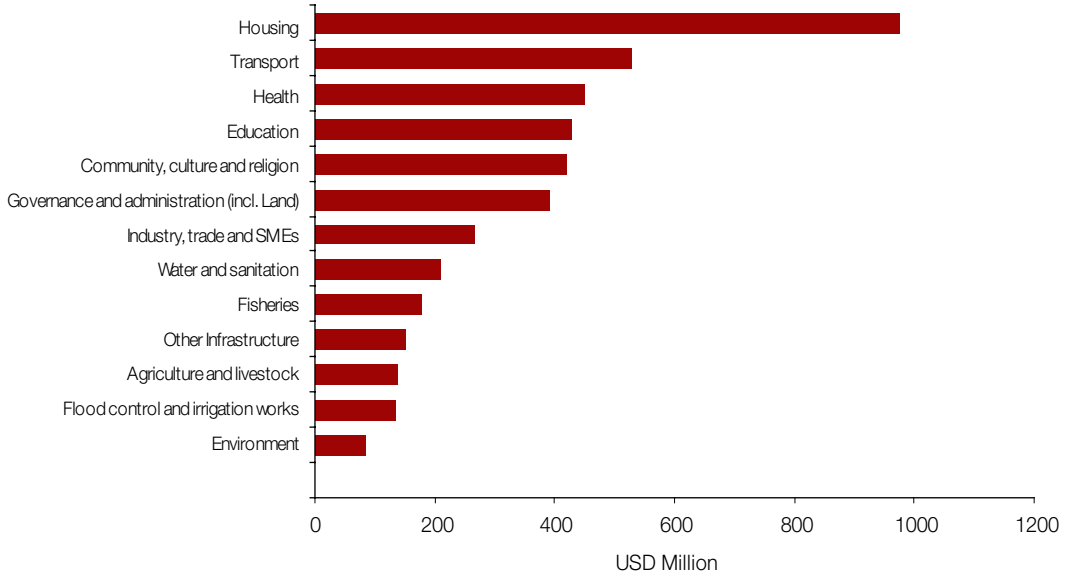
There is an opportunity to build back better. The Government of Indonesia, donors and NGOs have committed more than US$4 billion in additional resources. If all partners keep their commitments and if these resources are well spent, there will be up to US$ 3 billion to make Aceh and Nias a better place than it was before (see figure 7.1).

Figure 7.1 Reconstruction Needs and Commitments (US$ billion)



Almost half of the current reconstruction program, US$2.2 billion, is allocated to housing and infrastructure. Housing is the most important sector with more than US$1 billion allocated, followed by transport, education, health, governance and community support, all of which have allocations of US$ 400-600 million each. Allocations to the productive sectors, flood control and the environment are all in the range of US$150-250 million (figure 7.2).

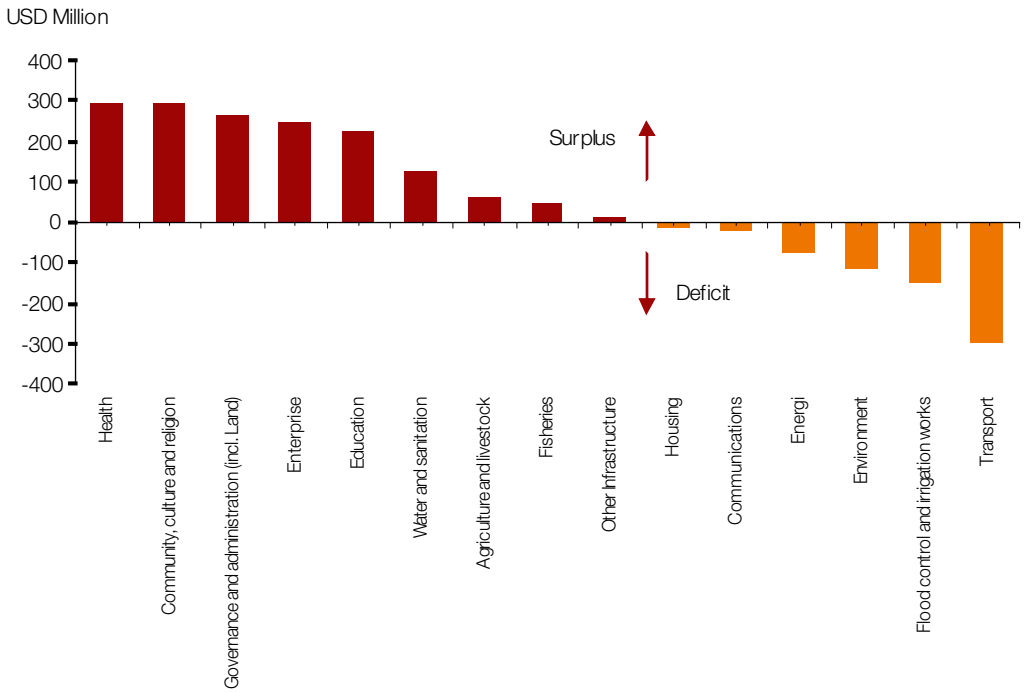
Figure 7.2 Sectoral allocation of the current reconstruction program



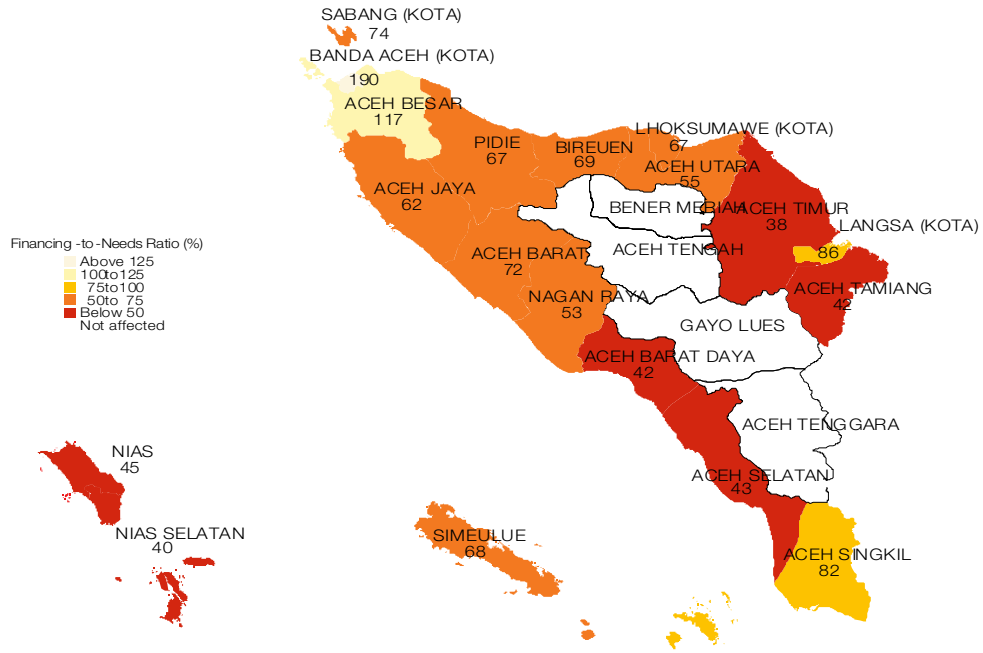
These allocations are broadly in line with sectoral needs with a slight bias towards the social sectors. Existing allocations have now exceeded core minimum needs in several sectors. These additional funds can help improve the quality of health-care, education, and other services in comparison with pre-tsunami levels. However, despite the BRR's 2006 budget allocation, transport remains heavily under-funded; even more so as almost 50 percent of the existing transport allocation is dedicated only to the road between Aceh and Meulaboh. Communications, energy, flood control and environment also need more support.

While the reconstruction funds are corresponding with spatial damage there is a visible bias towards areas that are close to Banda Aceh. The regions of Aceh Jaya and Aceh Barat experienced the greatest damage, followed by Nias, Aceh Besar and Banda Aceh. With the exception of Nias, all these districts are also receiving the largest donor allocations and in the case of Banda Aceh and Aceh Besar funding appears to exceed the amount of damage and losses. By contrast, other parts of Aceh particularly the South and North-East of Aceh, as well as Nias are still significantly under-funded (map 7.1, see also Annexe1-6).

Figure 7.3 allocation of funds versus "core minimum needs"



Map 7.1 Financing and needs (spatial)



Box 7.2 Slow Project Implementation

Villagers' resentment at the government's perceived neglect of them deteriorated so much during the year that by August some people were openly suggesting that Aceh should separate from Indonesia. "It's not that we support the Free Aceh Movement but we just don't get any benefits from being in Indonesia," one man told me. "I'm sure we'd be better off as part of Malaysia." His neighbor added: "If it wasn't for the NGOs, nothing would have been done here."

In many respects their anger and disappointment was justified. The only visible ongoing government project has been the clinic established by the provincial health office (see health section). Meanwhile, the villagers' most pressing need - the repair of the public works ministry-build floodgate that prevents the paddy fields from being inundated (see the Water Sanitary section) - has yet to even reach the drawing board. Bizarrely the public works ministry did however find funds to repave some of the road from the main Banda Aceh-Meulaboh highway; something that was not even on the villagers' priority list, let alone at the top.

But many villagers also quickly forgot that Nusa was one of the first villages to have barracks, the PDAM water supply was restored within a few weeks, the electricity company PLN has worked well with the village when required and the teachers who died in the tsunami were quickly replaced. Deliveries of "poor rice", as it became known, were also made regularly. The Camat (sub-district head), Rasidi, who rarely visited Nusa except when it became apparent a clear-the-air meeting was needed, such as over the delayed Jadup payment, told me it was not a case of him or his officials neglecting Nusa but rather that the village was receiving more NGO help than elsewhere. "We're coordinating the aid, so we're focusing our resources on where the NGOs are not going," he said. There was some justification to what he said but he could have handled the situation a lot more sensitively. Many villages also did not appreciate that in order to undertake the majority of projects, NGOs would have had to coordinate with several government agencies.

Source: John Aglionby (The Guardian)

IMPLEMENTATION

The implementation of these programs has been frustratingly slow for many. At the end of 2005, the gap between budget allotments and actual disbursements on the reconstruction program remains large. Of the US$4.4 billion already committed to specific reconstruction projects by the Government, official donors and NGOs, roughly US$775 million –17 per cent – has been disbursed as of the end of November 2005. The frustrations of the people in the village Nusa give a human face a human face to the frustration of waiting (box 7.2).

However, in recent months the speed of reconstruction has been picking up. This has also been confirmed by progress in key sectors such as housing, education, and health (see chapters 1 and 3). By end-September, disbursements were probably not more than US$450 million. By the end of November, total disbursements of donors, NGO and GoI combined stood at US$775 million, out of which US$ 665 million are from donors and NGOs[42]. Disbursements appear to have reached US$ 150 million per month and total spending in reconstruction is expected to reach close to US$1 billion by end-December 2005, which

is a positive sign given that reconstruction spending did not begin in earnest until July 2005. This is in addition to more than US$ 1 billion that was likely spent during the relief phase.

The coming year will be critical to the long-term recovery of Aceh and Nias. If 2005 was the year of delivering emergency relief, assessing damage, understanding local needs, investing in planning and policy issues, and building capacity for large scale reconstruction, then 2006 must be the year of pervasive action on the ground. With an additional US$ 3.7 billion ready to spend, the conditions are good to improve the lives of the people in Aceh and Nias, if the lessons of the difficulties in 2005 are applied. With a further acceleration of the reconstruction program, up to half of the whole program could be delivered by the end of 2006. Achieving such an ambitious target would entail that disbursements need to reach an average of over US$200 million per month. In this scenario, US$2.5-3 billion would be spent in 2006, and together with almost US$1 billion in 2005, half of the overall reconstruction program could be delivered in the first two years. Delivering this pace will require ongoing extraordinary effort and must not be taken for granted.

NOTES

[34] For a more in-depth review of private contributions to the reconstruction effort see BRR/World Bank, Rebuilding a better Aceh and Nias, October 2005, section 3.1.

[35] A team of more than 100 Indonesian and international experts prepared the January 2005 damage and loss assessment of the impact of the tsunami and earthquake in Indonesia. This assessment was based on the international standard methodology first developed by the UN Economic Commission for Latin America and the Caribbean (ECLAC). Follow-up assessments for specific sectors are updating the preliminary figures.

[36] Underlying this 20% real inflation assumption are the following parameters: (i) 30% nominal inflation (including Nias, which is below the average in Aceh); (ii) 10% depreciation of the Rupiah to the US$ since January 2005; (iii) assumption that a large part of reconstruction will occur in 2006; (iv) leveling off of inflation by 2007.

[37] For more details on the Master Plan and its proposed investment program see Rebuilding a Better Aceh and Nias, BRR and World Bank, October 2005, section 3.1.

[38] Paris Club debt rescheduling contributed partly to Government's contribution. In May 2005, the Paris Club agreed to reschedule the equivalent of US$ 2.7 billion in debt to Indonesia due in 2005 until December 2006 and to be repaid over a five-year period. The net present value of US$ 2.7 billion debt rescheduling, i.e. the interest rate gain for Indonesia, would depend on the average interest rate during this period. For illustrative purposes, an average 3.5% interest rate would result in a net gain of approximately US$ 330 million.

[39] For a more detailed overview over local government spending in tsunami-affected kabupatens see Rebuilding a Better Aceh and Nias, BRR/World Bank, October 2005, section 2.4.

[40] These are direct transfers from donors to NGO which are different from donor designed projects that use NGOs to implement, and thus counted under NGO-projects (see Annex 3).

[41] This financial analysis attempts to capture all available sources of reconstruction finance: The government of Indonesia (incl. regional governments), donors and NGOs. In order to avoid double counting and to cut out pledges that may not materialize, only ongoing, or already agreed, projects are counted. For practical and consistency reasons, each item is associated with the executing agency, as opposed to the source of funding. For a more details on the methodology see Annexes 1-6.

[42] See Annex 6 for details of measuring disbursements.

Part II

FINANCE AND COORDINATION

Chapter 8 | FUND FLOWS AND BOTTLENECKS

In the immediate aftermath of the tsunami, relief funds from all sources were mobilized and disbursed rapidly. While the bulk of these funds flowed directly to recipients from donor agencies, foreign military support operations, private firms, and national and international NGOs, the Government and the Indonesian military also utilized available emergency funds from the budget to rapidly commence relief operations.

SOURCES OF DELAYS IN THE RECONSTRUCTION PROCESS

However, funds flows for reconstruction activities have been slow, particularly in the first 9 months after the disaster. Of course, serious reconstruction works require a much longer lead time for project development, planning, review and impact assessment, procurement, and mobilization. Indeed, it is common in "normal" times for development projects in Indonesia to take up to 1-2 years from initial concept to first disbursement. But given the scale of suffering of those who lost their homes, livelihoods and communities, no one can be satisfied with the "normal" pace of project implementation. In this first year after the tsunami, slow project implementation added to the frustration of many stakeholders, most importantly local communities, who felt that all the main players in the reconstruction process, had lost the sense of urgency necessary to push projects forward.

Donors that disbursed their funds through the Government budget faced particular delays but even the "off-budget" donors have disbursed more slowly than initially expected. By end-November 2005, even the NGOs had only disbursed 25 percent of their reconstruction projects budgets (see chapter 3.1). Although most donor agencies declared their pledges for recovery and reconstruction at the CGI meeting in January 2005, many only formalized their support in mid-2005. Government approval of umbrella agreements with donors and individual donor projects often compounded these delays. But even after projects were agreed, project implementation and funds disbursements were slow. While these implementation delays were often a function of the sheer complexity and scope of the reconstruction challenge, there were a number of administrative bottlenecks that further exacerbated these delays, especially for "on-budget" donors (see box 8.1). Indeed, not only foreign donors, but the BRR itself has faced frustrating delays in the disbursement of funds for urgent reconstruction projects.

BOTTLENECKS IN INDONESIA'S BUDGET SYSTEM

On January 1, 2005, just days after the tsunami, the Government implemented a major, long-planned overhaul of its budget processes. The reform, designed to tighten fiduciary controls over a budget system rife with corruption, established a new system of checks and balances over all key stages of the development and execution of sectoral and project budgets. At the same time, it decentralized spending decisions to line ministries and regions. Like all major reforms, the new processes and procedures caused initial disruption in standard service patterns leading to delays in budget execution and hence in the implementation of government and donor projects across Indonesia. The local governments in Aceh and Nias, still reeling from the impact of the disaster, were particularly overwhelmed by these new processes.

The delays in 2005 were as much upstream in the preparation of projects and the budget as they were downstream in the implementation of the budget. The budget process, and the associated delays, can be categorized in four phases (see figure 8.1):

Box 8.1 Sources of delays in the reconstruction process

Project preparation and approval processes. Before any project can commence implementation it needs to be prepared, appraised and approved. This is part of a natural coordination and quality assurance process to make sure money will flow and be spent effectively once the project implementation begins. In Aceh and Nias, every project is being cleared by the BRR but in addition, coordination needs to happen with central and local governments as well as with other partner agencies.

Central Government budget process. The reconstruction budget, including the BRR's allocation, was only approved in June after submission to the Parliament in May.

Local Government budgets. The tsunami disrupted the local government budget approval process, scheduled for end-December 2004. Local budget approvals have taken several months to complete. Many local governments have displayed little urgency to support the reconstruction process in the expectation that central government, donors and NGOs will take over the financing.

Donor budget processes. Many donor institutions went through equally deliberate budget approval processes, including sign-off by national parliaments. This explains why many donors were only able to allocate their funds by mid-2005.

Procurement. Procurement covers a number of steps, beginning with the identification of specification and the tender process and ending in the delivery of goods and services and payment. It requires that activities have been defined and approved, budgets prepared and available, and designated human resources to conduct the process.

(i) **Approval of the Government budget:** Though relief funds flowed from a special emergency budget under control of the national agency for emergency coordination (BAKORNAS), Government spending (including all on-budget donors) for reconstruction projects had to be incorporated into the revision of the 2005 budget to be submitted to the DPR. The revised budget was finally approved at the end of June 2005.

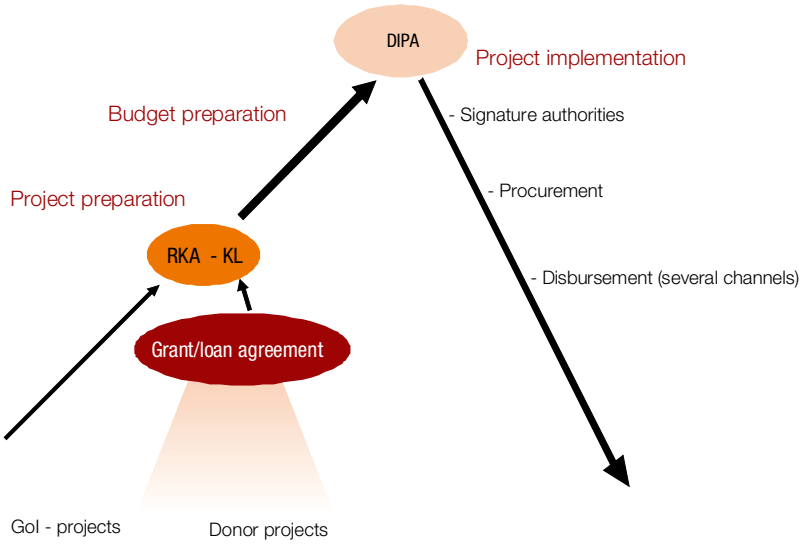
(ii) **Project preparation (RKA-KL-process):** The project preparation process for Government begins with the development of a ministry's annual work-plan and budget (RKA-KL), which is informed by the annual government work plan (RKP) and budgetary ceilings. Executing agencies submit draft budget plans to the Ministry of Finance for review and approval, but hastily prepared budgets often require several rounds of revisions and, coupled with slow administrative procedures, were generally the most significant source of delays.

(iii) Issuance of spending authority (DIPA): With an approved budget plan, the executing agency then prepares a budget execution document (DIPA) against which all disbursements are to be authorized and processed through the offices of the State Treasury offices (KPPN). The BRR's DIPA was issued in June. Donor-financed projects executed by line ministries in Jakarta tended to face even greater delays in the issuance of their DIPAs.

(iv) Project implementation. Upon completion of the DIPA and appointment of signatory authorities project work units can enter into commitments for the provision of various goods and services. However,

standard procurement procedures, not designed for emergency situations, have caused further delays. It should be noted, though, that off-budget bilateral donors and even NGOs have also experienced delays due to their own procurement procedures, which often require transparent competitive bidding, and thus take time.

Figure 8.1 Government Budget Processes



Though the revised 2005 budget allocated substantial funds to the BRR in June 2005, most of these funds have been channeled directly to line ministries and regional governments. This "pass-through" approach has also led to slow disbursements from the BRR's own funds. The process of identifying appropriate implementation agencies and appointing project managers ("Satkers") willing to work under BRR's enhanced fiduciary controls proved to be slower than expected. In addition, hastily defined projects prepared for review by the Parliament in May-June 2005 often required time-consuming budget revisions in response to rapidly changing circumstances on the ground.

RECENT PROGRESS AND OUTLOOK FOR 2006

Following direct intervention by President Yudhoyono to accelerate the progress of reconstruction, the backlog of approvals for existing on-budget donor projects was dealt with decisively. Approved projects of the Multi-Donor Fund (supervised by the World Bank) and the Emergency Tsunami and Earthquake Support Project (administered by the ADB) have now been processed through the budget system and are actively disbursing. After a slow start, over US$75 million will be disbursed from the Multi-Donor Fund by the end of the year. The BRR also recently established the Recovery Aceh Nias Trust Fund which should help the channeling of resources from donors, including the private sector, in a flexible way (box 8.2).

Box 8.2 Recovery of Aceh and Nias Trust Fund

The Recovery of Aceh and Nias Trust Fund (RAN-TF) was established in October by BRR, making use of its powers given by Presidential decree to provide donors with a funding channel as an alternative to on-budget fund flows.

The purpose of the fund is to provide flexibility and speed in responding to program needs, and matching that with donors seeking the most efficient funding means. The Trust Fund includes either 'open' funds to be allocated by BRR to the most pressing program needs, or 'closed' funds that the donor wishes to earmark for particular projects. Since the fund's inception, donors include governments of Greece and China, and corporations Alcatel, BP, JSE and BNI.

The RAN-TF has five commercial bank partners – HSBC, Deutsche Bank, Bank Niaga, BNI 46, and Standard Chartered. They will provide all financial management for the scheme, including all accounting and fund administration. BRR will have oversight of program and fund allocation, and a procurement agent will be engaged to manage the delivery of services. This arrangement is intended to ensure professional and robust standards of accountability for the reconstruction program.

In response to the delays in the budget system, the Government has approved a carry-over of unspent funds from the 2005 revised budget into 2006 for reconstruction projects. While normal procedures require unspent funds at the end of the year to be returned to the Ministry of Finance, the approval of this carry-over until April 2006 – with the option of a further extension until September 2006 – should provide sufficient space to implement projects slated for 2005. However, it is crucial that the procedures to administer this carry-over do not impose additional delays in project implementation.

The preparation of the 2006 budget appears to be on track. The budget was approved by the Parliament on October 27, 2005, including an allocation of US$ 583 million for the BRR and an additional US$ 369 million in on-budget donor projects. The Ministry of Finance intends to issue the BRR's budget document on January 2, 2006, allowing for immediate disbursement to BRR reconstruction projects. A recent presidential regulation allows the BRR to directly execute projects and adhere to emergency procurement guidelines in particular sectors through June 2006 which should significantly accelerate disbursements.

Despite the recent progress, a flexible, fast-track set of procedures for spending on reconstruction projects in Aceh and Nias with appropriate fiduciary controls is still required to ensure that the pace of implementation accelerates in 2006. The "normal" pace of project implementation is simply not good enough to address the urgent needs of those whose lives were disrupted by the tsunami and earthquakes. While decisive presidential leadership resolved ongoing problems in 2005, this is not an effective institutional solution to the underlying problems. Once administrative bottlenecks require presidential intervention to be addressed, they will have already caused unacceptable delays. Going forward, it is important to look for solutions that get the job done, on-budget or off-budget.

Part II

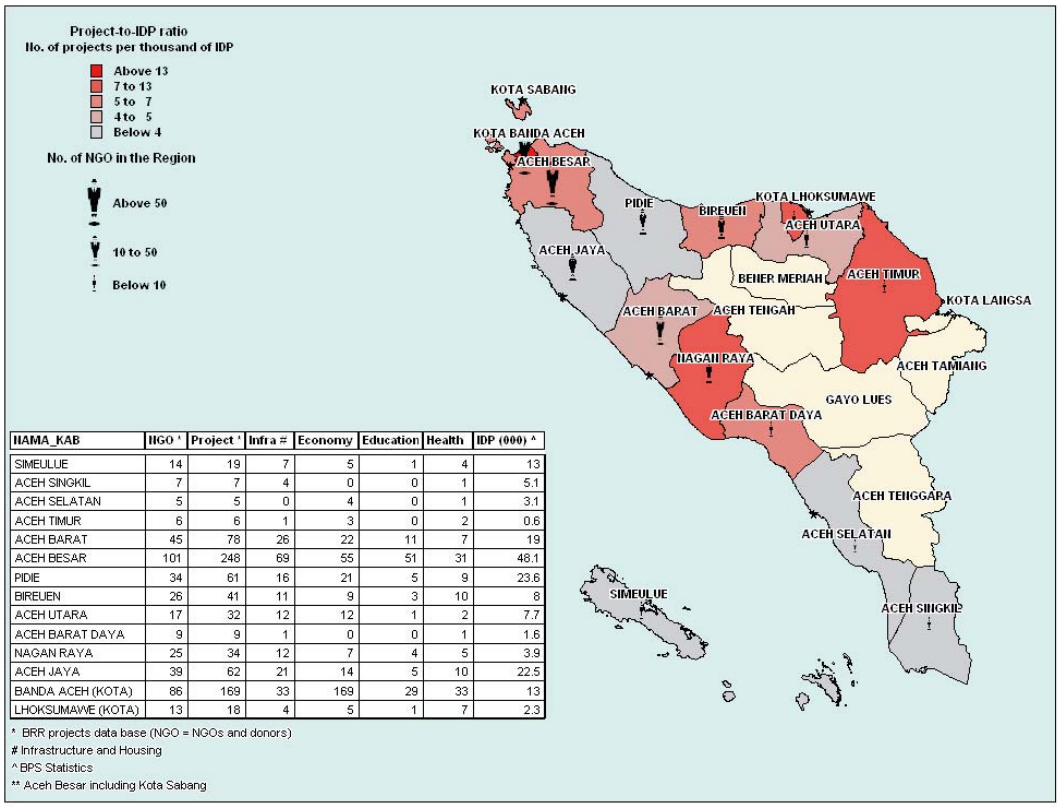
FINANCE AND COORDINATION

Chapter 9 | THE CHALLENGE OF COORDINATION

The profusion of donor agencies can lead to a confusion of activity. With nearly 500 organizations participating in the recovery program, including multi-lateral and bilateral agencies, national and international NGOs, private sector firms and associations, and civil society groups, differing approaches, standards and styles are inevitable. There have been many examples of competition between agencies, "poaching" of operational territory and an unwillingness to share plans and studies. Most donors have a cooperative spirit, but are so busy with their direct work that they have little time to inform others about their programs, much less the lessons learned.

Coordination problems have led to gaps, duplication, inefficiencies and areas of uncertainty.
This can lead to weak correlation between needs and recovery programs. Banda Aceh and Aceh Besar have the greatest coverage of NGOs, both more than 50 each. The concentration of IDP is also high in these two local governments, but the neighboring districts (Aceh Jaya and Pidie) still have many IDPs but much less support. We have seen similar gaps in financing of projects across sectors in chapter 7. Logistics are part of the problem -donor/NGO activities clearly concentrate in areas that are easier to reach by road or UN planes and helicopters – but there are more fundamental coordination failures behind these patterns.

Map 9.1 Distribution of NGO activities by District compared with needs (represented by IDP numbers)



NAMA_KAB	NGO *	Project *	Infra #	Economy	Education	Health	IDP (000) ^
SIMEULUE	14	19	7	5	1	4	13
ACEH SINGKIL	7	7	4	0	0	1	5.1
ACEH SELATAN	5	5	0	4	0	1	3.1
ACEH TIMUR	6	6	1	3	0	2	0.6
ACEH BARAT	45	78	26	22	11	7	19
ACEH BESAR	101	248	69	55	51	31	48.1
PIDIE	34	61	16	21	5	9	23.6
BIREUEN	26	41	11	9	3	10	8
ACEH UTARA	17	32	12	12	1	2	7.7
ACEH BARAT DAYA	9	9	1	0	0	1	1.6
NAGAN RAYA	25	34	12	7	4	5	3.9
ACEH JAYA	39	62	21	14	5	10	22.5
BANDA ACEH (KOTA)	86	169	33	169	29	33	13
LHOKSUMAWE (KOTA)	13	18	4	5	1	7	2.3

* BRR projects data base (NGO = NGOs and donors)
# Infrastructure and Housing
^ BPS Statistics
** Aceh Besar including Kota Sabang

Although coordination is a central mandate of BRR, it is a collective responsibility for all stakeholders working for recovery. This was the key conclusion of the Coordination Forum for Aceh and Nias (CFAN) in October 2005. This marked the first occasion that leaders of all stakeholder groups came together to determine more effective ways to meet the recovery challenges. Its theme was better coordination and collective responsibility for ensuring high standards and enhanced accountability to the people of Aceh and Nias.

THE STORY OF COORDINATION SO FAR

Coordination during the humanitarian relief phase was largely a problem of logistics. Based on a real-time assessment of needs and conditions, it was key to know: who provides what, where and when. Such coordination was effectively provided by BAKORNAS, the Indonesian military, UN OCHA, and the Red Cross/Red Crescent. But as emergency recovery turned to reconstruction, the tasks of coordination became much more complex. The UN began to convene various coordination meetings for bilateral and multilateral agencies, sometimes including the largest NGOs.

BRR takes the helm. BRR recognized that its first priority was to gain a comprehensive overview of the tsunami response in every part of Aceh and Nias, and in every sector. This has enabled BRR to establish where there are unmet needs or duplication, and where there is work of poor quality. BRR's main coordination tool was a fast-track project approval process in which every agency had to submit a Project Concept Note detailing the project's plans, location of its activities, budgets and targets, which was then be fed into a projects database. To encourage coordination and transparency, this process was in the public domain.

COORDINATION CHALLENGES AND STRATEGIES TO ADDRESS THEM

In spite of a long series of working groups covering most aspects of recovery, most seasoned agency staff would say that real coordination is quite weak. Most meetings ostensibly for coordination achieve little more than information-sharing rather than strategic planning. There is a vicious spiral; agency leaders are so busy on their own programs that they are frustrated when they attend a meeting that isn't useful, but largely informational; they are likely to leave these in future for more junior staff, which reinforces their information rather than strategy content.

Box 9.1 Sector-specific working groups meeting regularly in Banda Aceh

Construction/ Development	Social Sector/Other
Shelter	Health
Transitional Shelter	Hygiene
Water-Sanitation	Food and Nutrition
Logistics	Reproductive Health
Community-Driven	Psycho-social and Mental Health
Development	Medical Supply
Governance	Malaria
Livelihoods	Education
Fisheries and Aquaculture	Child Protection
Agriculture	Gender
Public Information	Humanitarian
Information Management and Monitoring	Security
Private Sector task force (BRR-led)	

At the first CFAN meeting, BRR and participants reached agreement on a strategy to make the whole greater than the sum of the parts through more proactive coordination, summarized as six objectives:

1) Strengthened policy-making: BRR is now initiating policy advisory groups to reach agreement on how best to address particular critical issues (such as in the housing sector). In these, BRR convenes small groups of the most experienced specialists in the topic concerned from the provincial agencies, donors, international NGOs and civil society. Policy decisions reached through such processes are also likely to be better respected and understood.

2) Collective responsibility for tackling problems: BRR's early coordination efforts tended towards a "hub and spoke" model in which all agencies dealt individually with BRR, relying upon it to internalize and communicate information across all other donors. But as the pace of recovery increased, it became impossible for BRR to engage with every project or problem; it has needed to devolve functions and work in partnership, with other agencies. The key principle to be advanced for problem solving is to create structures for identifying and solving them at the lowest level possible, while ensuring there is a clear referral route to forward issues that can't be resolved at that level.

3) Holistic planning: Many agencies may work in the same village. At that level, however, close proximity usually allows the various parties to avoid overlapping – but it is unlikely to lead to a holistic plan for the medium term, agreed with the community and with local authorities. For this it is important to evolve coordination at the sub-district (kecamatan) level. Experience in a number of places where this is well-developed (especially Aceh Besar and Pidie) demonstrates that well-planned, regular coordination forums that involve all stakeholders makes it possible to map the needs and existing programs in the various villages to identify problems of quality or consistency, to spot gaps and overlaps, and to determine better ways of working together. BRR is now extending such coordination to all damaged areas and will make sure that the results of these meetings feed into district-level coordination forums – again multi-stakeholder and led by the bupatis.

4) Collaboration in upholding standards: BRR is charged with overall quality management but cannot achieve this without active support of its operational partners. It is now important to develop effective, widely supported mechanisms to monitor performance. Various mechanisms to contribute to this are being considered, including commissioning independent agencies to survey programs or make spot checks, promoting peer review mechanisms, initiating an "accredited partner" scheme designed to help smaller NGOs in quality monitoring and compliance, and strengthening monitoring of government- funded reconstruction activities. For the latter, BRR has put in place a program for quality assurance and monitoring of the $397 million of programs managed under its own budget in 2005.

5) Better data gathering: Even now, approaching one year after the tsunami, it demands enormous efforts to receive an accurate and consistent picture of needs and progress, despite numerous studies and surveys. Greater professionalism is needed in future data gathering and

more discipline for sharing operational information. BRR, the UN Information Management Systems and the World Bank have now established an Advisory Group on Information Management and Monitoring to oversee the quality of future surveys and research. And BRR is being more assertive in requiring all donors and INGOs to provide regular information about the progress of their projects to a central system (the Recovery in Aceh and Nias – RAN-Data-Base) which is available for public inspection. See Box 9.2

Box 9.2 Recovery Aceh Nias Database

The RAN-Database is BRR's information management system for reconstruction projects, using a similar database as other tsunami affected countries.

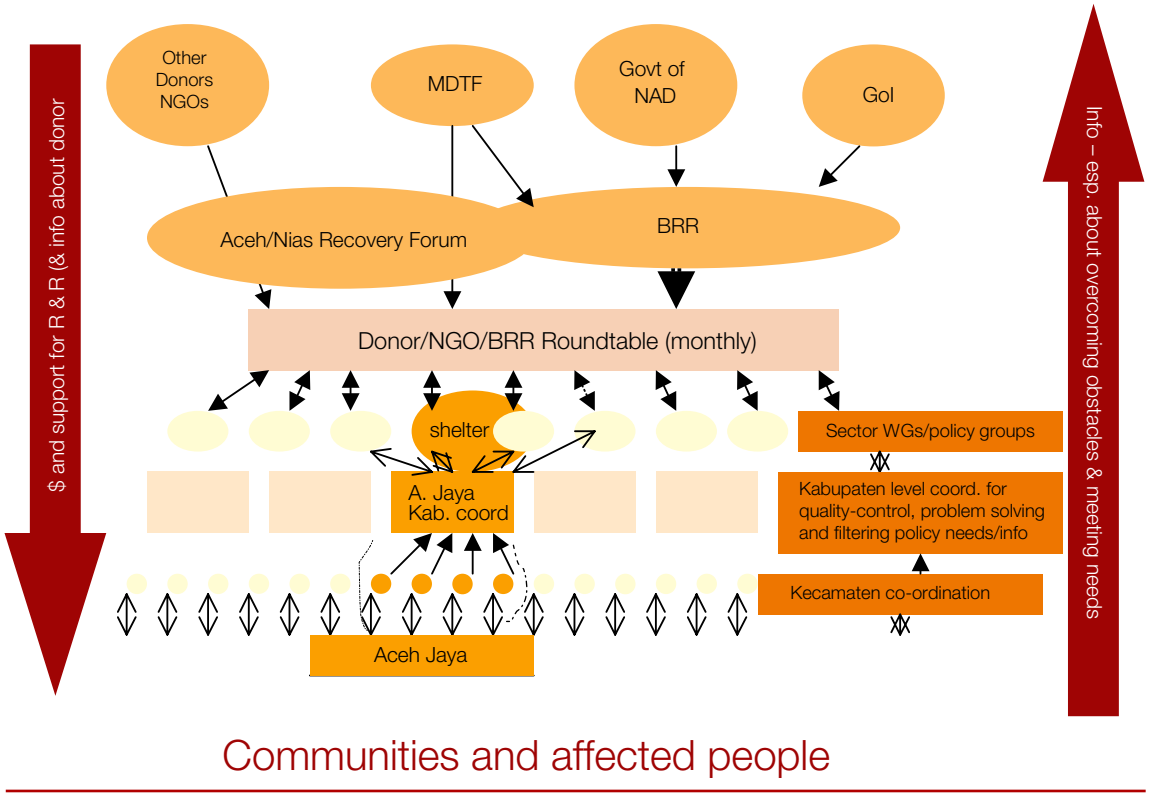
The database was launched at the end of October 2005. It contains information on approval and progress of all projects based on the BRR 'Concept note' approval system, plus monitoring data based on 'key performance indicators' for each sector.

All the database contents are publicly available through the website www.e-aceh-nias.org and organizations can update their own project information on-line.

6) Transparency and sharing: At present, there is a tendency for agencies to gather and keep information for their own programs and be reluctant to share it. This competitiveness and lack of collegiality imposes substantial costs to all the stakeholders. Also, many agencies give little attention to informing those impacted by the tsunami about their programs – leading most to feel extremely ill-informed about them. They must in future be the first to be informed.

This new framework for coordination was discussed extensively at CFAN and in follow-up meetings with the key stakeholders. Some CFAN proposals have been adopted; with others there has been only partial follow-up – however BRR sees acting on the whole framework as a priority for the coming months. The following diagram describes its key elements. Subsequent CFAN meetings will be the highest level meeting of all stakeholders to confront bottlenecks, review progress and agree future priorities. It comprises Ambassadors, country directors of donor agencies and NGOs, leaders of BRR, senior GoI officials, representatives of the provincial governments and its main agencies as well as civil society leaders. The priority at CFAN meetings will be to identify gaps – both geographic and sectoral – and explore how best to meet them. This will include a matchmaking between agencies who have capacity to expand excellent programs but lack funds with donors who have uncommitted resources for recovery.

Figure 9.1 Schematic view of the enhanced strategy for stakeholder coordination



Part III

MOVING FORWARD – CHALLENGES AND STRATEGY FOR 2006 AND BEYOND

Chapter 10 RECOVERY PRIORITIES FOR 2006-2007

While many organizations play vital roles in recovery, the BRR has been created to stand at the helm steering the overall enterprise. Its leadership makes the Indonesian experience unique compared with other emergency responses. This part of the report tells of the evolving challenges and priorities in the recovery effort. It discusses the contributions everyone can make to these challenges, but it concentrates heavily on the role of BRR and the vision of this agency for both the coming months and the longer term.

For its first six months, BRR built itself as a new government agency, creating systems to intervene in crucial areas, and coordinating recovery agencies, particularly by instituting a common project approval mechanism. This gave the BRR an overview of which agency was doing what, where and with what resources – the supply-side of recovery. At the same time, the emphasis of BRR and many agencies on ensuring community-driven approaches – reaching out to the people hit by the tsunami to understand their needs and priorities for recovery – enabled BRR to help match this donor supply-side capacity with the communities' demand-side needs. This helped identify the major gaps, and therefore the priorities for the government of Indonesia's resources, which started flowing to Aceh only in late August. In this formative time, BRR also established key units, such as the anti-corruption unit, and built relationships with other government agencies (nationally and locally). Now BRR leads the recovery effort by setting standards, monitoring delivery, identifying and solving problems of policy or bottlenecks, , and matching needs to funds – including by submitting proposals to major donors.

In 2006, BRR plans to take on more responsibilities as an implementing agency, directly overseeing large-scale construction projects through direct contracting. This will give it greater ability to respond to gaps or poorly performing programs. It can henceforth assume responsibility to deliver the programs itself, or reassign them to another agency. It will also have the capacity to provide support, training, encouragement and oversight to local governments to execute quality programs of reconstruction and development.

BRR has defined four key challenges for the months ahead: 1) getting people into houses; 2) addressing the immediate infrastructure and logistics needs to facilitate large-scale reconstruction activities; 3) helping to strengthen both institutional and human capacities; and, 4) restoring livelihoods.

REBUILDING HOUSING

There will be two main housing priorities in 2006:

- Ensure that all IDPs are out of tents in early 2006 through the provision of suitable transitional housing. While the UN Office of Recovery Coordination, together with BRR, has provided much of the impetus for this effort, the Red Cross/Red Crescent (RCRC) is carrying the brunt of the responsibility with the support of local government to identify land and local labor. RCRC has identified high quality transitional houses that can be erected quickly. The import of 20,000 units has begun and is expected to be completed over the next 3 months, building up to the rate of 2000 per week. IOM and RCRC are transporting the units to locations around Aceh and Nias, and several NGOs have agreed to erect them. UNICEF, Oxfam, RCRC and other NGOs are providing water and sanitation in the new settlements. Those who relocate into transitional houses will not be shifted to "the

back of the queue" for a permanent house.

- Accelerate the pace of building permanent homes. The goal is to maintain the recent pace of about 5000 housing starts per month in the first half of 2006 and accelerate 8000 per month in the second half of 2006, while rigorously maintaining the quality of construction and the participation of communities in decision-making. The total production goal for 2006 is 78,000 permanent houses. The remaining 12,000 would be completed in 2007. BRR will closely support and monitor the twenty largest housing programs (which are expected to build well over 80 percent of the planned houses). BRR itself will have the capacity, in terms of budget and a roster of construction companies, to build up to 40,000 houses in 2006 if the need arises.

Six important questions will need to be resolved early in 2006, and are likely to dominate policy-making in the sector:

1. What entitlement should renters have to compensation? The emerging consensus amongst agencies working in the sector and BRR is that renters should be entitled to a house, albeit perhaps with some obligation to pay for the land and a portion of the cost (for which loans would be available).
2. What would be the best program to assist those who need to repair their homes? At present, stringent requirements to provide photographic evidence of tsunami damage is deterring progress in this area; a simpler approach based on community-ratification of property damage could achieve much swifter results, so speeding up people's return to their homes.
3. Should host families be given incentives to house IDPs for the long term? Many IDPs have been incorporated into the homes of relatives, friends or others who wanted to help tsunami victims. Some are anxious to return to their homes, but others are happy where they are. If incentives are given to the hosts as well as the basic compensation package due to all IDPs, this arrangement may work well for all.
4. What options should be offered to those who don't want to return to their villages? In addition to the above, many will opt not to have the new house to which they are entitled. These include young men who have lost all their family members and might choose to move far away; women who might remarry or prefer to move in with adult children; and orphans who are adopted (perhaps by relatives) and who will not need a house of their own for a long time. For all of these a cash package might be more appropriate, but this is currently not on offer.
5. How actively should issues of equity be managed? Some communities complain that neighboring villages (or even others living in the same village) are receiving much better houses. This is an inevitable consequence of there being a multitude of housing providers, each using their own designs, and an emphasis on participatory approaches in which the communities themselves decide on which houses they want and which NGOs they want to help them. They may come to regret their choice when the alternatives that might have been available become evident.
6. How interventionist should BRR be in managing the quality of programs? Clearly some NGOs and donors are building sub-standard houses, are unacceptably slow, or are simply failing to meet their commitments. BRR is now determined to take responsibility for reassigning responsibilities in such situations or undertaking the commitments itself – but how much should BRR negotiate with and give notice to the offending agency before it strips them of their programs?

REPAIRING INFRASTRUCTURE

Linked to housing, a parallel priority will be for rehabilitating vital infrastructure. Indeed if this is not done, the houses won't get built. It will be impossible to build houses along most of the west coast unless roads and ports are repaired (at least temporarily). Unless housing land is drained or protected from tidal incursion, many of the houses built will be uninhabitable.

An Immediate Action Plan (IAP) for infrastructure, financed by the Multi-Donor Fund, will be implemented in the first half of 2006. The first aim of the IAP is to ensure that the pace of recovery in the most severely damaged communities along the west coast can accelerate by conducting swift repairs and upgrading to the temporary Banda Aceh to Meulaboh road and bridges, strengthening them from their current carrying capacity of 5-ton trucks to 20-ton; the Government of Japan is similarly upgrading the Calang to Meulaboh stretch of road. At the same time, special ships are being brought in to Aceh that can carry heavy loads yet land on beaches – to be able to bring construction materials and other supplies to areas where the ports were destroyed.

A further IAP element entails restoring drainage systems, particularly in the city of Banda Aceh, so that the new houses being built are not flood-prone. And work will start to make quick repairs to some of the ports and plan the more extensive port re-building and rehabilitation elsewhere. Finally, IAP includes the provision of water supplies and sanitation to the new temporary living centers being built with the IFRC/UN program.

Going forward, BRR is preparing a Medium-Term Action Plan for 2006-8 including a "Kabupaten Infrastructure Development Support" plan, for which mapping, surveys and studies have already been commissioned. Throughout 2006 this program will start in the five most affected areas (Banda Aceh, Aceh Besar, Aceh Jaya, Aceh Barat and Nias) and will evolve into an intensive program of spatial planning and detailed engineering design, followed by tender procedures for the construction tasks. The plan also entails building the capacity of local government to plan and manage local development projects. The full cost of the program will be in the range US$200-400 million and will extend, in the second year, to 14 districts/cities and eventually to all areas of Aceh and Nias that were damaged.

Box 10.1 Infrastructure priorities for 2006-2007 – Plans and Progress

Major infrastructure plans:

- 871 km of national road repaired or rebuilt (equivalent to 3-times Singapore to Kuala Lumpur)
- 336 km provincial/local roads in Aceh, 366km in Nias
- 150m of bridges in Aceh, 125m in Nias
- Rebuild ports in Ulee Lheue, Calang, Meulaboh, Malahayati, Tapaktuan, Sibigo, Balohan and Sinabang; expand Sabang port as a hub; rehabilitate other ferry and small ports, and Gunung Sitoli in Nias and 4 small ports; Calang port is top priority, (further ports are needed for which funds are not yet available in Blang Pidie, Singkil, Lamno Langsa and passenger ports in Nias)
- Rebuild airports in Gunung Sitoli, Lasondre, Blang Pidie and Tapak Lum.
- 37.8 km of coastal protection by 2009
- Potential plans for building coal-fired power station and linked coal-mining development in Meulaboh area; micro-hydroelectricity program in the Eastern highlands (the Leuser area); geothermal power station in West Aceh

Plans underway (end-2005):

- 5 major construction projects (totaling US$259 million) are underway including:
- 244km west coast road to Meulaboh (USAID)
- 491 km road rehab from Banda Aceh to North Sumatran border (ADB)
- Design of ports, water supply and coastal protection (technical assistance from France, Netherlands, Sweden, Norway, Japan and ADB)
- Support to district/city governments for project preparation, management of construction projects and institutional development
- 11 projects (totaling US$52.1 million) are being tendered including:
- Banda Aceh flood control
- Major irrigation and drainage program
- Rebuilding ports in Nias and Aceh
- 3 projects' (US$13 million) MoU or grant agreements are being prepared.

STRENGTHENING INSTITUTIONAL AND HUMAN CAPACITIES

With BRR's mandate ending in 2009, it is critical to work side by side with local authorities to strengthen their capacity. Local authorities must be fully involved in district-level infrastructure and other programs so that their capacity for managing programs and engaging constructively with communities is enhanced as a result. As the BRR increases capacity for program implementation and delivery, there is a risk that local government will further withdraw from the process. Local capacity needs to be built now– not least so that once BRR dissolves a strong capacity in the service of the people will remain, and there will be local government ownership, and therefore willingness to repair and service the roads and other facilities that have been provided by BRR and donor programs.

Both in the education and health sectors, initial success was achieved by rapidly restoring services through temporary facilities. The challenge now is to ensure these temporary facilities are quickly replaced by high quality permanent ones, and that

the quality of education and health care improves.

As attention turns to rebuilding the health and education systems, focus is needed on coordination, targeting and planning for the longer-term. Overlap of project sites amongst donors is an issue. In addition, both sectors were in a poor state prior to the tsunami, and education was particularly affected by the conflict. Planning should be a high priority for 2006-7, to ensure that facilities are provided equitably to all areas (tsunami, earthquake, and conflict-affected), and that these will be sustainable by local authorities.

RESTORING LIVELIHOODS

Employment

There will be large numbers of jobs in the construction sector in Aceh and Nias over the coming 3 years (perhaps as many as 1.15 million). The challenge is to ensure that these jobs help IDPs to recover their lives and dignity without creating an unsustainable employment and wage bubble. The most rapid reconstruction might be achieved by bringing in construction companies, complete with their workforce, from throughout Indonesia and beyond. However this would mean little local employment, potential resentment towards the incomers and lost opportunities for local capacity building. Conversely, if jobs are reserved rigidly for local people there could be serious wage and price inflation as well as capacity gaps that could cause construction delays.

There needs to be clear guidance – carefully negotiated with community leaders, labor groups and others in civil society – on steering the best course. Local labor should be used providing wage rates do not significantly exceed national norms and there are no lengthy delays, but there must also be flexibility to offer jobs and contracts to workers and companies outside Aceh and Nias. Donors and NGOs should be encouraged to provide on-the-job training to workers so that they gain skills in construction, carpentry and other trades – though this too needs strategic management and consideration of the likely labor market once the post-disaster reconstruction boom dies down.

At the same time, there is an urgent need for training in a range of other activities – particularly for those who cannot return to their previous jobs. In addition, there is an opportunity to promote the empowerment of women through training in non-traditional skills. BRR will coordinate programs providing training to over 4000 people per year in new skills and will initiate 24 manpower centers in Aceh alone to provide information about work opportunities.

Agriculture

To enable families to return to their farms, the priorities are to complete the rehabilitation of 28,000 ha of paddy land and 30,000 hectares of dry-land farms and to compensate for land that will be lost forever through the creation of 20,000 ha of new paddy land over 2006-7. To capitalize on the opportunities created by the peace agreement, BRR is proposing a program to develop 50,000 ha of new plantations for coffee, fast-growing wood and other agri-business products, plus related plants for the processing of these goods. There is also an opportunity to greatly expand animal husbandry, so that Aceh can move from its heavy dependence on imported meat (notwithstanding the urgency to keep the new outbreaks of bird flu under control).

Fisheries

A priority for 2006-7 is to develop a more integrated and holistic strategy for the recovery of fishing related employment. With

growing evidence that the current level of coastal fishing is unsustainable, and that rich stocks exist in deeper water, the future priority should be to build and equip larger boats that can fish further out. There also needs to be more emphasis on fish processing and ice plants, markets, cooperative development, training and other infrastructure so that fishing communities can get greater rewards from their catch. BRR has also set targets for the rehabilitation of 11,000 ha of fish ponds by end 2006 and 15,000 by 2007, to enable 30,000 families to regain their livelihoods.

Enterprise

Microfinance to support the quick recovery and expansion of small and medium enterprises will be a key priority. By 2007, BRR anticipates that there could be 650 microfinance institutions underway providing credit to 20,000 people; by 2009 livelihood programs could help start 167,000 home industries and aid 56,000 small businesses through training schemes, microfinance, and advice on management and marketing.

DONOR AND BRR PRIORITIES TO MEET THE CHALLENGES OF 2006

To reach these goals, BRR and the donors will need to focus on the following issues for 2006:

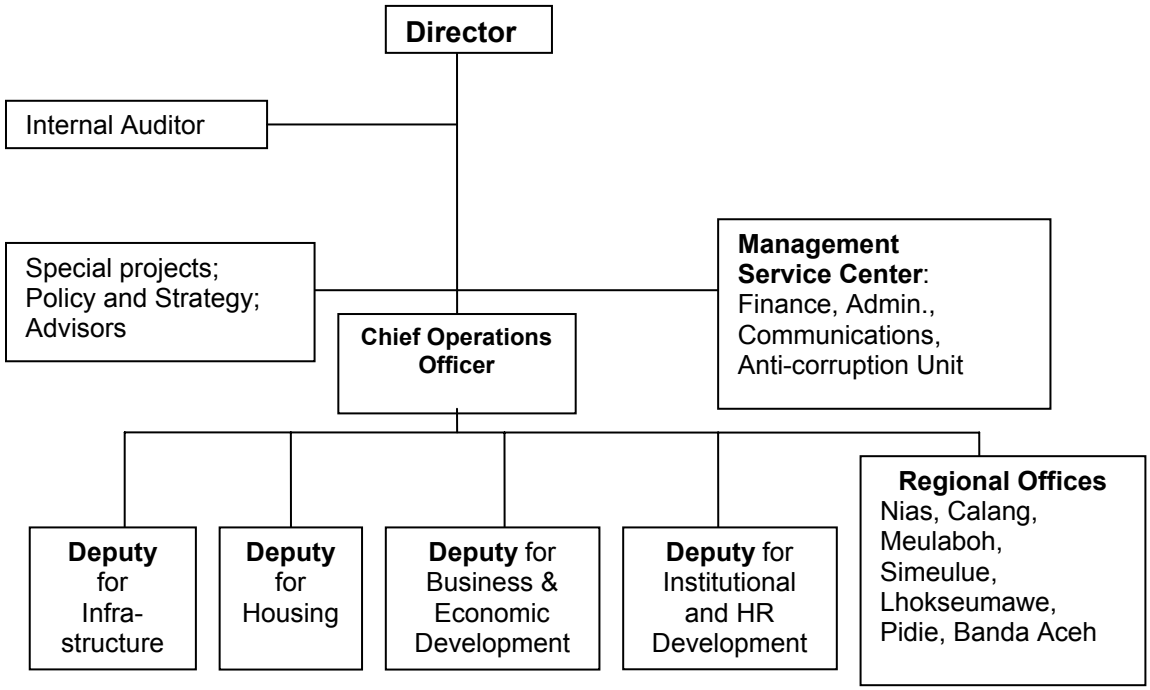
- Ensure that government, donor and NGO pledges translate into real programs, or that – where commitments cannot be honored – others are found to take on the work;
- Maintain the quality as well as pace in the recovery, and again reassign programs to other agencies where it emerges that competence is lacking;
- Address with communities the inter-related issues of land titling, phasing of reconstruction efforts, and re-design of communities so that opportunities for preventing future disasters are not lost;
- Establish BRR's capacity for direct implementation, with procurement mechanisms that enable BRR to directly appoint construction companies under the emergency powers given to it by Presidential decree;
- Begin the process of capacity building for district governments;
- Manage the supply-chain for construction materials to ensure stable supply;
- Strengthen the monitoring and data systems to end the lack of clarity concerning numbers of IDPs, numbers of new houses needed, and progress of NGO and donor programs;
- Establish a well-functioning grievance system so that IDPs and communities can have their concerns and complaints listened to and effectively addressed;
- Establish a one-stop shop to help provide the visas, work-permits and import licenses needed by international agencies engaged in the reconstruction effort.

THE BRR IN THE FUTURE: EXTENDING ITS OPERATIONS AND STRENGTHENING THE ROLE OF LOCAL GOVERNMENT

BRR is significantly widening its functions beyond general coordination, oversight, and project approval. This is designed to enable BRR to assert stronger strategic leadership and coordination, to be more effective in managing the quality and pace of the overall recovery effort, to press and support local government in playing a steadily increasing role in recovery, and to accelerate recovery by becoming itself a major implementer of construction projects. These changes have major implications for BRR's relationships with provincial, district governments and other stakeholders.

To equip it for these broadened functions, BRR has recently undergone a major restructuring. Its operation core comprises four sections, each led by a BRR Deputy (for Infrastructure, Housing/Settlements, Economic and Business Development; and Institutional and Human Resource Development). Other functions are arranged as illustrated below. BRR also plans to decentralize to help accelerate the housing and infrastructure programs and to be able to work closely with, galvanize action by, and carefully monitor the activities of local governments. While in 2005 some 90 percent of BRR staff were in its Banda Aceh and Jakarta office, by 2008 it is estimated that 50 percent staff will be located in 7 or more regional offices. The start will be made in 2006 by the appointment of BRR liaison staff to open these offices. Over time, existing BRR staff will be transferred to these offices to develop close links with officials and other stakeholders at the district and sub-district levels.

The ultimate aim is a gradual shift of decision-making and management responsibility from BRR to district and city authorities. BRR's role would be reduced to monitoring, countering corruption, problem solving, gap-filling and donor relations (including mobilizing more funds that may be needed from the donor community) so that, in 2009, it can dissolve itself leaving a well-functioning recovery and development machine in place.



Part III

MOVING FORWARD – CHALLENGES AND STRATEGY FOR 2006 AND BEYOND

Chapter 11 THE LONGER-TERM VISION AND PLAN FOR ACEH AND NIAS

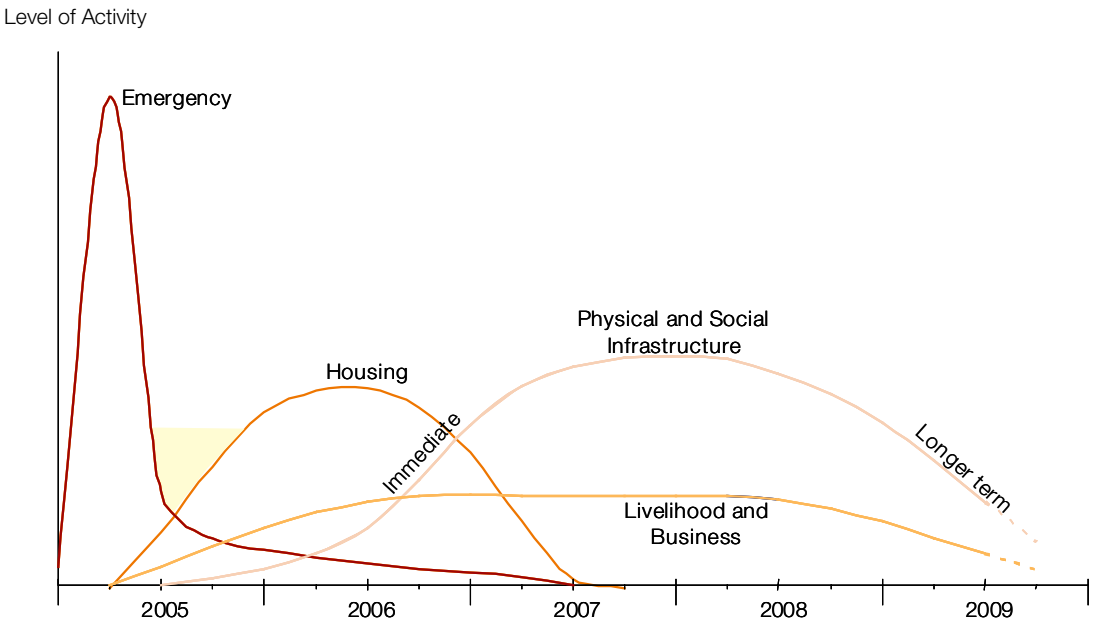
There are a thousand ingredients in recovery from a major disaster – especially one as complex as that of Aceh and Nias. It is not possible to attend to all of them at once without plunging the whole endeavor into a mire of planning and indecision. Effective progress means tough choices, separating what is vital from the merely important. The previous chapter concentrated on the immediate priorities for the next two years. As things progress, it will be possible to expand operations to include vital needs that are less urgent and eventually, build beyond recovery to development.

SEQUENCING THE RECOVERY

Geographically, this sequencing accounts for why priority in 2005 largely went to the coastal areas from Banda Aceh towards Bireuen in the north-east and southwards to Meulaboh. In 2006, BRR and donors will ensure a broadening effort to give due attention to the remainder of the west coast, Nias and Simeulue. In 2007, they will ensure that parts of the interior and the rest of the east coast are adequately supported and by 2008 programs will be extended to all vulnerable areas, especially in the highlands, where both conflict and the tsunami have had a devastating impact.

BRR also envisages a similar sequencing by sector. After emergency relief, the immediate focus of recovery was on housing and work programs to support livelihoods and kick-start economic recovery. In 2006-2007 priority will be extended to building physical and social infrastructure. The infrastructure program will largely entail working with local government, which requires building capacity for project management and supervision, planning, and monitoring corruption to enable them to assume full responsibility so that, in 2009, BRR can dissolve. This sequence of prioritization is illustrated below.

Figure 11.1 Sequencing of emergency and recovery effort (schematic)



MONITORING PROGRESS

Monitoring and evaluation of the reconstruction effort presents unique challenges. The scale of the disaster, the range of sectors covered, and the number of partners involved makes getting a grasp of progress difficult. Several surveys were undertaken soon after the disaster to assess the extent of damage and the needs of the population by NGOs, donors and government agencies and various systems established for recording affected individuals. In addition the national statistics agency conducted a full population census in August and BRR has established databases to record pledges and progress with recovery projects and has commissioned periodic surveys to establish progress of reconstruction at village level in key sectors such as housing and livelihoods. These sources of data, however, often present widely differing results. As a consequence it is often difficult to know with accuracy the extent of need and progress.

Coordination of the different monitoring activities is important to avoid duplicate requests for information and to improve the quality of the data. Hence, BRR has established an inter-agency working group to give greater strategic direction to monitoring efforts. BRR is receiving support from the international community in operationalizing its monitoring systems. Many government reporting systems were not working well before the disaster and it is unlikely they can be rejuvenated quickly. Nevertheless, BRR needs to be careful not to duplicate the activities of existing government departments, and look forward to building capacity in provincial and district governments. Finally, emphasis needs to be given to the analysis and dissemination of information, incorporating it in to priority setting, policy formulation and program management and enabling a range of stakeholders to assess progress.

LONG TERM DEVELOPMENT GOALS

There is enormous potential to build a "New Aceh and Nias". Aceh has fertile soil and good fishing prospects; rich natural and mineral resources; an educated and hard-working population; plentiful reserves of oil, coal and renewable energy sources and tremendous scenic beauty and beaches with tourist potential. Its location – with easy sea-routes to India, Malaysia, Singapore, and Thailand, – links Aceh and Nias to one of the fastest growing economic regions of the world. A holistic development strategy is needed. And the consultative structures established for tsunami and earthquake response together with the new peace dialogue between politically diverse factions, offers a precious chance to have an intense public debate about the future development trajectory for the region.

Altering the course of a province is a bold venture that, to be sustainable, requires the active involvement of the people as well as the provincial and local governments. It is therefore critical that there be intensive, broad participation in defining the vision for the long-term growth of Aceh and Nias. To ensure all stakeholders have a chance to be heard entails extensive, and therefore time-consuming, consultation. However, if the deliberations take too long this unique opportunity may be lost. So the challenge for planning the long-term strategy must be to "make cautious haste."

SOME OF THE LONGER-TERM PRIORITIES INCLUDE:

Realizing the long-term economic potential of the region. The economic prospects of

the region hinge upon removal of the key barriers to growth that have been holding back Aceh and Nias for many years before the tsunami and earthquake. To fully realize the economic potential of the region, the following key issues need to be addressed: (i) modernizing economy; (ii) diversifying exports; (iii) maximizing the employment opportunities; (iv) developing the processing units at district level; (v) ensuring that economic recovery is environmentally sustainable; (vi) exploring investment opportunities; (vii) benefiting from the peace dividend.

Integration, connectivity and equity. The longer-term vision is for a public infrastructure development program that promotes a web of infrastructure schemes throughout Aceh and Nias to better connect it to the rest of Sumatra and to external markets. With roads reaching to the remoter districts and into the poor highland regions, future development can become more equitable, reducing the risk of resentments that fuel conflict.

Better use of natural resources. Aceh and Nias have enormous potential that their relative isolation and history of conflict have not allowed them to realize. For example, there is potential for geothermal energy in the mountains near Banda Aceh; small scale hydro-electricity generation throughout the extensive mountain areas; wind, sea and solar energy production particularly on the islands; unexploited coal deposits near Meulaboh; and opportunities to diversify farming, forestry and plantations. Both Aceh and Nias offer natural beauty that is rich for tourist development.

Unleashing the potential of all the people. A long-term strategy should include a bold strategy to improve opportunities for education and training. Special efforts are needed to ensure gender equity at school and in enterprise – including through support for women's cooperatives, providing microfinance and management training, and business advisory services. A gender strategy should include legal rights programs to offer women protection in employment and enterprise, protection from domestic violence, counseling services and access to lawyers and paralegals that are specially trained to fight gender equality cases. Women should also receive civic education, encouragement to run for elected office and to participate in decision-making at all levels. To meet the Millennium Development Goals in Aceh and Nias, special attention must also be paid to ensuring a child-focused development strategy – including clarifying and protecting all basic rights of children, starting with the universal provision of birth certificates; and legal aid and counseling services for children. Young adults could be helped by enterprise training programs to tackle youth unemployment and by international youth exchange programs.

Safeguarding the peace. The immediate demobilization and reintegration program needs to be followed by a broader reconstruction program for all conflict-affected areas comparable to the program in tsunami-affected areas. Among the issues that should be considered:

- Support for ex-combatants returning to communities and the provision of houses;
- Traditional ishlah (reconciliation) through community-driven approaches;
- Socialization of peace-building among key groups-- TNI, youth, women, teachers, traders and professionals;
- Training of traditional religious and community leaders in peace-building and conflict resolution skills and programs to encourage their activities in these areas;
- Use of media, specially radio and TV to create public awareness and dialogue; and,
- Vocational training for ex-GAM members.

Building responsive, responsible and honest government. With more than US$4 billion worth of projects and almost 1000 projects on the ground, it is vital that the most energetic measures possible are taken to guard against corruption in the recovery effort. The province of Aceh has a poor reputation, even by Indonesian standards, for corruption. There is an active anti-corruption unit within the BRR itself and it is now expanding its monitoring, information and evaluation system so that it can watch very carefully the use of government funds it channels through local governments. As BRR increases its capacity for direct implementation it will become increasingly important that its independent Oversight Board (Dewan Pengawas) play a stronger role in monitoring BRR's activities. It will also be important to strengthen the judicial system to ensure IDPs get their full entitlements and that their grievances are adequately addressed.

Ensuring preparedness against future disasters. It takes time to seed and nurture a culture of disaster prevention, but multi-hazard disaster risk management is a vital element of long term recovery in Aceh and Nias. Increasing capacity for hazard risk mitigation cannot be achieved within the context of a recovery program of 2-3 years. Much attention has been given to installing a tsunami early warning system for the Indian Ocean. While this is beneficial, there are other hazards that occur with more frequency in the region, including earthquakes, storms, floods and landslides. A comprehensive risk management system should include the necessary structural and non-structural measures to deal with all relevant hazards. Reconstruction and development activities in each and every sector should integrate risk reduction measures. For example, schools and community centers can be sited and built to serve as evacuation centers; education curricula can include materials on disaster preparedness; hospital and health facilities must be built so that they are functional in the post-disaster aftermath to serve the injured; investments in farming should consider sustainable agricultural practices; and infrastructure must be built to provide protection from hazard risks. It is crucial for communities to lay the foundations for reducing their disaster risk now, by considering the planning of their village or community, where structures are sited, the standards to which they are built, and how they manage their environment and natural resources.

Experience in other parts of the world tells us that such challenges cannot be underestimated. It's important to recognize that while disasters offer opportunities for change, they also reveal and exacerbate pre-existing weaknesses. After Hurricane Mitch devastated the Central America region in 1998 – dropping nearly 3 feet of rain and causing about 18,000 lives to be lost and nearly US$5 billion in damage and losses – the presidents of the four most affected countries (El Salvador, Guatemala, Honduras, and Nicaragua), along with donors and communities called for a "transformation" of the region rather than mere reconstruction. This was to be based on transparency, good governance, decentralization, tackling social vulnerability, environmental management, local development, trade, and migration.

Part III

MOVING FORWARD – CHALLENGES AND STRATEGY FOR 2006 AND BEYOND

Chapter 12 CONCLUSIONS – THE IMPLICATIONS FOR ALL PARTNERS

Those involved in bringing Aceh and Nias back from devastation know just how great the challenges are in rehabilitating and reconstructing the communities, the infrastructure and the livelihoods for those in the affected areas. Yet just as the challenges are great, so too is the spirit of those who have endured the trauma of the events and those who have joined the endeavor to restore their lives. The world was moved by the tragedy and moved with collective will to address it.

All would wish that greater progress was made in the year since the tsunami, but that should not overshadow the progress that is being been made. New houses are being built by the thousands, although twenty to thirty thousand may seem few given the need for so many more. Less visible but essential are the softer elements of progress: vocational employment training, the slow but steady development of livelihood programs, local government capacity building and the peace agreement between the Government and GAM. Such advances may not be as easy to see as physical structures but they are no less important. When combined they reveal a picture of a recovery program being waged on many fronts with gradual but increasing success.

The Government of Indonesia chose to build a new institutional foundation to anchor the reconstruction process in recognition of the magnitude of the disaster, the challenges of the environment in which it occurred, and the need to ensure a coordinated approach among the unprecedented number of actors engaged in the recovery. The drafting of a Master Plan for Rehabilitation and Reconstruction and the creation of the BRR did take months of consultation, deliberation and preparation. But the hope was that, once established, such a foundation would ensure a more effective and sustainable recovery and maintain the sense of urgency and vision needed over what will inevitably be a lengthy process of recovery and reconstruction. The Government tasked the BRR not only with leading the reconstruction, but setting new standards for efficiency and integrity to secure the confidence of the millions of people around the world that so generously contributed. 2006 will put these hopes to the test. This report sets out a clear timeline for the reconstruction process and concrete indicators of success to judge that performance.

To achieve these results will require the work of hundreds of organizations pulling together in operations, analysis, problem solving, quality-control and intelligence-gathering. This can be achieved. By learning from the valuable experience of past months, and by pulling together, the pace of recovery could accelerate greatly.

To achieve this, however, it is time to think beyond questions of 'my project' or 'yours', and recognize that there is one single recovery endeavor, in which all actors have a role to play and share a burden of responsibility. Effective partnerships entail crossing institutional divides to ensure that the whole recovery effort becomes much more than a sum of all the component projects. The remainder of this chapter sets out the key challenges needed for a quantum leap in the recovery effort, and goes on to suggest the responsibilities of all stakeholders to make this happen.

KEY CHALLENGES FOR ALL PARTNERS

The Coordination Forums for Aceh and Nias in October and December brought all the key stakeholders together for the first time to discuss priorities for the recovery. This, and the ensuing discussions, can be summarized as eight key and collective challenges.

1) **We must cooperate in identifying problems, gaps and bottlenecks and finding ways of solving them at the most local level.** This entails joint mechanisms to ensure both high quality and a rapid pace of reconstruction, as well as a willingness to shift program responsibility from one agency to another if this will accelerate progress. It also entails cooperation to ensure equity – between regions and genders, between house owners and renters, and among all population groups.

2) **We must coordinate effectively in policy-making and analysis, not just operations,** to ensure that systematic problems are cleared up by appropriate policy shifts and guidelines, and that new policies are well informed by realities on the ground. This has implications for policy advisory groups within Aceh and Nias and also for ensuring that BRR's boards (the Advisory and Oversight Boards) become effective instruments.

3) **We must be systematic in tackling the infrastructure logistics problems** that hamper recovery in the most challenged areas. This includes cooperation in ramping up sea and road transportation to cut-off areas, in repairing the ports, roads, bridges and drainage systems, and in restoring utilities and coastal protection.

4) **We must cut through red-tape wherever it adds delay.** All agencies should return as far as possible to the sense of urgency that pervaded the first few months, when people on the ground felt empowered to make the decisions on which lives depended. Now, too many decisions are still bogged down because of bureaucratic approval processes. Ensuring more direct lines of authority, clarity on who has financial or policy authority, and actively creating speedy processes for both on-budget and off-budget funds are all vital.

5) **We must work hard to revitalize the economy through restoring livelihoods and employment.** Reconstruction to date has concentrated on houses and infrastructure; it now needs to enter a more holistic phase, otherwise we will simply be creating places where people have shelter but not a decent life. This calls for imaginative support for entrepreneurs to restart businesses, for long-term livelihood promotion, and for fostering sustainable jobs – while retaining emergency employment and welfare schemes as a vital stop-gap.

6) **All of us, working in our various agencies, must constantly remind ourselves that the path of recovery is not for us to determine, but for the people who suffered.** The communities must be firmly in the driving seat – which means scrupulously adhering to principles of consultation, participation and transparency. It also means helping communities put in place mechanisms to ensure their grievances are heard. The starting point for this should be well-planned coordination forums at village and sub-district level to bring together the supply side and the demand side: the representatives of the communities and local officials plus the donors and NGOs who are offering support.

7) **We need to consider the needs of communities who were ravaged by conflict** along with the natural disasters to seek a virtuous circle by integrating re-building and peace-building. Bringing the two together can help reunite communities, and demonstrate the real possibilities of a peace dividend.

8) **We need to strengthen intelligence gathering and information systems so that we have a clearer idea of needs and progress,** and greater confidence in the data and analysis on which we base our programs.

These are the key challenges, and all stakeholders have a part to play in realizing them.

CONTRIBUTIONS BY ALL PARTIES

BRR – the reconstruction agency:

BRR is committed to providing stronger strategic coordination at all levels to assert clear priorities, resolve problems, close gaps and, provide clear policy guidance. In support of these it will continue to help communities, donors and NGOs cut through unwelcome bureaucracy. It will also continue to build a solid and reliable base of information and data on which sound program decisions can be based. In addition, BRR will take the new step of creating a strong network of regional offices to promote greater coordination of effort at the district and sub-district levels. The agency is determined to establish a capacity to implement construction projects directly as one option to meet emerging gaps, albeit as the "constructor of last resort". It will become more directive in reassigning program responsibility where agencies are clearly not delivering adequately or, conversely, where agencies have surplus capacity and a good track record. It is directing increasing attention to restoring business and economic vitality – so ensuring a more holistic recovery effort – among other things by encouraging investment from abroad and the rest of Indonesia and by restoring the banking system. BRR will continue to assert and reinforce high ethical standards, tackle corruption, demand full transparency and insist on respect for communities through participatory and consultative practices while also building institutional mechanisms to support these initiatives.

Central Government of Indonesia:

The main responsibility of central government is to do everything possible to speed up decisions and ensure line ministries and budget processes maintain the sense of urgency necessary to get he job done. The President has given a clear message that he will not tolerate obstruction in the reconstruction process. He expects senior ministers to support him by actively clearing blockages. They in turn will look to competent, senior staff to shepherd each important initiative, ensuring it passes smoothly. Government will also need to facilitate the seamless roll-over of funds between budget years to avoid interruption of programs, and rise to the challenge of facilitating flexible and speedy on-budget and off-budget mechanisms in the best interests of delivery. Increasingly, major recovery issues are raised to Cabinet level for discussion and BRR's Advisory Board will need to resolve blockages and complexities of intra-governmental arrangements. It is also important to strengthen BRR's Oversight Board in support of its functions of monitoring, grievance handling, guarding against corruption, promoting transparency and maintaining an open dialogue with tsunami affected communities and civil society.

Local authorities:

District and sub-district leaders (bupatis and camats) are called upon to play stronger coordinating roles. The Aceh Governor's office and an increasing number of bupatis and camats are being engaged in this role. Their contribution will be extremely important, particularly in identifying and clearing local bottlenecks, working to ensure tsunami victims get all the help they

are entitled to (including the regular cash payment), negotiating with NGOs and donors operating locally to ensure the community (and especially its most vulnerable) get the best possible support, convening regular coordination meetings of community leaders and all agencies working locally to ensure the communities truly drive their own recovery, and ensuring the communities have access to the fullest information about local programs. It is hoped they will empower village leaders to solve problems locally where possible while ensuring there are clear referral routes to sub-district, district and province level if needed. They should be resolute in stamping out corruption and other malpractices. Clearly, they themselves will come under greater scrutiny in doing so and must set the highest examples as community role models.

Donors:

Donors need to sustain the "emergency culture" in their processes to ensure rapid decision-making and delivery. These efforts should include an active contribution to inter-agency coordination. They will, of course, need to report regularly and objectively on the progress of their programs, especially to the RAN database maintained by BRR and maintain best practices in independent auditing and monitoring. Contributions to the post-conflict reintegration process will also need to be considered and negotiated. Donors are also welcome to extend their contributions to the areas of enterprise and business revitalization. The sustainability of program contributions will need to be considered with greater care, including environmental impact. Less obvious but equally vital will be the need for donors to ensure the financial sustainability of the facilities they construct. Detailed cost-benefit and fund flow analysis will be of increasing importance in assessing the impact of donor projects, particularly in the health sector. The contributions of donors will be pivotal in building the capacities within civil society and local government so that Aceh and Nias can perpetuate the positive development momentum after the donors leave.

International NGOs:

Everything that applies to donors also applies to NGOs. In addition, it is important that NGOs strive collectively for greater discipline in their sector. Although many programs are wonderful, there is also much delinquency. Communities increasingly complain about NGOs who promised help but then disappeared, about programs that are just not getting off the ground, or about poor quality projects (especially when compared with better quality programs in neighboring villages). NGOs should endeavor to strengthen performance in their sector, not just their own programs. This entails a preparedness to blow the whistle on the poor performance of peers, to offer advice to willing but less experienced NGOs, to help community leaders and camats plan local coordination mechanisms, to be diligent in reporting progress and problems to BRR and coordination forums, and to be candid when problems and delays arise, including being prepared to hand program responsibility to others who have the capacity to work faster. It is vital to avoid over-pledging and under-delivering.

Civil Society:

Aceh's recent history of conflict and international isolation means that civil society has evolved rather differently compared with other provinces. There are few local NGOs with large-scale operational capacity, but on the other hand there are many who are strong in advocacy and in protecting human rights, and there are strong associations, for example of fisher folk. While many INGOs and donors have programs to

help strengthen civil society's capacities, the most important roles civil society can play immediately are in ensuring citizens know and claim their entitlements and are aware of recovery programs intended to help them, helping communities voice their grievances, and tackling problems of corruption and abuse. They can also provide independent monitoring of recovery projects, ensure the needs of the most vulnerable groups are met and serve as an interface between citizens and all institutions involved in the recovery of their communities. Civil society can also play a valuable role in helping tsunami-affected communities understand the many challenges involved in delivering such a large and complex recovery program. Managing community expectations is not easy. Disappointments are no doubt many. It would be inappropriate to exploit them improperly. Civil society can and should continue to strengthen the already strong foundations of community so essential to a stable working environment enabling all national and international contributors to deliver their products and services with confidence.

FINALLY...

At the outset, the government made two important choices for the recovery program; these appear to be robust ones, but it is still relatively early days. The government decided firstly that recovery would be led by a specially-created agency and secondly that it should follow a community driven approach. There is evidence that coordination is becoming stronger and bottlenecks are being resolved. There is also evidence that communities make good choices when they are allowed to do so and have access to good information. Providing these features prevail and providing the agencies working for recovery pull more strongly together there are good prospects for the recovery continuing to accelerate without losing quality. If this is so, we will be able to build homes, not just houses. We will not just be erecting settlements throughout the damaged areas of Aceh and Nias, but we will be re-creating vibrant communities. This is the goal for which we must all strive.

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Annex A.2: The Reconstruction and Development Program for Aceh and Nias (million US$)

	Domestic Funds		Donors			TOTAL
	BRR	Decon	Multilateral 1		NGOs	
Social Sector	**156**	**14**	**396**	**187**	**547**	**1,299**
Education	45	8	136	106	133	428
Health	48	0.1	97	60	244	449
Community, culture and religion	62	6	163	20	171	422
Infrastructure	**495**	**55**	**420**	**406**	**624**	**2,000**
Housing	227	48	226	28	446	976
Transport	134	2	65	310	18	529
Communications	7	0	17	10	1	35
Energy	27	5	10	0	1	43
Water and Sanitation	18	0	52	31	108	210
Flood control, irrigation works	81	0	36	10	9	135
Other Infrastructure	0	0	15	17	41	73
Productive Sectors	**101**	**6**	**152**	**21**	**302**	**581**
Agriculture and Livestock	29	2	34	0	72	138
Fisheries	33	3	52	16	73	176
Enterprise	39	1	66	6	157	268
Cross Sectoral	**228**	**8**	**106**	**81**	**59**	**482**
Environment	6	0	45	10	24	85
Governance and Administration (incl. land)	222	7	61	71	31	392
Bank and Finance	0	1	0	0	4	5
Total	**980**	**83**	**1,074**	**695**	**1,532**	**4,362**

1 Multilateral includes Multi Donor Funds

Annex A.2: The Reconstruction and Development Program for Aceh and Nias (million US$)

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1 Multilateral includes Multi Donor Funds

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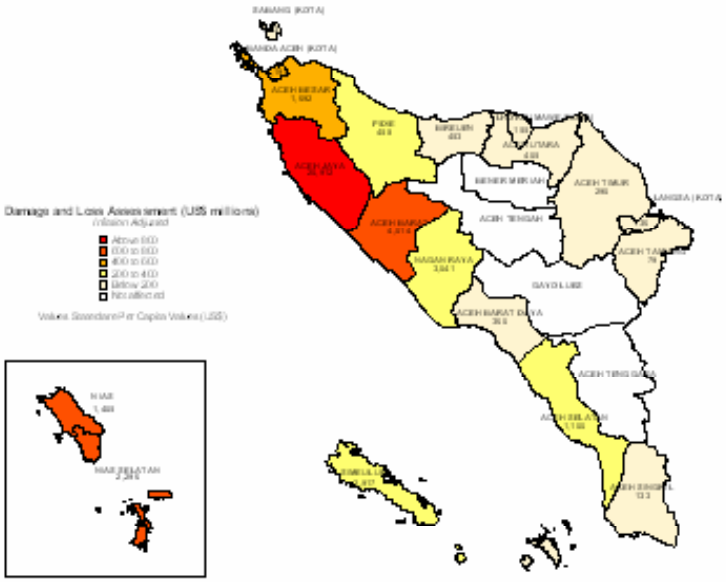
Annex A.3: Financing Aceh and Nias reconstruction
(status as of end-November 2005, US$ million)

	Domestic Government Funds			Donors		Private	TOTAL
	BRR(1)	Decon (1)	Local(2)	Multilateral (incl. MDTF)	Bilateral	NGO	
Total commitments to the reconstruction program (2005-2009)	2,100	300	350+	2,000(4)	1,600(4)	2,500(5)	8,850+
Already allocated to specific projects	980	83	72(6)	1,074	695	1,532	4436(7)
Already disbursed	19	31	60	168	127	370	775

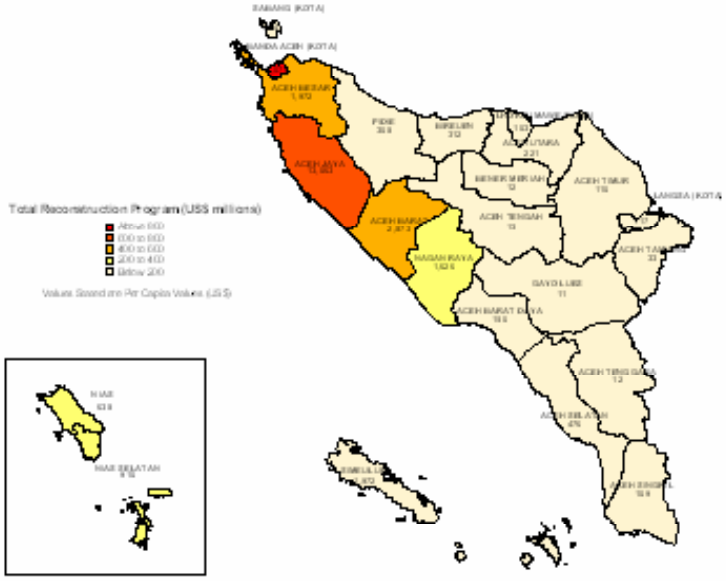
(1) Government budgets and BRR-data
(2) Based on research of 2004 budgets in 10 Tsunami-affected local governments
(3) Assumes continuation of deconcentrated funding 25% below 2005 levels.
(4) Based on the latest commitments including grants and loans.
(5) The total NGO-envelope for reconstruction in all tsunami-affected countries has been estimated at US$ 5 billion. In Indonesia the current NGO-envelope is already US$1.8 billion, if the full amount of the Red Cross/Red Crescent allocation, including not yet specifically allocated funds, were considered.
(6) Actual allocation for capital spending in affected local governments.
(7) This is higher than US$ 4,362 million (see Annexes 2 and 3) because of the inclusion of the US$ 72 million funding from the local (kabupaten) governments which cannot be disaggregated by sector.

Annex A4: Damage and Loss vs. Reconstruction Program, by kabupaten

Panel (A). Damage and Loss



Panel (B). Reconstruction Program



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Annex A5: The demographic and economic impact in the disaster-affected region: cross country comparisons

Source: compiled based on the data from the Asian Disaster Preparedness Center.

Note: * - most affected province in each country; for Maldives the data refers to total country.

Annex A6: Methodological Notes

A6.1. General Methodology and Definitions

A6.1.1. Definitions used in this Report

A significant amount of data has been categorized and analyzed for this report. The key objective of the analysis was to get reliable estimates of the: (i) reconstruction and development needs for Aceh and Nias (by sector); (ii) funding commitments and disbursements (by sector). The definitions of the key concepts used in the analysis are provided below.

DEFINITION OF NEEDS

There is no uniform definition of needs. This report has reflected the concepts of the damage and loss assessment as well as of the Master Plan, and in addition estimated core minimum needs:

- The **Damage and Loss Assessment** estimated total costs to replace damage and losses caused by the disaster (*replacement value*). Total damage and losses (Aceh and Nias) have been estimated at US$ 4.8 billion and after being adjusted for inflation the total is US$ 5.8 billion.[1]

- The **Master Plan** used the Damage and Loss Assessment as the baseline figures but made two important distinctions: (i) Build back *better* in certain sectors (particularly social sectors and infrastructure), (ii) Compensate private sector damage only up to a limit, which affected particularly the allocations for housing and the productive sectors.

- ***Core minimum needs*** are a sub-set of the Damage and Loss Assessment and of the Master Plan. Core needs are defined as (i) full replacement of all public sector damage (per damage and loss assessment); (ii) financing of private sector needs such as housing, agriculture, fishing, up to the limit set by the Master Plan; (iii) partial financing of environmental damage, which can only be addressed to a very limited degree by external interventions, and (iv) inflation adjustment given the recent price trends.

For the March 28, 2005 earthquake in Nias the IOM and BRR carried out a separate damage assessment. The estimation methodology used to compute damage and loss in Nias is described in the following sub-section (A6.2). This estimation builds on the IOM and BRR data to compute estimates of damage value at the aggregate level as well as by sector.

KEY PARAMETERS

Timeframe. Many projects will take more than one year to complete. The database of funds from donors and NGOs contains single and multi-year projects.

Area. Financing figures could include both tsunami-affected areas and non-affected areas. Reconstruction activities include the tsunami-affected areas only, while development activities include both tsunami affected and non-affected areas in Aceh and Nias.

1 For the Earthquake in Nias on March 28, the government carried out a needs assessment which estimated total damage at US$ 392 million. Comparisons with the January assessment for Aceh and Sumut confirm the magnitude of the damage if the IOM damage numbers are used as a basis.

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Ongoing activities and agreed projects. Figures in tables include both ongoing activities (i.e. being disbursed and executed) as well as agreed projects that are currently prepared.

On and Off-budget. The tables in this report include both on-budget and off-budget spending. Donor funds which are channelled through the government are defined as on-Budget. If funds are channelled directly to projects they are defined as off-budget.

Donor Disbursement: Donor disbursement data is directly gathered from each major donor. The financial allocation made by donor is classified as disbursement if the fund had been spent on a project. The fund transferred to the Government or NGO accounts but not ready to be spent on a project would not be defined as disbursement. Data are as of November 30, 2005.

NGO Disbursement. Disbursement refers to the funds that have been spent on the projects directly or has been transferred to implementing agencies. NGO disbursement data is obtained mainly from the BRR Project Monitoring Database that was received in November 2005, and to some extent additional information from NGOs' websites and financial reports.

GOI Disbursement. Central government disbursements consist of two categories: BRR budget and deconcentrated (line ministries) expenditures. The term disbursement refers to actual spending against project's activities, i.e. based upon disbursement orders (SP2D) from the treasury service offices (KPPN) to the central treasury account (BUN). Data has been provided by the Directorate General of Treasury in the Ministry of Finance. Data are as of December 6, 2005.

Double Counting. Occasionally financing figures are susceptible to double counting, since an institution provides financial resources through other institutions. For example, a donor country provides project fund, but the project is implemented by other donor country or NGO. Both institutions report the same project concept note to the BRR. In order to avoid double counting, distinction between execution and contribution is made. The financing numbers in this report are based on an execution basis. In other words, they take into account the institutions implementing projects rather than institutions contributing to funds.

Exchange Rate. The financing numbers are expressed in US Dollars. Data in non-US Dollar donor country currency was converted to US Dollar using exchange rate at the time of a project being entered into the BRR concept note database. The exchange rate between Indonesian Rupiah and US Dollar is: US$1=10,000 Rupiah.

Sectoral Analysis. In this report, financing is categorized functionally into the following 4 sectors: social sector, infrastructure, productive sectors, and cross sector, each of which is composed of several sub-sectors (see next section for sectoral definitions).

A6.1.2. Sector definitions		
Education	• Revitalizing delivery service and management system of education • Designing, rehabilitating, and reconstructing school and other educational buildings • Supplying education material and equipment • Teacher training, advocacy, research and support on education.	• Australia: Education Rehabilitation Assistance (ERA) • Save The Children: Revitalization of Community and District Educational Systems
Health	• Revitalizing health service and health management system • Designing, rehabilitating, and reconstructing health facilities • Supplying medical and health equipments • Training, advocacy, research and support on health	• UNICEF: Provision of primary health care services and supplies • The Mentor Initiative: Rebuild capacity of Communicable Disease Control of the Provincial Health Office and District Health Offices throughout the Province of Aceh and Nias
Community, culture, and religion	• Housing design • Rehabilitating and reconstructing permanent housing	• UNDP: NAD Housing Rehabilitation Project (implementing partnership with UN-HABITAT) • World Vision International: Meulaboh Permanent Housing
Transport	• Revitalizing transport infrastructure such as road, bridge, port, air port and bus station • Transport logistics.	• USAID : Reconstruction of Banda Aceh - Meulaboh road • IACO (International Aid and Cooperation Organization): Reconstruction of Batee Bridge, Pasir Gentang, Pidie
Communication	• Generating early warning communication system • Distributing publication and information on the progress in tsunami-affected area • Radio broadcasting to support the social activities • Other revitalizing activities on the infrastructure for communication system	• JAPAN: Support for Radio/TV Broadcasting Activities • Red Cross and Red Crescent (RCRC): Early Warning Communication System

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Energy	• Rehabilitating and reconstructing energy system and infrastructure such as on the electricity system • Research, study and workshops on energy issues	• ADB: Power Sector Project • Soluziana S.A: Feasibility study for the development of wind energy in Nias regency, Nias Island, North Sumatra
Water and sanitation	• Rehabilitating water and sanitation facilities including the water supply network such as piped water, well and spring • Improving the access to safe drinking water and the hygiene condition • Study, research and training on water system, water infrastructure, and environmental sanitation	• UNICEF: Provision of Clean Water Supply and basic sanitation facilities • THW: Rehabilitation of springs and water intakes for the tsunami and earthquake victims of Simeulue island, Nanggroe Aceh Darussalam, Indonesia
Flood control & irrigation works	• Cleaning, rehabilitating and reconstructing river, drainage and irrigation system • Study and research on aquaculture project and system	• Japan: Selected Emergency Repair Work of Flood Way Dyke in Aceh • Muslim Aid Indonesia: Banda Aceh Flood Relief Flow Valves & Pump Stations
Other infrastructure	• Rehabilitating and reconstructing infrastructure facilities other than the ones mentioned above, such as on the warehouse and repair shops	• UNDP: Restoration of minor infrastructure • Red Cross and Red Crescent (RCRC): Regional ware house preparedness Jakarta, Surabaya, Medan, Banda Aceh
Agriculture & livestock	• Cleaning, rehabilitating and revitalizing agricultural sector • Supplying agricultural equipments/tools and inputs such as seeds, fertilizers, crops, plant protections, etc • Providing workshops, trainings, and technical assistance on agricultural planning, land mapping, and production management system for sustainable livelihood	• ADB: Restore support services, community empowerment, and restoration of farming • Food for the Hungry International: Aceh Jaya Agriculture Recovery Program

Fisheries	• Rehabilitating and reconstructing fishery piers, market, cold storage, and ponds • Reconstructing and supplying boats, nets, and other fishing materials and tools • Providing workshops, training, and technical assistance on fishing techniques, navigation, system, and distribution management	• World Bank: Support for Fisheries Sector Post-Tsunami Rehabilitation • World Relief: Kreung Raya livelihoods, fishing and small grant project
Enterprise	• Revitalizing trade and industries, SMEs and cooperatives, as well as on manpower issues • Community regeneration through small industry development and financial access or loan for micro enterprises • Reconstructing and rehabilitating markets, factories, and other business activities • Workshops and training on economic capacity, skill training, production management, entrepreneur skills, etc.	• Canada: Private Enterprise Participation (PEP) Implementation Project • Save The Children: Economic Recovery Assistance & Micro enterprise Development
Environment	• Rehabilitating degraded areas and regenerating nature and forest through enrich planting and increase the environment awareness in community • Redeveloping and protecting coastal area and coastal ecosystem by planting mangrove and such • Providing workshops, training and technical assistance in environment planning, public education on environment • Assisting in developing natural hazard law, policy and regulations	• MDTF: Aceh Forest and Environtment Project • Leuser International Foundation (LIF): Integrating Environment & Forest Protection in to the Recovery and Future Development of Aceh

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Governance and Administration (inc. land)	• Rehabilitating, renovating and reconstructing government building • Government administration activities such on population census, registration of birth, registration of beneficiaries to receive relief aid • Land use rehabilitation program including land clearing, land mapping, land administration, land record • Capacity building including workshop and training for supporting local government	• Australia: Restoring Local Governance and Communities in Aceh (RLGCA) • LGSP: Local Governance Support Program / LGSP
Bank & Finance	• Rehabilitating and reconstructing banking and other financial buildings • Monitoring, evaluating and appraising on micro and small loan portfolio • Capacity training and workshop on bank and finance issues	• Savings Banks Foundation for International Cooperation (SBFIC): Savings Banks Reconstruction Fund for South Asia

A6.2. Measuring the Spatial Dimension of Reconstruction

A6.2.1. Nias: Technical Notes on the Computations of the Damage & Loss

Input data used for the calculation of Nias' damage is drawn from a report by the International Organization for Migration (IOM) entitled: "Post Disaster Damage Assessment on Nias and Simeulue Islands", the survey of BRR Nias and Satuan Koordinasi dan Pelaksanaan (SATKORLAK) and the technical report prepared by BAPPENAS and the International Donor Community entitled: "Indonesia: Preliminary Damage and Loss Assessment Report: The December 26, 2004 Natural Disaster", henceforth referenced as IPDLAR. This assessment was based on the international standard methodology first developed by the UN Economic Commission for Latin America and the Caribbean (ECLAC).

The IOM report and the survey of BRR Nias/SATKORLAK provide information on damage of physical infrastructure, such as buildings and roads and the percentage of infrastructure that is still functioning. The IPDLAR provides information on the total monetary value of damage in Aceh by every affected sector. These data are used as the reference to estimate the monetary value of damage in Nias.

The calculation of the total value of physical damage in Nias is based on the estimation of unit values. To calculate the unit value of a damaged building, the total value of all damaged buildings reported by the IPDLAR is divided by the total number of damaged buildings. This unit value is then multiplied by a factor corresponding to the level of damage incurred - 1 is used for total damage, 0.5 for medium damage, 0.25 for minor damage, and 0.1 for very minor damage. These values are then multiplied by the total number of damaged buildings for each related level and sector in Nias.

A similar method is also used to compute the estimated value of damage for roads, settlement areas, and infrastructure for communication, energy, and water. That is, for "damage per meter of road" the total value of damaged road reported by IPDLAR is divided by the length of damaged road in meters. For the energy, water and communication sectors the financial value of total damage reported by the IPDLAR is divided by the reported overall percentage of damage sustained in each sector to compute the monetary value of the unit percentage of the damage. The damage cost per unit percent of each of these sectors (energy, water, and communication) is then multiplied by the corresponding percentage of damage per sector. For other sectors such as education and health, the unit cost for each damaged building of school and health facilities is directly available from the IPDLAR; hence no calculations of unit cost are required.

The exchange rate used in all computations is Rp 10,000/ US$1.

Table A6.2.1. Impact Simulation Damage per Sector in Nias

Sector/Sub Sector	Total Impact	Total (in million USD)
Social Sector		
Education (unit building)	723	23
Health (unit building)	414	23
Religious and Cultural Affairs (unit building)	1,787	10
Infrastructure and Housing		
Housing (unit building)	70,900	160
Road (in km)	1,066	45
Telecommunication (% disfunctional)	52.11	21
Energy		
Electricity (% disfunctional)	32.3	20
Drinking Water and Sanitation		
Water Resources Infrastructure		
Piped water (% disfunctional)	90.62	28
Well (% disfunctional)	31.3	3
Spring (% disfuntional)	28.42	3
Other Infrastructure		
Bridge (unit)	403	21
Piers (unit)	11	4

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Production Sector		
Agriculture and Food		
Fishery		
Industry and Trade (unit)	181	1
Manpower		
SME and Cooperatives		
Cross Sector		
Environment (in hectars)	1948	5
Administration and Government (unit building)	539	24
Banking		
Total value in million rupiah		**3,916,730**
Total value in million USD		**392**

A6.2.2. Technical Notes on the Geographical Analysis

A6.2.2.(A). Geographical Project Allocation

The data source for project allocations to districts comes from the government budget 2005 and 2006, and the BRR project concept notes (Batches 1-11) database for NGOs and donors. The data in most cases provides information on the targeted districts for the projects. Nevertheless, as the information in the data source on the geographical allocation is sometimes limited, and as the projects are sometimes targeted to more than one district, the allocation by district (kabupaten) is estimated using the weights. The weights are obtained by dividing the value of damage and loss assessment for each of the impacted district by the total damage and loss. The estimation is based on the IOM assessment of damage, and the methodology is similar to the one applied for Nias (see Annex A6.2.1.).

A6.2.2.(B). Estimating the impact of disaster on GDP at the kabupaten level

Estimating the impact on GDP at the kabupaten level involves the following steps:

- Estimate the value of damage at kabupaten level (as described above);
- Since the estimates of damage only cover damage to non-productive sectors, we first use the aggregate D&L assessment to estimate the ratio of the damage in productive sectors (incl. 50% of damage to infrastructure) to the damage in non-productive sectors, and then use this estimated ratio (25%) to obtain monetary value of damage to productive sectors by kabupaten;
- The aggregate D&L assessment for the productive sectors indicates that damage (incl. 50% of the infrastructure damage) is US$ 670 million (352 + 318), and losses (over 4 years) are US$ 952 million (incl. 50% of infrastructure losses); assuming that 40% of the losses will be borne during the first year, these number indicates that every 1$ of damage (stock concept) will transform into $0.57 of losses (flow concept) during the first year after the impact;
- Applying this ratio to the previously obtained estimates of the productive sector damage by kabupaten, we obtain the estimates of productive sector losses by kabupaten, which are then compared to the 2004 levels of GDP by kabupaten.

A6.2.3. Technical Notes on the Computations of the Financial Commitments (Projects) in Nias

The data used for the calculation of the financial commitments for Nias (see Table 6.2 Chapter 6) was primarily taken from the BRR Concept Notes – Batches 1 to 11. The approach was to use data for the donors and NGOs which have dedicated projects and budgets only for Nias. In cases where the donor or NGO has a combined total amount allocated for both Aceh and Nias, this budget is not included since it is not possible to ascertain the percentage of funds dedicated only to Nias. As a result the total amount allocated to Nias is possibly slightly above the current estimates which present the minimum allocation. The government figures were provided directly by the BRR office in Nias. The domestic funding from the central government (de-concentrated) sources is not included in this table. All numbers are for the two kabupatens: Nias and Nias Selatan.

NGOs	Sectors
Help e.V.	Housing, land, & markets
IMC	Restoring of health facilities
ACTED	Housing and shelters
World Vision	Rehabilitate education, water, and sanitation, food distribution
Croix Rouge Francais	Reconstruct 3 schools, rehabilitate markets
Tomorrow's Hope	Build orphanage, build schooling facilities
CWS	Build houses, provide water and sanitation facilities
LEAP	Restore livelihood by developing coconut oil industry
Red Cross & Red Crescent	Rehabilitate and reconstruct schools and health centers, build houses, water and sanitation facilities, and rebuild markets and shopping centers
TEARFund	Restore government health services structure
Soluziana	Study of wind as alternate energy source
United in Diversity	Housing and provision of boats to villages
Samaritan's Purse	Permanent housing program
LPAM Nias	Reconstruct schools and houses
Caritas	Reconstruct houses and community development
Food for the Hungry Intl.	Repair water piping and build treatment system
LDSC	Hospital medical equipment
TEARS Intl.	Renovation of public hospital
AMDA	Community based emergency shelter rehabilitation
IOM	Community development, livelihood, and logistics
Catholic Relief Services	Housing and shelters
GTZ	Water and sanitation facilities
Johannitar	Schools and education
Lazarus	Schools and education
Surfaid	Community water and sanitation facilities

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A.7 GoI – GAM Peace Agreement: Key Points from the MoU

Note: this is not a complete or faithful translation but a selection of key points

Memorandum of Understanding between the Government of the Republic of Indonesia and the Free Aceh Movement, signed on 15 August 2005: The Government of Indonesia (GoI) and the Free Aceh Movement (GAM) confirm their commitment to a peaceful, comprehensive and sustainable solution to the conflict in Aceh with dignity for all. The parties commit themselves to creating conditions within which the government of the Acehnese people can be manifested through a fair and democratic process within the unitary state and constitution of the Republic of Indonesia. The parties are deeply convinced that only the peaceful settlement of the conflict will enable the rebuilding of Aceh after the tsunami disaster on 26 December 2004 to progress and succeed. The parties to the conflict commit themselves to building mutual confidence and trust. This Memorandum of Understanding (MoU) details the agreement and the principles that will guide the transformation process. To this end the GoI and GAM have agreed on the following:

1.1 Governing of Aceh

- Aceh will exercise authority within all sectors of public affairs, which will be administered in conjunction with its civil and judicial administration, except in the fields of foreign affairs, external defense, national security, monetary and fiscal matters, justice and freedom of religion, the policies of which belong to the Government of the Republic of Indonesia in conformity with the Constitution.
- International agreements entered into by the Government of Indonesia which relate to matters of special interest to Aceh and other decisions with regard to Aceh will be entered into in consultation with and with the consent of the legislature of Aceh.
- The borders of Aceh correspond to the borders as of 1 July 1956.

1.2 Political participation

- Not later than one year from the signing of this MoU, GoI agrees to and will facilitate the establishment of Aceh-based political parties that meet national criteria, and within 18 months the political and legal conditions for the establishment of local political parties in Aceh in consultation with Parliament.
- Until 2009 the legislature of Aceh will not be entitled to enact any laws without the consent of the head of the Aceh administration.

1.3 Economy

- Aceh has the right to raise funds with external loans. Aceh has the right to set interest rates beyond that set by the Central Bank of the Republic of Indonesia.
- Aceh has the right to set and raise taxes to fund official internal activities. Aceh has the right to conduct trade and business internally and internationally and to seek foreign direct investment and tourism to Aceh.
- Aceh will have jurisdiction over living natural resources in the territorial sea surrounding Aceh.
- Aceh will enjoy free trade with all other parts of the Republic of Indonesia unhindered by taxes, tariffs or other restrictions.
- GAM will nominate representatives to participate fully at all levels in the commission established to conduct the post-tsunami reconstruction (BRR).

1.4 Rule of law

- The legislature of Aceh will redraft the legal code for Aceh on the basis of the universal principles of human rights as

provided for in the United Nations International Covenants on Civil and Political Rights and on Economic, Social and Cultural Rights.

- An independent and impartial court system, including a court of appeals, will be established for Aceh within the judicial system of the Republic of Indonesia.

2 Human rights

- GoI will adhere to the United Nations International Covenants on Civil and Political Rights and on Economic, Social and Cultural Rights.
- A Human Rights Court and a Commission for Truth and Reconciliation will be established for Aceh.

3 Amnesty and reintegration into society

- GoI will grant amnesty to all persons who have participated in GAM activities as soon as possible and not later than within 15 days of the signature of this MoU.
- Political prisoners and detainees held due to the conflict will be released unconditionally as soon as possible and not later than within 15 days of the signature of this MoU.
- Use of weapons by GAM personnel after the signature of this MoU will be regarded as a violation of the MoU and will disqualify the person from amnesty.
- GoI and the authorities of Aceh will take measures to assist persons who have participated in GAM activities to facilitate their reintegration into the civil society. These measures include economic facilitation to former combatants, pardoned political prisoners and affected civilians. A Reintegration Fund under the administration of the authorities of Aceh will be established.
- GoI will allocate funds for the rehabilitation of public and private property destroyed or damaged as a consequence of the conflict to be administered by the authorities of Aceh.
- GoI will allocate suitable farming land as well as funds to the authorities of Aceh for the purpose of facilitating the reintegration to society of the former combatants and the compensation for political prisoners and affected civilians.

4 Security arrangements

- All acts of violence between the parties will end latest at the time of the signing of this MoU. GAM undertakes to demobilize all of its 3000 military troops. GAM members will not wear uniforms or display military insignia or symbols after the signing of this MoU.
- GAM undertakes the decommissioning of all arms, ammunition and explosives held by the participants in GAM activities with the assistance of the Aceh Monitoring Mission (AMM). GAM commits to hand over 840 arms. The decommissioning of GAM armaments will begin on 15 September 2005 and will be executed in four stages and concluded by 31 December 2005.
- GoI will withdraw all elements of non-organic military and non-organic police forces from Aceh. The relocation of non-organic military and non-organic police forces will begin on 15 September 2005 and will be executed in four stages in parallel with the GAM decommissioning immediately after each stage has been verified by the AMM, and concluded by 31 December 2005.

5 Establishment of the Aceh Monitoring Mission

The tasks of the AMM are to:

a) monitor the demobilization of GAM and decommissioning of its armaments,

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b) monitor the relocation of non-organic military forces and non-organic police troops,
c) monitor the reintegration of active GAM members,
d) monitor the human rights situation and provide assistance in this field,
e) monitor the process of legislation change,
f) rule on disputed amnesty cases,
g) investigate and rule on complaints and alleged violations of the MoU,
h) establish and maintain liaison and good cooperation with the parties.

GoI and GAM will not undertake any action inconsistent with the letter or spirit of this Memorandum of Understanding.

A.8 Aceh & Nias Related Presidential Decrees – Key points

A.8.1 Kpres 15/2005 – Implementation of MoU between GoI and GAM

- The coordinating ministers and related ministers are to synchronize planning and policies and to provide solutions to any disputes arising during the implementation.
- Minister of Home Affairs to facilitate planning and policies and to implement capacity building to local governance practices
- Minister of External Affairs with related instances to provide administrations and to facilitate foreign parties involving in the Aceh Monitoring Mission (AMM) with plans, policies and diplomatic measures to obtain international supports in implementing the Note of Agreement
- Minister of Defense to coordinate with the National Soldiers of Indonesia (TNI) to relocate non-organic soldiers, to organize the remaining soldiers and the other defensive components.
  Minister of Law and Human Rights to prepare laws and regulations related with governance, political participation, human rights and socializing the Note of Agreement
- Minister of Finance to manage finance, funds and budget from the National Budget, and those from multilateral and bilateral donors.
- Minister of Communications and Information to prepare materials to disseminate information on the Note of Agreement in Indonesia and abroad and to coordinate with AMM in the implementation of the Note of Agreement.
- Minister of Transportation to prepare and manage the building of ports and airports in Nanggroe Aceh Darussalam and their lines abroad in coordination with the Governor.
- Minister of Manpower and Transmigration to manage issues on manpower and the return of ex-displaced transmigrants.
- Minister of Social Affairs to provide proper social insurance to previous member of the Free Aceh Movement and the members of community affected by the conflict.
- Minister of National Development Planning to provide the implementation plan of the Note and to coordinate with international donors in mobilizing and allocating fund.
- The Attorney General to assist in providing amnesty and abolition to the inmates, to appoint Attorney and to empower attorneys in Aceh Province, in implementing laws and regulations
- The Chief of National Indonesian Soldiers to prepare plan and policies to pull out non-organic TNI soldiers out of Aceh up to 31 December 2005, to provide plan to the remaining soldiers in Aceh, to provide plan and policy to support the AMM duties and to provide fair opportunities to any of previous Free Aceh Movement to join TNI
- The Chief of the Indonesian Police to prepare plan and policies to pull out non-organic Police elements from Nanggroe

Aceh Darussalam Province up to 31 December 2005, to provide plan to the remaining police in Aceh, to provide plan and policy to support the AMM duties and to provide fair opportunities to any of previous Free Aceh Movement to join the Indonesian Police.

- The Head of the State Intelligent Agency to provide plan, policies and activities to enable conducive situation to take place following the implementation of the Note.
- The Head of National Land Issues to provide policies to provide farming land for previous members of Free Aceh Movement and people affected by the conflict
- The Head of the Executing Agency for the Rehabilitation and Reconstruction Area and Living of Community in Nanggroe Aceh Darussalam Province and the Nias Islands of the North Sumatera Province to provide plans and policies to include representatives of previous Free Aceh Movement to fully participate in the Agency as per the required criterion and skills.
- The Governor of Nanggroe Aceh Darussalam Province to provide plans and policies on the local governance and its related issues, on political participation, and on reintegration previous members of Free Aceh Movement

All budgets arising from the implementation of the Note of Agreement will be included in the National Budget and Regional Budget and in the support from the donating nations/formal donating institutions.

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A.8.2 KPRES 69/2005 – Establishment of BRR

Referring to the implementation of rehabilitation and reconstruction area and living of community in Nanggroe Aceh Darussalam Province and ones living in Nias islands of the North Sumatera Province the Government of Indonesia provide opportunities to all parties to participates, including foreign institutions/ individuals. In this regard, the involvement of the above parties needs to be managed as per the Grand Plan of the Rehabilitation and Reconstruction Area and Living of Community in both provinces.

- The Regulation restated the definition of Rehabilitation and Reconstruction as per quoted in the Government Regulations in lieu of Law Number 2 Year 2005 on The Agency for Rehabilitation and Reconstruction of Area and Living of Community in Nanggroe Aceh Darussalam Province and Nias Islands of North Sumatera Province.
- To participate in the Rehabilitation and Reconstruction efforts, any foreign institutions/individuals need to submit program proposals to the Executing Agency quoting identity, programs to be implemented, local partners involved in the said programs, sector, location and duration of programs, expected results, budgets and local community involvement
- The Regulation mentioned the role of The Executing Agency in examining the program proposals prior to agreeing or disagreeing the proposals.
- Once the program proposals verified and agreed, the Head of the Executing Agency may make MoUs to the institutions/individuals
- The institutions/individuals bear responsibilities of duration of programs, the implementation and quality result satisfy the ethical codes and guidance provided by the Executing Agency.
- The foreign institutions/individuals may expect an ease on immigration and working regulations, technical regulations on equipment, goods and services and customs and taxes related with existing laws.
- The executing agency conducts monitoring and evaluation to the program implementation.
- The executing agency has the rights to continue or discontinue any institutions/individuals on certain findings and regulations

Any related regulations needed to implement this Presidential Regulations will be decided by the head of Executing Agency and related governmental departments as per related duties and responsibilities.

A.8.3 Kpres 70/2005 – BRR procurement

Considering that the Executing Agency of Rehabilitation and Reconstruction for Aceh and Nias, implements provision of procurement/services under existing laws, the President of the Republic of Indonesia considers it is necessary to equip the Executing Agency of Rehabilitation and Reconstruction for Aceh and Nias with a Regulation to gear up the provision of procurement/services and to implement them in immediate, effective and efficient manners while keeping the principles of healthy competition, transparency, accountable and just for all parties, including:

- The compulsory need to set up a procurement committee for any provision with the amount of Rp 50,000,000 (fifty million Rupiah), comprising of civil servants with related technical advice The procurement committee has duties, authorities and responsibilities, among others the setting up schedule, preparing related documents and implementation of the provision, selecting participants of tenders, reporting tender processes and signing in an integrity pact prior to the commencement of implementation procurement/services provision.
- The divisions of procurement/service provision contract are based on the remuneration (lump sum, single prices, a combination of lump sum and single price, turn key, percentage), based on duration of implementation (single year, multi years), and based on the number of users of goods/services (single provision contract or collective provision contract).
- The conditions of delayed works because of both procurement/service providers and users and how to settle any arising disputes on targets and results.
- Specific conditions on how to cope with emergency situation for the national defense and security of community and service providers including in the time of natural disaster, confidential works, small scale works and works involving licensed/patented agencies.
- Provision of goods and logistic distribution for the Regional electoral activities is also included in the regulation.

The regulation also mentions immediacy in the provision of goods/services in regard to the rehabilitation and reconstruction for Aceh and Nias especially to provision of housing works prior to July1, 2006 and continuation of leftover or remaining works in provision of housing and special condition related with formal tariff, specific works/goods, products of small scale industry and complex works utilizing specific technology leading to specific goods/service provider.

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A.9 Data Sources

Several types of institutions contributed to recovery financing, namely, bilateral donors, multi-lateral donors, NGOs and government own sources (central government and regional governments). This report collates data from the following institutions:

- CGI and non-CGI bilateral donors: Data mostly from BRR concept note project database and confirmation from donor countries. Data reported for UN programs is drawn from UN flash appeal for Indonesia. MDTF data is obtained from the MDTF representative, and cover approved projects and concepts.
- NGOs (Indonesian and non-Indonesia NGOs and/or private contributions): Data from BRR concept note project database. On disbursement, data is obtained from BRR monitoring database, which represents the disbursement around late September and October, 2005.
- Indonesian governments (central, province, local): Data from DG Treasury provided by the MoF. BRR funds for reconstruction and rehabilitation are from the 2005 and 2006 budget. The BRR disbursement data is obtained from KPPN Khusus as per December 6, 2005. It represents the actual spending on the projects, including project and administrative spending. APBN-deconcentration disbursement for reconstruction is estimated from total disbursement of deconcentration budget. Local government disbursements are obtained through a local government assessment supported by the World Bank. For details on the local government assessment see the BRR/World Bank Report "Rebuilding a Better Aceh and Nias – Stocktaking of the Reconstruction Effort", October 2005, chapter 2.4.

Other documents and data sources include:

Aceh-Reconstruction website: http://e-aceh.bappenas.go.id

APBN (2005) Deconcentrated fund and BRR, from Regional DG Treasury, MOF and BRR.

BAPPENAS, Rencana Aksi Rehab-Rekons TA 2005 Hasil Konsultasi Teknis Renaksi R2WANS di Provinsi NAD, May 2005

BAPPENAS. (2004). Indonesia: Preliminary Damage and Loss Assessment, December 26, 2004 Natural Disaster. A Technical Report prepared by Bappenas and the International Donor Community.

BRR, Geographical survey, September 2005 and November 2005.

BRR. (2005). Meletakkan Fondasi Membangun Harapan: Laporan Kegiatan Enam Bulan Badan Pelaksana Rehabilitasi dan Rekonstruksi Nanggroe Aceh Darussalam dan Nias.

BRR/World Bank. (2005). Rebuilding a Better Aceh and Nias: Stocktaking of the Reconstruction Effort.

BRR Project Database of Donor Country and NGO/Private Sector Projects on Aceh Reconstruction and Development.

Budget data from DG Treasury, Ministry of Finance as well as regional Treasury offices Credits and banking data from Bank Indonesia Office in Banda Aceh.

Education Management Information System Website EMIS

Indonesia: Notes on Reconstruction, December 26, 2004 Natural Disaster. A Technical Report Prepared by Bappenas and the International Donor Community.

IOM Damage Assessment for Nias and Simeulue Islands; June 2005.

Input financing data from Germany, Ausaid, UN, ADB, MDTF, Red Cross Movement. National Labor Survey (Sakernas) – various editions, Central Bureau of Statistics (BPS).

OCHA's fund tracking website. (http://ocha.unog.ch/fts/index.aspx)

Price data from BPS Office in Banda Aceh.

Provincial Health Office data

Settlement and Livelihood needs and Aspiration Assessment Survey 2005, IOM

SPAN: Population Census of Nanggroe Aceh Darussalam, BPS, November 2005.

Kerangka Peta Aceh dan Nias v. 2.2 (mapframe), bappenas, BRR,, BPS, ADB, IHS, 2005