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POST-TSUNAMI AID EFFECTIVENESS IN ACEH

PROLIFERATION AND COORDINATION IN
RECONSTRUCTION

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ABBREVIATIONS

ADEA	Association for the Development of Education in AFRICA
ARDE	Annual Review of Development Effectiveness
BRAC	Bangladesh Rural Advancement Committee
CACID	Cellule d'Appui a la Conservation et aux Initiatives de Developpement Durable
CDD	Community Driven Development
CRC	Citizen Report Card
EDUCO	Education with Community Participation
DFID	Department for International Development (UK)
IGVGD	Income Generation for Vulnerable Group Development Program
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IIRR	International Institute of Rural Reconstruction
KDP	Kecamatan Development Program Indonesia
MDG	Millennium Development Goals
NGO	Nongovernmental Organization
ODI	Overseas Development Institute
OSI	Open Society Institute
PROGRESA	Progres-Oportunidades Program Mexico
TI	Transparency International
REF	Roma Education Fund
SERVOL	Service Volunteered for All
TTFSE	Trade and Transport Facility for Southeast Europe
UNDP	United Nations Development Program
UNICEF	United Nation's Children's Fund

POST-TSUNAMI AID EFFECTIVENESS IN ACEH

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INTRODUCTION

Research overview

On December 26, 2004, an earthquake measuring 9.0 on the Richter scale struck off the north-east coast of Nanggroe Aceh Darussalam (Aceh) on the island of Sumatra, Indonesia. In the subsequent tsunami that followed, over 150,000 people lost their lives, while an estimated 700,000 people were displaced. The scale of the damage to the local economy, infrastructure and administration was unprecedented. The magnitude of these events triggered a huge outpouring of compassion and generosity from around the world. The influx of aid and assistance into the province of Aceh in the weeks and months that followed was unprecedented and surpassed all expectations. This paper seeks to provide some insight into the effects of such an influx whilst also exploring some of the coordination mechanisms put in place to manage what was the largest reconstruction program in the developing world at the time.

At the time the tsunami struck, Aceh had been home to a separatist conflict for 30 years. The influx of aid was seen as an opportunity to reach a peaceful settle-

ment of the insurgency and for all parties to work towards community development, not only in rebuilding Aceh, but building it back better. Nearly 500 agencies flooded into the province, bringing funding and promises of a brighter future, whilst creating the enormous logistical challenge of doing so without duplicating efforts and squandering resources.

The second section of this paper looks at how the Government of Indonesia and the international community responded in the aftermath of the disaster and details the extent of the damage and the amount of funding provided towards the reconstruction program. This section also examines some of the many issues that faced the reconstruction of residential houses in the province and puts into context the enormity of the task of rebuilding homes. In contrast to many other reconstruction programs around the world, the money flowed in as promised. The third section examines why agencies began to fail to deliver on promised outcomes despite adequate funding. The fourth section goes on to assess whether the proliferation of agencies involved was effective and examines some of the costs associated with a large number of agencies whilst the fifth section reviews some of the various coordination mechanisms that were put in

Box 1: Aceh's reconstruction: key research findings

Aid Volatility

- The experience of high volatility in the delivery of aid was avoided in Aceh.
- Many actors struggled to deliver on their promises due to the emergence of inflation, which caused high output volatility.

Aid Fragmentation

- Despite the presence of nearly 500 agencies, the reconstruction landscape was only “moderately” concentrated.
- The creation of a single agency, in the form of the BRR, to coordinate the Government's response, together with the pooling of funds by donors into a Multi-Donor Fund, had direct and significantly positive effects on coordination.
- The creation of peak representative bodies greatly improved the coordination effort.

Information Management

- Robust information systems are vital and should be in place from the start of the reconstruction process to ensure effective coordination.
- A simple, largely manual financial tracking system worked best in the Aceh context.
- The Government's use of a mandatory mechanism to track NGO project information was critical to the success of the overall reconstruction effort.

Effective Transitioning

- The early involvement of local government agencies in decision-making processes supports the effective transition into longer-term development.
- The issue of transitioning from the reconstruction phase to the development phase requires further study.

place to deal with this. Finally, the sixth section examines the key information systems used whilst delving into some of the problems experienced by the users of the systems.

The impact of the earthquake and tsunami on Aceh province

The total estimate of damage and losses from this catastrophe for Indonesia alone was US\$4.45 billion (Rp 41.4 trillion). Along with the Government's substantial assistance program the international community

pledged assistance for reconstruction and development totaling US\$7.7 billion. By the end of 2007, projects and programs worth US\$6.4 billion had been allocated by 463 organizations, 65 percent of which had been disbursed by December 2007.

Many new actors emerged, all with differing approaches, objectives and cultures. At the same time, the Government established a special agency aimed at coordinating the efforts and executing the Government's reconstruction and rehabilitation program. Perhaps the greatest impact of the rising num-

ber of aid agencies stems from difficulties in providing adequate information, coordination and planning for effective development assistance. With such an increase in the number of organizations present, the costs of delivering aid also increase, raising questions around the effectiveness of the effort. It is apparent that substantial costs are attached to the proliferation of agencies and projects in recipient countries (Kharas 2007a).

As the largest reconstruction project in the developing world at the time, Aceh's post reconstruction experience may provide useful lessons on how aid is delivered and how it should best be allocated to cover the three phases of relief, reconstruction and development. The need to build a link between the phases is well recognized and acted upon by many of actors. Equipped with unprecedented levels of funding, the resource gap between phases does not appear to be the main issue in Aceh. Instead, the problems lie in areas such as coordination and engagement with local actors. While the relief or humanitarian assistance is often highly effective, it nevertheless rarely leads to rapid, effective and productive recovery and long-term reconstruction.

Internationally, the effectiveness of aid has often been hampered by the lack of reliability in delivering aid to recipient countries, amplifying further the already volatile macroeconomic environment of low-income countries (Cassen and Associates 1993). Donors and international financial institutions (IFIs) have started to pay attention to this issue. However, the recent changes in donor behavior and program design seem to have had little impact on the way aid has been disbursed, remaining volatile, pro-cyclical, and unpredictable (Bulir and Hamann 2005).

This paper also shows that a competent Government with a stable economy, coupled with proficient funding mechanisms, can ensure that promised aid reaches the recipients. However, in the case of Aceh price increases have jeopardized the planned reconstruction outputs. Affected by rampant inflation in Aceh post-tsunami, reconstruction actors have been required to either apply additional resources, energy and effort into fulfilling their promises, or else to scale back their planned activities.

THE RESPONSE TO THE TSUNAMI IN ACEH

Immediate response

At the time the tsunami struck, Aceh had been home to a separatist conflict for 30 years. As a result, the Government had previously declared martial law and restricted travel to the region for outsiders. However, it became immediately evident that the immense scale of the disaster created a need for assistance not only from within Indonesia but also internationally. On December 26, 2004, Indonesian President Susilo Bambang Yudhoyono declared a national disaster. He ordered line departments and ministries to mobilize available resources for the emergency response and recovery processes, and assigned an existing government emergency mechanism, the National Coordinating Board for Disaster Management and IDPs (Bakornas PBP), to deploy all its resources to Aceh. The agency was mainly tasked with providing immediate assistance to tsunami survivors in the form of search and rescue, food, shelter and medical help, as well as with burying the dead. Some 15,000 of the 40,000 Indonesian military personnel (TNI) in Aceh were used for the humanitarian relief operation, and an additional 12,000 military personnel were sent to Aceh on January 14, 2005, to hasten the burial of bodies and the clearing of debris.

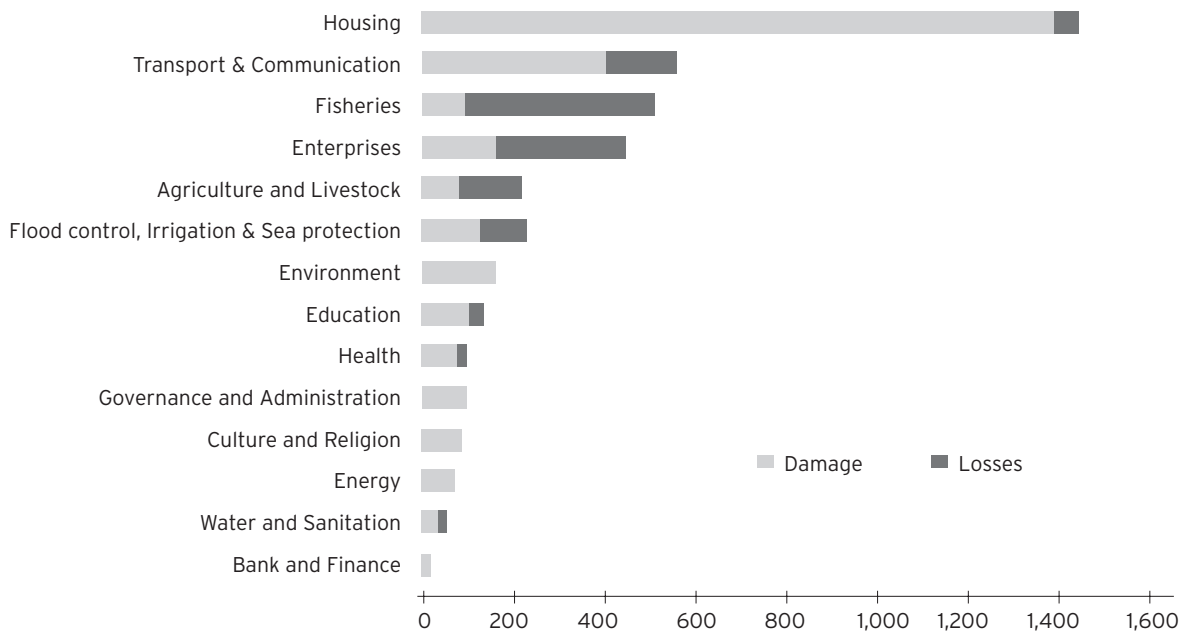
As soon as access to the province was opened on the evening of December 28, 2004, international non-government organizations (NGOs) and foreign government relief teams streamed in, together with thousands of volunteers from the provincial government, the central government, relief organizations, and communities from elsewhere in Indonesia. The international response that followed came from all corners of the world, with some 133 countries providing assistance to the humanitarian mission. During the

emergency response, 16,000 foreign military personnel from various countries were deployed.

The relief phase was effective in ensuring that immediate survival needs were met through a mixture of local assistance in the immediate aftermath and international assistance in the first weeks after the disaster. However, these relief responses were generally not based on joint needs assessments and were not well coordinated. This led to an excess of some interventions, such as medical teams, together with shortages in less accessible areas or less popular sectors, such as water supply (Goyet and Morinière 2006).

There is no doubt that international assistance was vital to the relief effort in Aceh, providing relief to hundreds of thousands of tsunami victims, and helping to prevent a far higher death toll. Led by Bakornas and with the UN-OCHA to coordinate, a wide range of activities was immediately undertaken by numerous agencies. They focused on the emergency operations ranging from ensuring all basic needs were sufficiently met, such as food, medical supplies and clean water, as well as temporary shelters, to immediate income generation activities, such as the “cash-for-work” program. It is estimated that assistance worth more than US\$500 million (BRR 2007) was deployed during the relief phase, with some United Nations agencies and international NGOs taking a lead in the process. The humanitarian system initiated early support for livelihood rehabilitation in the form of distribution assets, such as small boats and fishing nets, as well as cash for work. Emergency housing needs were met through the initial provision of tents and barracks, as well as starting the construction of permanent housing. Livelihoods in the form of trading, labor farming and fishing were re-established.

Figure 1: Damage and losses of Aceh's tsunami



Source: Bappenas, 2005.

Damages and losses

In contrast to many other natural disasters, the tsunami affected almost every sector in Aceh. Recorded at US\$4.5 billion—equivalent to about 80 percent of Aceh's regional gross domestic product—the effects of the disaster were scattered across the region, primarily impacting private assets and revenues. About 78 percent the total damage and losses accrued to the private sector, including households, while the remaining 22 percent was borne by the public sector (Bappenas and International Community 2006) as shown in Figure 1.

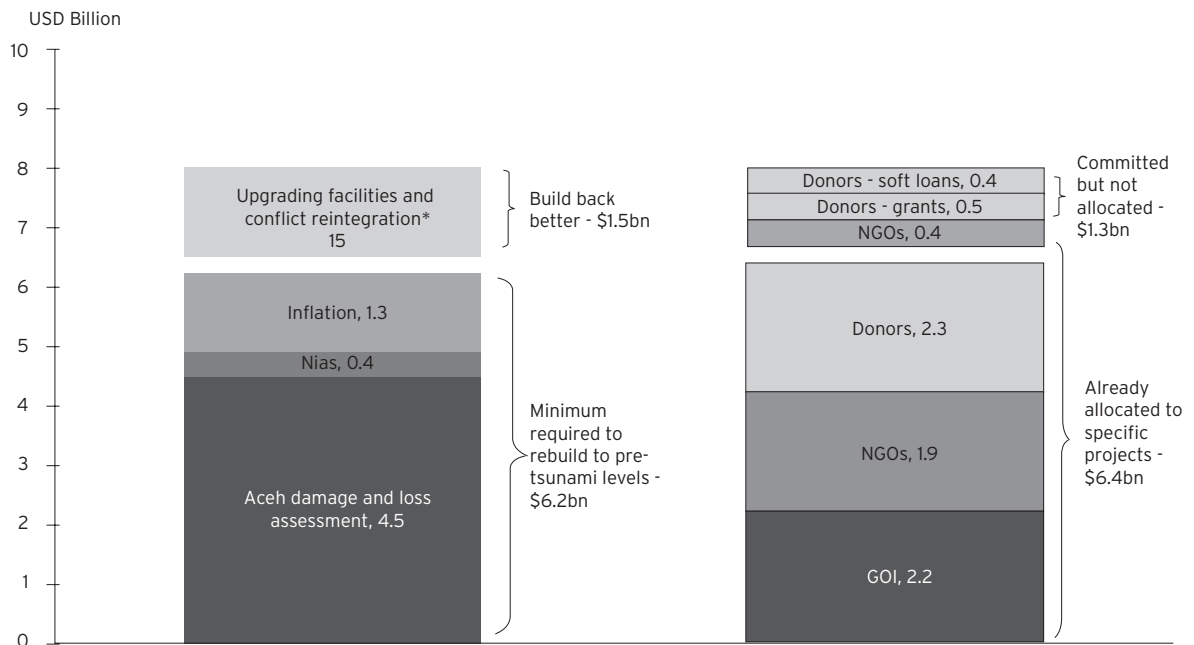
Funding the response

The disaster triggered an unprecedented response and generosity from domestic and international communities in those countries affected by the tsunami. It is estimated that about US\$7.7 billion was committed

by the amalgamation of funds from the Government of Indonesia, bilateral and multilateral donors, international NGOs, and communities both within and outside Indonesia towards the reconstruction program. One of the surprising aspects of the composition of aid in Aceh was the extent to which NGOs came forward with substantial sums of their own money. Figure 2 shows that the allocations¹ made by agency type are not too dissimilar and in total surpass the reconstruction replacement cost by US\$1.5 billion. This creates the opportunity not only to build back, but even to “build back better,” as envisioned by development agencies and the Government.

By December 2007, US\$6.4 billion (83 percent of total commitments) had already been allocated to specific projects and programs, of which US\$4.1 billion (65 percent) had been disbursed. The remaining commitment of US\$1.3 billion is yet to be allocated by

Figure 2: Aceh's reconstruction, commitment and allocation



donors and NGOs, whilst the Government, through the Agency for Reconstruction and Rehabilitation (BRR), has now committed all its funds. Donors are still in the process of identifying projects² for up to 25 percent of their commitments mostly made back in early 2005 (World Bank 2008).

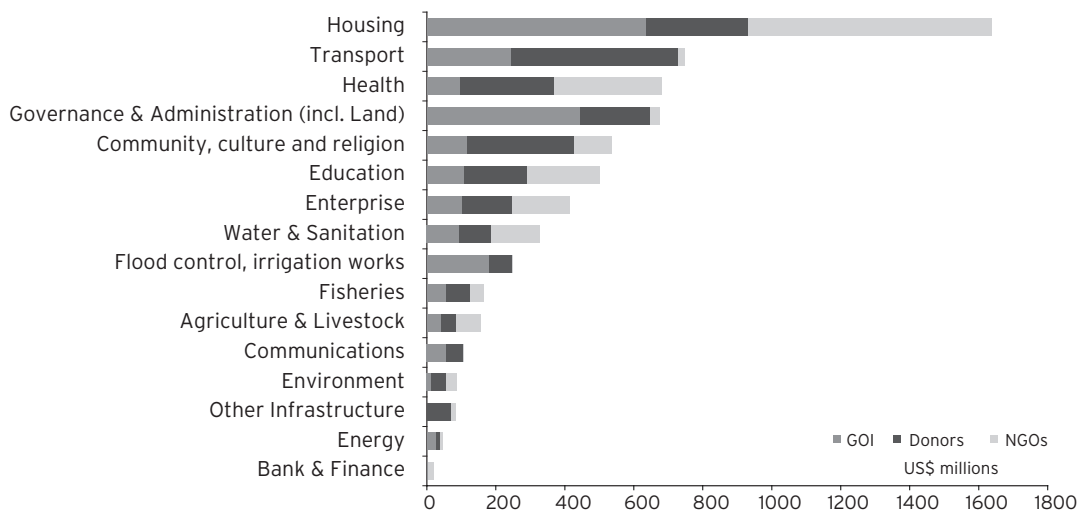
Ongoing recovery and reconstruction

The discussion surrounding the link between relief assistance and longer-term development has gained in prominence since the 1980s. This followed the African food crises, when calls for prevention rather than cure drew attention to the importance of integrating the relief and development processes (Wijkman and Timberlake 1988). This meant a focus on ensuring that reconstruction efforts reduced the risks of recurrent natural disasters primarily through more appropriate land-management and agricultural systems. However, the concept remained on the agenda until the late

1990s, when conflict-related emergencies were growing in number and intensity, and rapidly attracting a growing proportion of aid resources.³ New approaches were therefore required to ensure that better development would reduce the need for emergency relief, better relief would contribute towards development, and better rehabilitation would ease the transition between the two phases (Buchanan-Smith and Maxwell 1994). Although several international NGOs had been involved in Aceh prior to the tsunami, most of their activities after the tsunami were focused on relief and reconstruction, with only a small portion of their funding allocated towards longer-term development. Meanwhile, bi- and multi-lateral funding agencies also focused on the reconstruction efforts to reduce the risks from recurrent natural disasters.

When President Yudhonoyo declared the emergency phase over in March 2005, it soon became apparent that the large influx of aid was required not only for

Figure 3: Reconstruction allocations



the emergency relief effort but also for the longer-term reconstruction. Following the end of the emergency response phase, the Government assigned the National Development Planning Agency (Bappenas) to coordinate the development of a rehabilitation and reconstruction plan for Aceh and Nias.⁴ Several institutions in cooperation with international bodies participated in the process of developing the Master Plan (Rencana Induk). Apart from reviewing the redevelopment needs in the areas affected by the disaster, the Master Plan also outlined the need to establish an agency responsible for the coordination and implementation of the rehabilitation and reconstruction plan for Aceh and Nias. Supplied with US\$2.1 billion,⁵ the establishment of the Agency for Reconstruction and Rehabilitation (BRR) demonstrated that a new phase in Aceh's tsunami assistance had begun.

Christoplos (2006) suggests that many reconstruction actors are unfamiliar with the term of Linking Relief, Rehabilitation and Development (LRRD). The term is certainly not in common usage. However, in the case of Aceh all appeared to be familiar with the underlying concept. Some had their own terminologies to

express a similar concept or philosophy: the concept that was introduced by BRR, "build back better;" the World Bank, which referred to its mandate for poverty eradication and development; and the Red Cross movement, with its main mandate of saving lives and preventing further loss of life in the recovery phase. It is also recognized that in all assistance environments these linkages are problematic and multi-layered; they may not be universally appropriate, and may well vary depending on an agency's mandate. In Aceh, most of the actors' main mandates were for reconstruction, with some evolving into longer-term development in later years.

The largest reconstruction program in the developing world at the time, Aceh hosted around 2,200 projects across all sectors implemented by more than 400 actors. This was in addition to over 200 projects during the emergency phase in early 2005. Figure 3 shows that the housing sector was by far the largest in the reconstruction plan. Total infrastructure (including housing, transport, communications, energy, water and sanitation, and other infrastructure) was recorded at US\$3.1 billion, or almost half the total reconstruct-

tion funding, surpassing the core minimum needs⁶ recorded at US\$2.6 billion. The housing sector acquired US\$1.6 billion, or 25 percent, of total reconstruction funding.

Whilst NGOs allocated their largest share of funds towards the housing and health sectors, donors concentrated their portfolios on longer-term projects in the transport and infrastructure sectors, with allocations of US\$1.638 billion. It is hard to tell whether the preference of reconstruction actors in allocating their portfolios demonstrated their respective competencies. Large sums of “un-earmarked” funding primarily from private funds and pressure to show immediate results encouraged agencies to leverage their activities beyond their core proficiencies.

An estimated 463 agencies were involved with implementing projects, dominated by the NGOs, as shown in Table 1. Of the 435 NGOs operating in Aceh, 75 percent (326 agencies) were international organizations.

Compared with the Government’s program, the average project size for NGOs was far smaller. Excluding relief projects during the emergency phase, about 2,200 projects were executed or are still in progress, with NGOs managing 80 percent or 1,643 projects, whilst the donors and the Government implemented 397 and 152 projects, respectively. On average, NGOs maintained about four projects per agency, whilst the donors managed 15 projects per donor (Table 2). The social sector has by far the largest number of projects (839) and has also attracted the most reconstruction actors, although it does not have the largest funding allocation. In the infrastructure and housing sectors—the most severely affected by the disaster—the number of projects and actors was lower (Figure 4).

Whilst NGOs crowded the social sector (education, health and community) with 213 actors, donors concentrated their projects in the infrastructure sector, eschewing the needs of the energy sector (eight donors), and the banking and finance sector (Table 2 in *Inundation of support for Aceh*).

There is a large variation in the value of projects, with a small number of large projects at the tail end of the distribution (Figure 5). Twenty-one projects are valued above US\$50 million, nine projects are in the range US\$25-50 million, while there are more than 2,000 projects valued at less than US\$25 million. The average size of a project stands at US\$4.7 million.

As expected, there is a low correlation between the funds allocated in each sector and the number of projects. The housing sector has the largest allocation of funds at US\$1.64 billion, whilst the health sector has the highest number of projects, followed by the education sector (Figure 6).

Figure 7 shows that while the average project size is US\$2.9 million, the transport sector has the largest average project size of nearly US\$12 million per project. Meanwhile, the housing sector, with a higher participation of agencies, has an average project size of almost half that of transport, at about US\$6 million per project.

Housing sector

As at July 2008, about 114,000 units had been built out of the estimated 130,000 needed.⁷ The housing sector is perhaps the most challenging sector in the reconstruction effort, as it is overwhelmed by many socioeconomic issues. These range from issues, such as land title, equity, the creation of unique beneficiary lists, and increasing unit costs, through to a wide varia-

Table 1: Number of reconstruction actors

Implementing agencies	Number of actors
Government of Indonesia (BRR)	1
NGOs	435
Donors (including UN agencies)	27
Total reconstruction players	463

Figure 4: Number of reconstruction projects

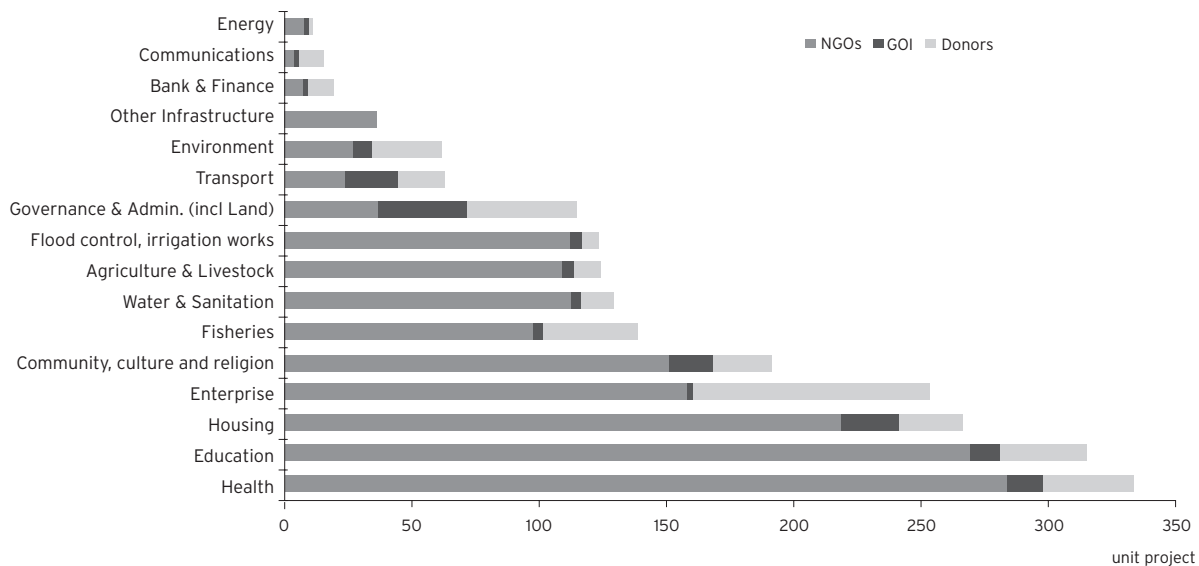
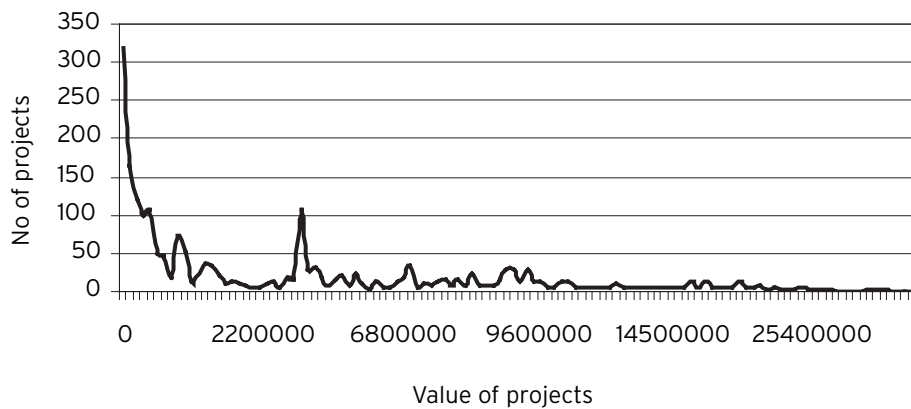


Figure 5: Distribution by value of reconstruction projects



Source: World Bank staff estimates.

Figure 6: Number of projects and funds allocated by sector

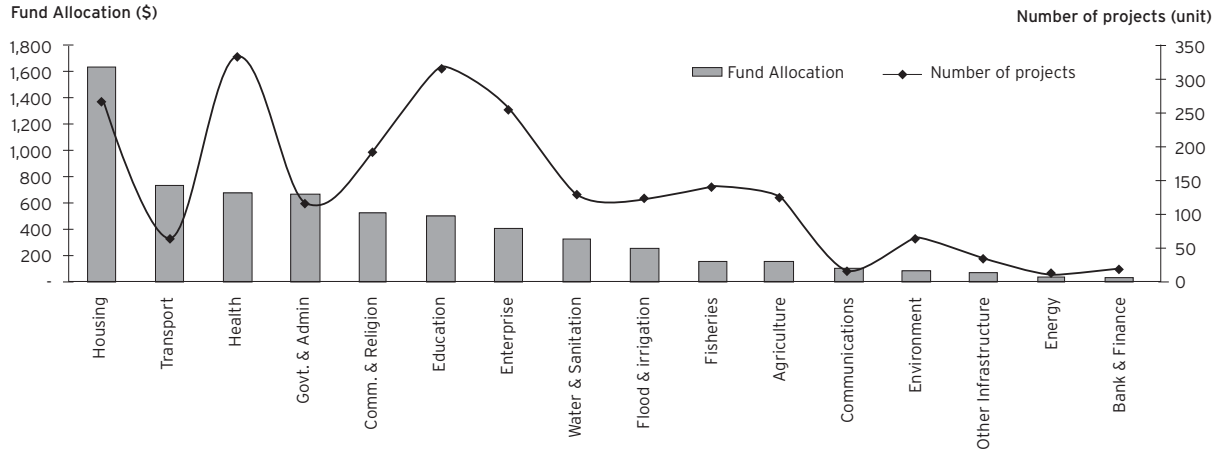
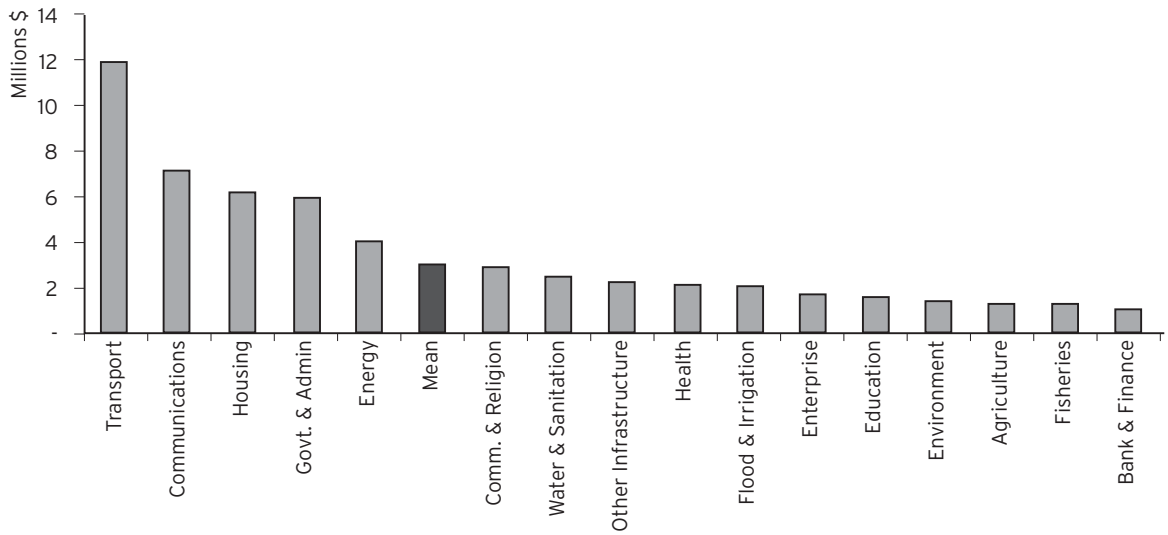


Figure 7: Average project size by sector



tion in the quality of completed houses. This is coupled with a breakdown in the supporting infrastructure that would otherwise support a more effective response. Aceh's remoteness also added to actors' frustrations, as they had to transport materials from further afield, which placed further reliance on the damaged supporting infrastructure. Housing reconstruction has provided a unique story, with many lessons learned by reconstruction players. As the most affected sector financially, housing attracted the most funding from agencies, valued at about US\$1.64 billion.

The speed of aid: Aid agencies have been criticised for their slow speed and their failure to fulfil commitments, as well as failing to ensure high levels of quality and longer-term development. Furthermore, ambitious promises were made at the beginning of the reconstruction effort, showing a degree of overconfidence and a lack of experience of the realities of long-term reconstruction. The shift from transitional housing or relief accommodation to rehabilitation was slow, with a large proportion of those affected still living in deteriorating tents over one year after the disaster (Christoplos 2006).

Information: Christoplos (2006) argues that disaster-affected people are prepared to be patient when waiting for permanent housing, but are angered by false promises and failures to plan for an inevitably protracted transitional period. Another issue is the lack of information made available to the affected population. This is a prominent factor that prevents a smooth transition from relief to longer-term reconstruction, as those affected need to understand the reconstruction plans and what they will receive in order to make informed decisions about their own plans and future livelihoods.

Coordination: Coordination of the players in Aceh's reconstruction was an almost impossible task and compounded by the profile of new development ac-

tors. With around 120 agencies implementing 266 housing reconstruction programs, there have been many differing implementation mechanisms, methods and approaches. Many of the implementing agencies were often well funded but short on experience. Many new players had particular difficulty in providing permanent housing in a complex, and often changing, environment. Many sites were waterlogged; many families had moved to other regions; local institutions were dysfunctional; and labour and materials were often in short supply and of low quality. The challenge was made all the more difficult by the remoteness of many affected areas, where transport access was difficult and costly (Dercon, 2008). With such a large number of actors, coordination was a major challenge in the early stage, when many of those in housing battled over claims to housing development areas. This was particularly the case in the region's capital city, Banda Aceh, which was readily accessible and where resources were easier to mobilize.

Disbursements: While NGOs were quick to commence housing reconstruction projects, they have lagged behind the Government's housing program and those of donors. By December 2007, NGOs had disbursed about 56 percent out of a budget of US\$700 million and 219 projects, while both the Government and donors together had disbursed 80 percent of funds allocated towards housing reconstruction (Figure 8).

Lack of experience: A lack of experience and expertise in housing reconstruction was perhaps the greatest challenge facing NGOs. Although the donor community (both multilateral and bilateral) also lacked direct housing experience, donors were more accustomed to contract management and had established procurement systems in place that were suited to such redevelopment. All housing reconstruction actors faced a multitude of challenges on the ground, starting from land acquisition, procurement of skilled contractors,

contract management, lack of internal expertise, and difficulties acquiring materials and labour.

Increasing costs: Increasing costs may not have been of such importance to larger NGOs, but they had a critical impact on smaller ones. NGOs with limited funding faced challenges in keeping to their committed number of promised houses. Due to an increase in raw materials and transport costs, the unit price of housing rose significantly at the end of the first year of reconstruction, with the Government raising its budget per new house from Rp 30 million to Rp 60 million. NGOs then faced the difficult choice of either increasing their committed funds, or decreasing the number of units that they could produce. In the subsequent years, many NGOs failed to deliver on their promised units. This created a shortfall in the planned reconstruction of housing units, a gap that BRR was left to manage.

Moving targets: As costs increased, many actors were forced to reduce their targets of planned number of houses to be built in order stay within budget and avoid having to find additional funding to match the cost increases. Whilst costs increased, the overall

number of houses required also increased over time, as shown in Figure 9, adding to the financial burden of those building houses.

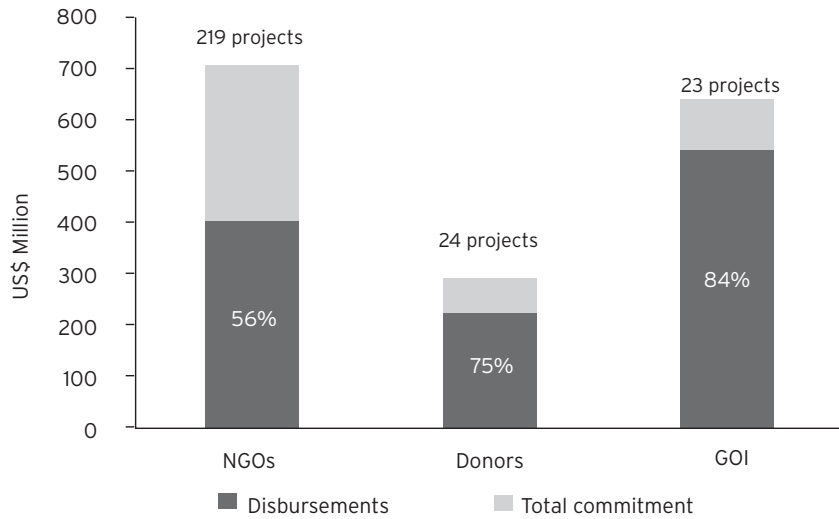
The first two increases in targets, as determined by the Government's reconstruction agency BRR, were due to having a more complete assessment of the number of houses required. Adjustments were made as it became apparent that a large number of houses previously thought as being repairable would actually need to be replaced in full. Furthermore, a Government imposed limit on the number of dwellers per house further increased the number of houses required.

Variable quality: Other challenges also faced those implementing housing programs. At the beginning, no standard was set for the type of house to be rebuilt. Agencies budgeted significantly different sums for the redevelopment of houses, based on the type of construction (e.g., traditional versus brick versus wood) and the approach (community-based or contractor-driven) used. As a result, the variety of reconstructed houses varied significantly in quality and style, giving rise to a variety of social equity issues. Communities began to negotiate with a number of actors over

Box 2: Damage to houses after the 2006 Yogyakarta earthquake

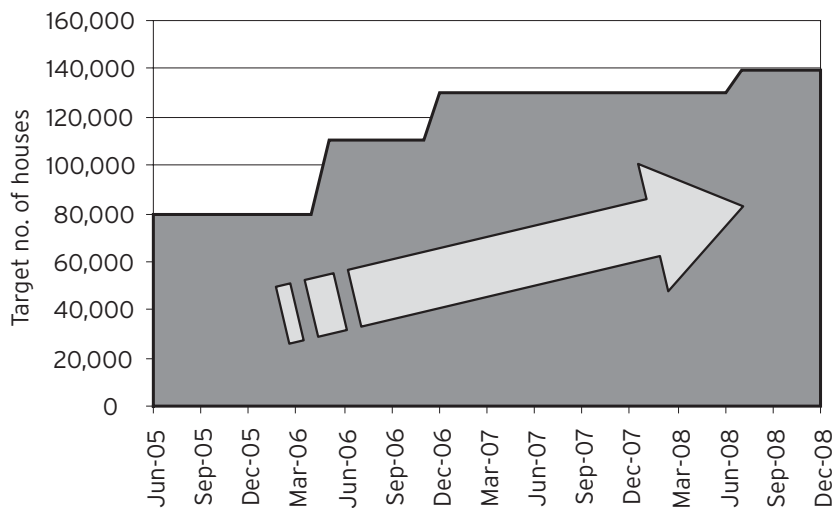
In May 2006 a devastating earthquake struck the city of Yogyakarta in Central Java destroying 280,000 houses. However, the housing reconstruction experience was entirely different to that experienced in Aceh, notably due to the different scale of the two disasters. The Yogyakarta earthquake hit a relatively small, yet condensed, area of the city. While the tremor had a devastating impact around the epicentre, access to the area remained largely unaffected, making the affected area accessible for both the emergency response and the reconstruction effort. Furthermore, the two provincial governments affected already had a high level of capacity and were able to move swiftly into recovery mode. Within each province, approaches were standardized and the involvement of NGOs limited largely to livelihood recovery programs, rather than housing reconstruction. With the surrounding infrastructure still in place, and the swift response from the provincial government, increases in the costs of material and labor were largely avoided. As a result, the Yogyakarta response was on the whole unaffected by the massive price increases experienced in Aceh (World Bank 2007b).

Figure 8: Housing sector disbursements



Data as at December 2007

Figure 9: Increasing housing targets



Source: BRR, various reports

which could offer them the greatest benefits. Some NGOs argued that this only served to push up costs as NGOs competed to win community support for their programs. On completion, some communities complained of receiving units of a lesser standard than

their neighboring communities, and jealousy and rivalry became apparent. Later, BRR set a size of 36m2 ("type 36") as the standard housing size. However, this standard was set after many agencies had already designed and commenced construction of their units.

VOLATILITY IN OUTPUTS

The delivery of promised aid

The supply of promised aid is more volatile in countries identified as having weak political institutions and historically poor macroeconomic policies (Dollar and Levine 2005). Where there are large numbers of donors, such as in Aceh, the volatility of aid tends to be lower (Fielding and Mavrotas 2005). There appeared to be a general consensus from Aceh's donors that three key characteristics should be taken into consideration when assessing whether to continue delivering on promised aid: evidence that the host country is managing itself well with sound macroeconomic policies; evidence that loans and grants are being managed well; and, evidence that beneficiaries are actually benefiting from the aid.

The creation of Government's Agency for Reconstruction and Rehabilitation (BRR), headed by Kuntoro Mangunsubroto, a well-regarded leader with an impeccable track record, provided the necessary evidence to donors that the Government was managing the reconstruction effort in a well-coordinated manner. Such evidence was apparent in the creation of the World Bank-managed multi-donor trust fund (MDF) (see *Government tracking of NGO projects*). Meanwhile, continuous reporting enabled donors to witness how beneficiaries were reaping the rewards from donor contributions.

While reconstruction efforts around the world may have suffered from a lack of delivery of promised aid, there is only small evidence of this occurring in Aceh. Three years after the tsunami, 83 percent (US\$6.4 billion) of committed aid had been allocated to specific projects, with the likelihood that this will continue to rise in the coming year (Figure 10).

Increased volatility in outputs

Whilst the delivery of funds towards Aceh's redevelopment has not fallen short of promises made, there is evidence of volatility in outputs. This volatility has been caused by issues in data quality (e.g. changing housing needs) and linked to increased costs and funding allocations. As a result, many players had to reduce their commitments in the delivery of outputs. Further volatility has arisen between expected and actual disbursements, creating policy implications for the Government.

The unexpected appearance of inflation has been the main trigger of aid volatility in Aceh and has had a direct effect on the ability of international reconstruction agencies to deliver on their planned promises. Year-on-year inflation peaked in November 2005, reaching 41 percent, with the result that several reconstruction gaps became apparent. The Government, together with major donors, later addressed the funding shortfalls in those sectors affected, mainly through the allocation of funds from the Multi-Donor Fund.

The tsunami destroyed a significant portion of Aceh's already poor infrastructure, physical capital and productive sectors. This caused a sharp decrease in supply of agricultural products, especially fish, and other commodities. With the supply chain and transport dislocation, prices were driven up by increased demand from the reconstruction effort. Inflation was further exacerbated by the fuel subsidy reduction in October 2005, which spurred prices even higher (Figure 11).

Material and labor cost increases effectively doubled the initial estimates of the unit cost of housing development. As a result, many NGOs were forced to cut targets and reduce the scope of their programs, or alternatively source additional funding. It is estimated that inflation caused funding gaps in housing and the

Figure 10: Commitments and disbursements

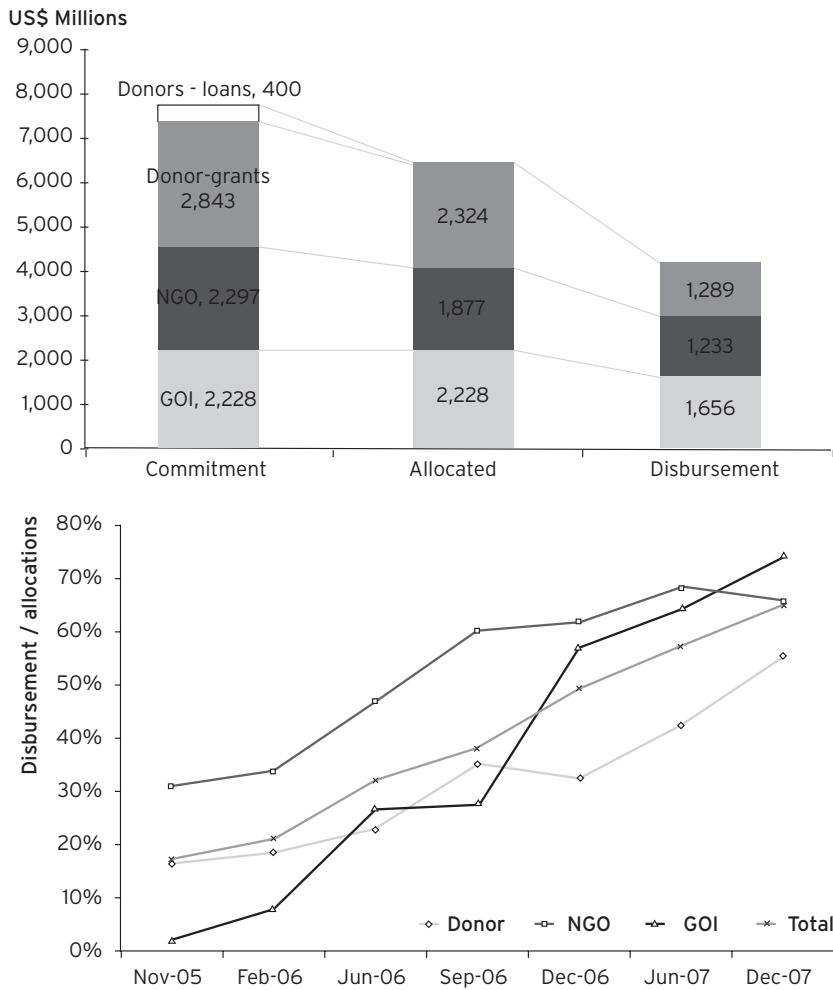


Figure 11: Inflation in Aceh

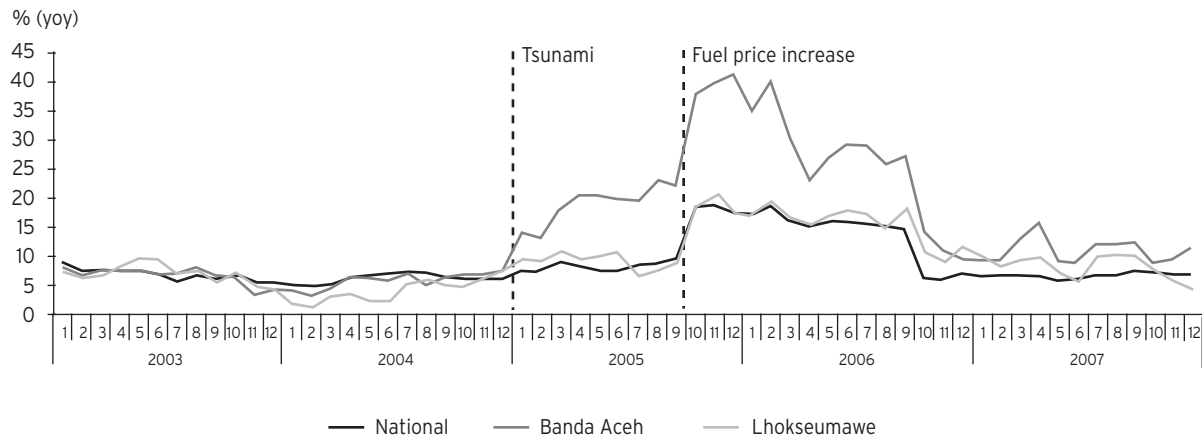
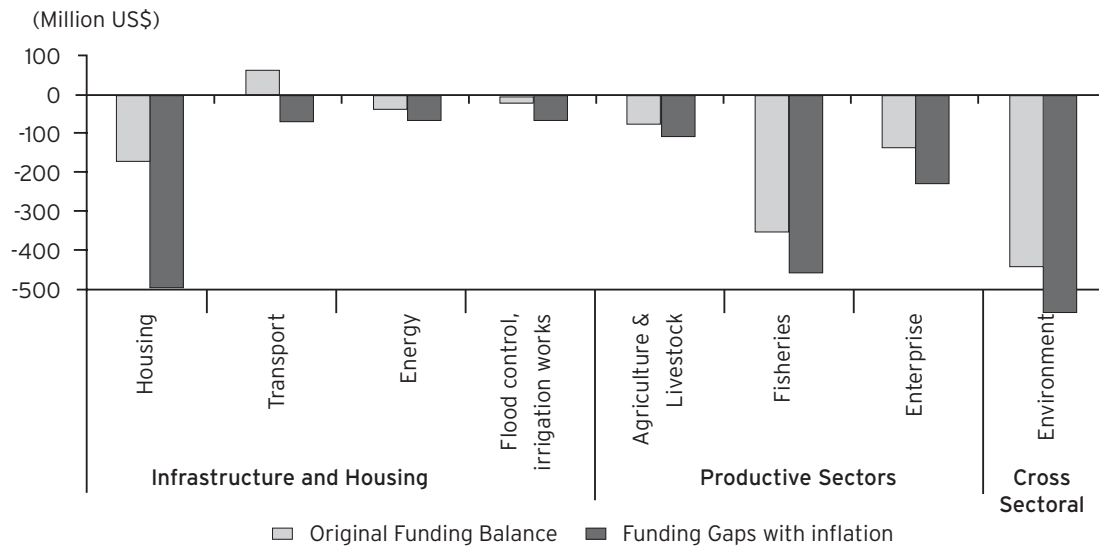


Figure 12: Funding gaps and inflation



productive sectors of US\$492 million and US\$784 million, respectively (Figure 12).

Given the high international exposure of the response to the tsunami in Aceh, there was a demand to see results. Bilateral donors sought to allocate funds quickly, whilst United Nations agencies, NGOs and implementing agencies expressed concern over the pressure to spend money too quickly in order to show tangible results to the international community. In contrast was Yogyakarta's reconstruction, where the supply chain and road network remained relatively unaffected (World Bank 2007b). Re-establishing supply chains, as

well as getting markets back into the business, may be two ways of easing the burden of inflation (Funke and Gatewood 2008). An effective operation to fill the transportation gap for not only construction materials but also immediate needs in the early months after the tsunami, both by land and sea, would have almost certainly provided eased inflationary pressures.⁸ Better coordination amongst the reconstruction actors in procurement, such as establishing a multi-party procurement system or warehouse-sharing, could have maximized economies of scale and also helped to curb the steep price increases in construction materials.

THE PROLIFERATION OF AGENCIES

The evolving development environment

Contemporary development aid has its historical roots in Marshall Plan assistance from the United States to Western Europe after World War II. Today, the United States is no longer the largest single donor, given increases in the volume of aid and even greater increases in the number of donors and aid channels. Nowadays various United Nations agencies derive their own funds and programs, and multilateral agencies play an ever more important role in development. Many new donors have also emerged developing direct bilateral relationships with recipient countries, and there is a notable increase in private sector contributions through foundations and NGOs alike. All of these factors are changing the aid landscape.

It is estimated that the number of international NGOs around the world has soared up to 30,000 (Duke University 2006), changing the nature of aid architecture. Edward (1999) argues that this has happened because official aid is under criticism for favoring political ends, while also failing to deliver results. It is true that some official donors and their aid agencies have their own commercial and security objectives. Aid agencies also have the objective of maximizing aid budgets, which requires them to satisfy key domestic constituencies in parliament and among aid contractors and advocacy groups. This latter objective often requires making the results of aid programs visible, quantifiable and directly attributable to a donor's activities—even if doing so reduces the developmental impact of aid (Dollar and Pritchett 1998). These trends have led to growing skepticism about the effectiveness of official aid. Against a background of a widening development gap between poor and rich countries, it seems that many people in rich countries

now prefer to channel their funds through private agencies and foundations.

However, reflecting on the success of Marshall Plan aid compared with more recent aid delivery to less developed countries, this is partly attributable to differences between the recipients. Western Europe had huge advantages in putting aid to effective use. Unlike most aid recipients of subsequent decades, Europe had skilled labor, experienced managers and entrepreneurs, and a history of reasonably effective financial and judicial systems, and public administrations (Degnbol-Martinussen and Engberg-Pedersen 2003). These successful aid stories are also attributable to the mechanisms themselves, which required one recipient to deal with only one single donor, compared with dozens of bilateral and multilateral donors, as well as thousands of NGOs, in the aid environment today. The successful delivery of aid in South Korea, Botswana and Taiwan is also recognized as being partly due to the aid-channeling environment with single or dominant actors present (Azam, Devarajan and O'Connell 2002). Other literature suggests that there are very strong reasons to believe that, all other considerations aside, aid often underperforms because it flows through too many institutional channels. This generates high transactions costs within each recipient nation, and so reduces the value of the aid (Acharya, Fuzzo and Moore 2004). In a recipient country with many donors, where each is responsible for only a small part of the development assistance, responsibility for success or failure is diffused and any single donor will have a lesser stake in the country's economic and social development (Barry, 1998).

Inundation of support for Aceh

The growing number of reconstruction actors has provided alternative options and opportunities for

Table 2: Number of actors by sector

Number of actors by sector	NGOs	BRR	Donors	Number of actors
Social sector				
Education	143	1	17	161
Health	135	1	16	152
Community, culture & religion	97	1	5	103
Infrastructure and housing				
Housing	107	1	12	120
Transport	19	1	14	34
Communications	3	1	5	9
Energy	8	1	1	10
Water & sanitation	57	1	6	64
Flood control, irrigation works	8	1	5	14
Other Infrastructure	11	1	10	21
Productive sectors				
Agriculture & livestock	64	1	4	69
Fisheries	55	1	9	65
Enterprise	109	1	32	142
Cross-sectoral				
Environment	17	1	8	26
Governance & admin	27	1	10	38
Bank & finance	7	1	0	8
Total*	435	1	27	463*

**Actors can have a presence across multiple sectors, and totals are therefore not cumulative*

recipient countries, development agencies and other players. The proliferation of agencies has provided a pool of newly invented approaches on undertaking development, which traditional donors had yet to provide. The multitude of players and projects in Aceh's reconstruction program—463 actors and over 2,000 projects—posed great challenges in terms of coordination and implementation. Agencies had different levels of experience, expertise, specializations and procedures in executing their programs. Different approaches, standards, and styles were inevitable.

Although 463 agencies have been active in Aceh since the tsunami, the top 15 actors dominate the reconstruction landscape, making coordination somewhat easier than envisaged.

With allocations of US\$5.3 billion, the top 15 actors (including the Government of Indonesia) account for 80 percent of reconstruction funding (Figure 13). With such a concentration of funds amongst a small group of actors, coordination was made more straightforward. The creation of BRR and the Multi-Donor Fund

(MDF) further assisted in reducing the coordination burden.

Despite an almost equivalent share of allocations as NGOs and donors, the Government dominates the reconstruction portfolio with a 46 percent share of the top 15 actors' allocations. This is followed by multi- and bilateral donors, which together account for an additional 39 percent, with NGOs sharing the smallest portion of 15 percent (Figure 14).

A proliferation of agencies and a concentration of funds

Conceptually, fragmentation parallels proliferation. Fragmentation has two dimensions: first, the number of sources (funding agencies) from which a recipient obtains aid; and second, the extent to which each source contributes an equal share (Acharya, Fuzzo, Moore 2004). A common measure of how concentrated or fragmented aid is in recipient countries is the Hirschman-Herfindhal Index.⁹ The index for Aceh's reconstruction program is 0.155, placing Aceh's reconstruction actors as *moderately concentrated*.

The calculation of the index for Aceh includes the Government's reconstruction agency, BRR, as it is the largest single actor in the reconstruction program. The concentration of agencies in Aceh is slightly above the national Indonesian index. In comparison,

the Mozambique index¹⁰ (of 0.07) shows that there aid is more broadly spread, with no single donor dominating the aid environment (Figure 15).

The assessment of the concentration of agencies in Aceh for each agency type (NGOs, donors and all agencies) provides some valuable lessons for reconstruction agencies. Whilst the index scores for NGOs (0.107) and donors (0.116) both reveal moderate concentration in their own right, when combined, their common score drops markedly to 0.058, or highly fragmented, as depicted in Figure 16.

However, when the Government's reconstruction Agency, BRR, is included, the index jumps up to 0.155: moderately concentrated. This very clearly demonstrates that the inclusion of a single agency controlling a significant share of the funding is highly significant.

This is further highlighted and supported when the donor numbers are interrogated further. With a group score of 0.116, the donors alone are moderately concentrated under the Hirschman-Herfindhal Index. However, if the funds from the MDF are removed from the fund and redistributed back to the source, the index falls to 0.0916: unconcentrated and fragmented. The sufficient pooling of funds into the MDF has a positive effect on the index.

Box 3: Positive effects of pooling funds

The establishment of agencies that pool funds, such as the Government's reconstruction agency, BRR, or the Multi-Donor Fund, have a positive influence on the Hirschman-Herfindhal Index, moving the index from fragmented to moderately concentrated.

Figure 13: Distribution of funding

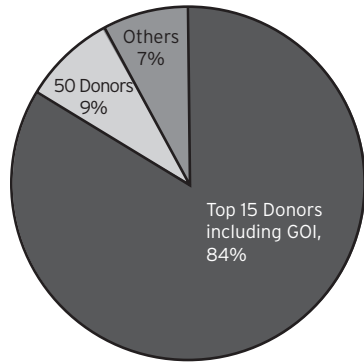


Figure 14: Top 15 actors' shares

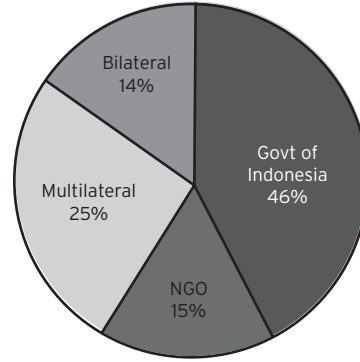
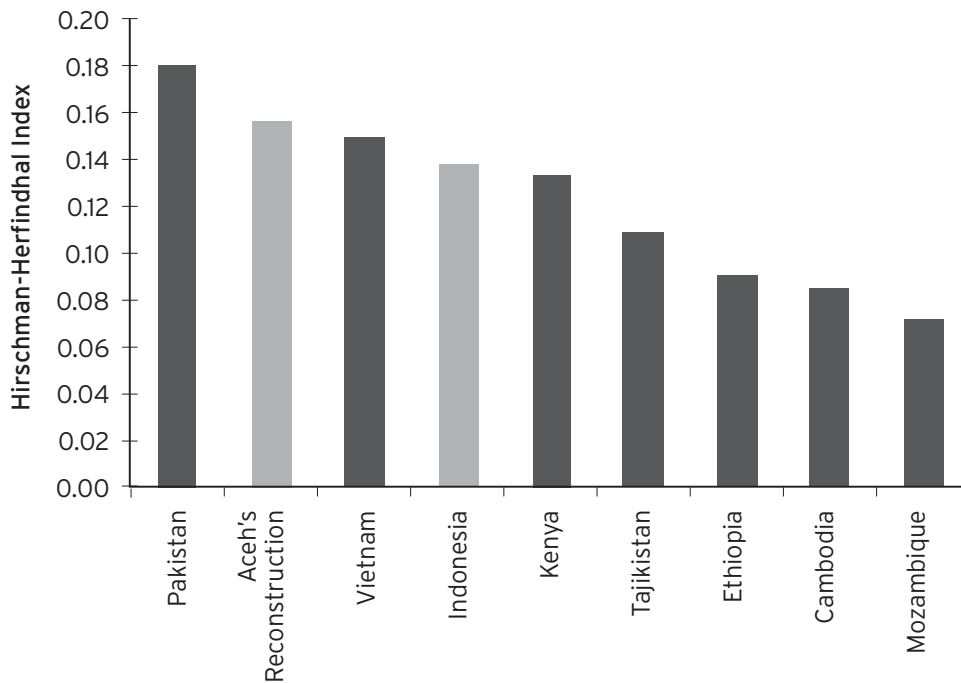
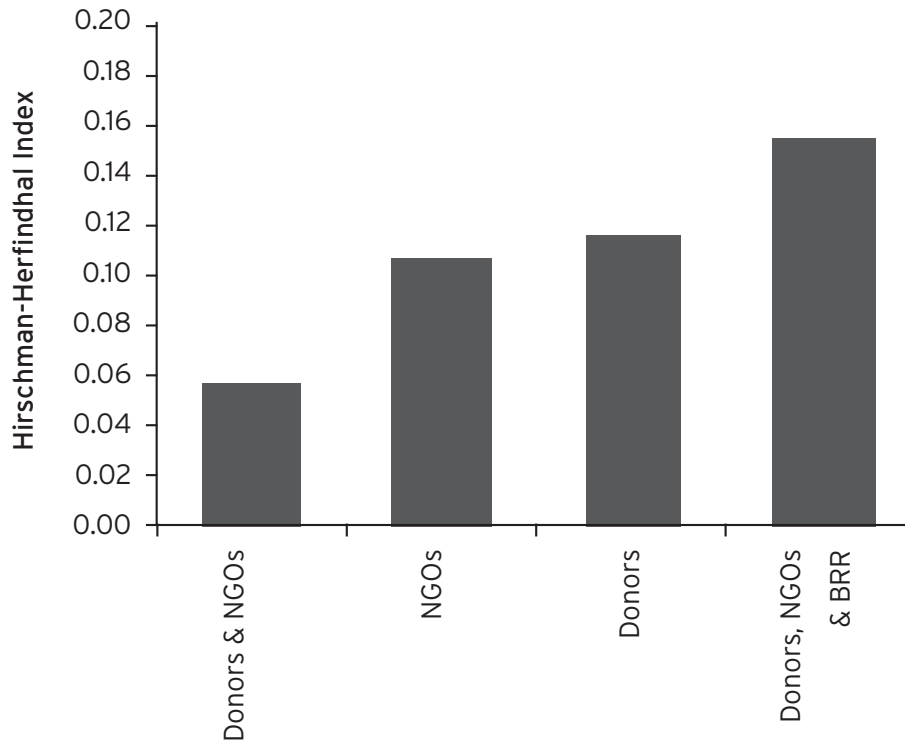


Figure 15: Comparison of Hirschman-Herfindhal Indices



Source : OECD & authors' calculations.

Figure 16: Hirschman-Herfindhal Index by reconstruction agency type



Fragmentation costs

The cost of fragmentation can be divided into two categories (Acharya, Fuzzo, Moore 2004). First, *direct transaction costs* essentially take the form of the absorption of the scarce energy and attention of relatively senior government staff. Each project requiring separate negotiation and distinct management absorbs energy and attention from officials to an inefficient degree in order to establish and maintain relationships with multiple agencies and adjust to their differing procedural requirements. Second, *indirect transaction costs* take the form of the dysfunctional bureaucratic and political behavior stimulated by aid proliferation.

With an estimated 463 actors on the ground, each with its own management structure and support services, there is an enormous overlap of activity and duplication of effort that could be streamlined. Most of the 463 agencies came with their own support services such as human resources, information technology, procurement and contract management, transport, legal, finance and administration, payroll, accounting, and more. The cost of these duplicate activities is enormous, and few efforts were made to minimize these costs.

BRR and the MDF were two such efforts to minimize agency overheads. Similarly, the International Federation of the Red Cross (IFRC) sought to provide

a range of support services to participating national societies in order to minimize duplication, and further to obtain benefits from bulk purchasing.

Direct transaction costs

Although historically donors have channeled funds through the Government's budget (an "on-budget" mechanism), Aceh witnessed a large level of off-budget funding from NGOs and United Nations agencies. About half (US\$3.1 billion) of allocated funds were not channeled through the on-budget process. BRR therefore set up various mechanisms in order to coordinate the reconstruction effort and to monitor off-budget funding. Each agency was required to submit a "concept note"¹¹ containing full project details to be approved by BRR. With over 2,200 off-budget projects, it absorbed a substantial amount of BRR officials' time to discuss and review the projects, not only before project approval, but also during implementation in the field. It is estimated that each deputy¹² had to spend about one third of his daily working time discussing and maintaining engagements with various actors, mostly the NGOs. Although to a lesser degree than at BRR, senior provincial officials were also affected in a similar way, especially the local Aceh planning agency (Bappeda). Bappeda officials had to spend at least one quarter¹³ of their time on average per day dealing with donors and NGOs.

The other implication of this fragmentation is also captured in studies conducted by various actors. Some of the studies are for project preparation purposes, while others attempt to provide and equip the local governments with better plans.¹⁴

Indirect transaction costs

In most developing countries, public servants are poorly paid and can often significantly increase their salaries by working for aid agencies and projects (Dollar and Pritchett, 1998). Although there is no clear

evidence of dysfunctional bureaucratic systems, anecdotal evidence suggests that many of the better educated and talented lecturers from local universities left the classroom in search of work with international organizations.¹⁵

In many instances, bilateral agencies not only fail to coordinate, but actually compete with each other (Cassen and Associates 1993), as they are look for reasonably sized projects with ease of access. This was seen in the provincial capital of Banda Aceh, as bilateral agencies competed to supply water infrastructure. Despite the best intentions and interventions from BRR, incompatible equipment was supplied by various agencies adding to the administrative burden and requiring valuable time from local officials to find practical solutions.

Many NGOs found themselves in the unfamiliar position of having funding of their own to spend. In many cases, NGOs were unable to spend their own money on projects that they themselves implemented and were forced to take on the additional and unfamiliar role of a funding agency. This resulted in some unsuccessful and costly activities as some NGOs struggled to manage other implementing agencies effectively. A lack of experience in procurement and contract management also resulted in ineffective contractual arrangements that increased costs and resulted in project delays. While several bilateral and multilateral donors attempted to reduce costs, increase efficiencies and create transparency by pooling their funds by contributing to a multi-donor fund (see *Multi-Donor Trust Fund (MDF)*), in contrast there was very little evidence of NGOs seeking similar solutions or coordinating administrative functions.

The other indirect cost that occurs is the priority distortion of reconstruction. There is palpable pressure between building back properly and building back

quickly to show tangible results and visibility. Building back properly inevitably needs more time for assessment and planning. Conversely, building back quickly often triggers other issues, such as project overlaps

and duplication. The pressure comes not only from donors but is also spurred by the media. As a result of this pressure, some projects were designed in a haphazard way and not necessarily based on needs.¹⁶

Box 4: Poor community engagement creating waste and increasing costs

In February 2005, ECHO gave the Agency for Technical Cooperation and Development (ACTED) US\$970,658 for emergency support to livelihood recovery through fishing boat construction and equipment for tsunami-affected communities in Nagan Raya and Aceh Barat districts. Several other donors also contributed to this project, which plans to establish 11 boatyards to make 200 boats for local fishermen. In June 2005, ACTED's website announced that the first 10 boats had been handed over to fishermen in the sub-district of Kuala Tadu, in Nagan Raya, and showed a small group of fishermen standing in a boat on the river, waving. Five months later, not one boat had ever been used for fishing; all remained in the shallow waters of the local river.

One of the beneficiaries in Langkak village explained the problem: "The boats have many structural problems and are not the usual boats we use here. It would be dangerous to use these boats outside the river." ACTED staff insist: "We are partners with the local government, and are implementing our boat building program in consultation with the local Panglima Laot." But the local Panglima Laot tell a quite different story: "The main problem with the program is that ACTED never coordinates with the local people or with us, the local fishing association. They work alone, very distant from the fishermen." On 10 December, ACTED again announced that 10 boats had been given to communities in Nagan Raya. But these were in fact simply the original 10 boats given in June that had, according to the ACTED coordinator in Nagan Raya, been repaired and upgraded. Local fishermen say, however, that the boats are no different to the first time around, and the boats makers confirm that no repairs had been carried out. "I know the fishermen say there are problems with the boats, but we only make the boats as ordered by ACTED," said one boat-maker. "No changes or upgrades have been made to the boats since they were originally given in June." Indeed, by December, the boats' paint was peeling; their engines, which had been sitting in water and not maintained for five months, were in very poor condition, and some were leaking. Several fishermen who received the boats in Langkak and Kuala Tadu said it would take about Rp 4 million (US\$430) to bring the boats up to the required safety standard. Abdul Manaf explained: "We can't go to sea in that boat. The engine is making a strange thumping noise. I don't know what's wrong with it, but I know it's not right." Other beneficiaries complain that the nets given with the boats are the wrong type, and must be replaced by the fishermen themselves. Causing further insult to the fishermen, ACTED insisted the three fishermen who are co-owners of each boat sign an MoU which includes a clause stating "ACTED is no longer responsible for future technical problems, any mistakes in making the boats, or any decay of the boat's quality." Yet ACTED is very well aware that in their current condition none of the boats can be taken to sea.

Source: Eye On Aceh, 2006

COORDINATION MECHANISMS

The coordination framework

For any recipient country, the heart of an aid coordination system must be a strong central unit in government with a complete overview of the aid process (Cassen and Associates 1993). The stronger the grip the recipient country has on its aid process, the better equipped it will be to coordinate donors. Given the scale of Aceh's reconstruction, coordination was crucial. A range of coordination mechanisms were established each with different aims and successes. Whilst there has been remarkable progress in coordinating and implementing over 2,000 projects across all sectors in just three years, there is some evidence of poor coordination leading to gaps, duplication, inefficiencies, and ultimately a weak correlation between needs and recovery programs (BRR and the International Partners, 2005b). 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 (BRR and the International Partners 2005b).

In Aceh, three lead bodies provided the broad coordination framework for the reconstruction program, as depicted in Figure 17. First, the Agency for Reconstruction and Rehabilitation (BRR) became the central body for government activity. Second, a Multi-Donor Fund (MDF) was created to enable bilateral and multilateral donors to coordinate funds. The MDF also acted as a forum to bring together funding agencies (bilateral and multilateral agencies, as well as key NGOs with significant funding of their own) to allow open dialogue. Third, the United Nations created the United Nations Office of the Recovery Coordinator

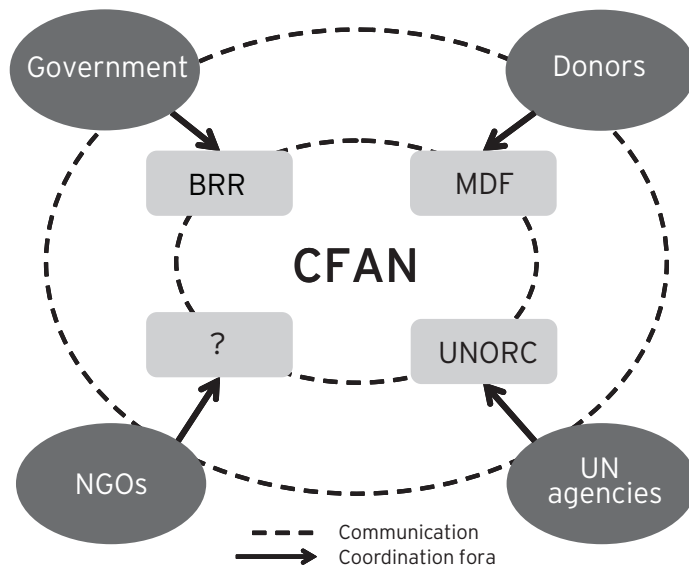
(UNORC) primarily to coordinate United Nations agencies and provide a single access point for BRR to the United Nations system.

Historically, NGOs have relied on traditional donors and United Nations agencies for funding and have therefore not required such direct coordination amongst themselves. However, with many NGOs raising their own funds, there lacked a clear mechanism for coordinating NGO activity. The very fact that NGOs did not need to seek funds from traditional sources may have created a disincentive to coordinate, as many NGOs simply developed programs that were relevant to their own interests, often without regard to the Master Plan. This issue was addressed when BRR required all NGOs to register and seek approval for all their activities. In addition, the UNORC informally expanded its role to attempt to bring together NGOs at an Inter-Agency Steering Committee (IASC) in order to open dialogue, share information and minimize the likelihood of duplication of projects.

Government coordination

Following the end of emergency response phase, the Government assigned the National Development Planning Agency (Bappenas) to coordinate the establishment of a rehabilitation and reconstruction plan for Aceh and Nias, developing the Master Plan (Rencana Induk) in cooperation with international bodies. Apart from reviewing the needs for the redevelopment of the areas affected by the disaster, the Master Plan also outlined the need to establish an agency responsible for the coordination and implementation of the rehabilitation and reconstruction plan for Aceh and Nias. This led to the formation of BRR on April 15, 2005. Led by a respected former minister, Kuntoro Mangkusubroto, BRR took responsibility for managing and coordinating the rehabilitation and reconstruction program in the post-disaster regions.

Figure 17: Lead coordination bodies



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

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

of implementing projects was onerous, and soon the agency’s attention was firmly on implementation and less on the coordination of other agencies.

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

The Master Plan for Aceh was developed in the first six months after the tsunami, when data availability and resources were limited. As a result, the Master Plan started to become less relevant as the full details of needs transpired and developed over time.¹⁷ Consequently, the Master Plan was revised in early 2008 after re-evaluating the needs of beneficiaries, examining the progress of BRR, and after considering the longer-term development needs in association with the provincial government.

In order to better coordinate the activities of NGOs, BRR established a mandatory mechanism to capture project information called the “Concept Note Approval” process (described further in the section on Information Systems). BRR, as the coordinator for reconstruction, retained the right to approve or reject projects proposed by reconstruction players. Once approved, details of projects were entered into the publicly accessible Recovery Aceh Nias (RAN) database.¹⁸

BRR also established a Coordination Forum for Aceh and Nias¹⁹ (CFAN), which was designed as an annual forum to bring together all stakeholders working in the reconstruction of Aceh and Nias and to provide a platform for discussing progress and challenges. The 2005 forum identified issues and obstacles facing the reconstruction community, allowing these issues to be tackled in the following months. Following a process of ‘regionalization’ by BRR in 2006, the 2006 forum gave input on how the reconstruction process could be decentralized, and funds and authority devolved to the districts of Aceh and Nias. The 2007 forum was preceded by a series of technical meetings, with the output from the forum being incorporated into BRR’s mid-term (two-year) review process, constituting a new baseline for reconstruction needs and outlining progress to date. Views of success of the forums are mixed. The forums appear to have achieved their

goal to provide a platform for discussing progress and challenges. However, there was an expectation that the forums would coordinate agencies, helping the reconstruction actors to set their strategies and shaping longer-term development plans. However, these expectations were not realized.

Provincial and local government

Local governments were hit by the tsunami but they managed to return to their pre-disaster level of capacity relatively fast (BRR and Partners 2005a). Little has been done to assess the capacity of local governments in Aceh, except for a World Bank study that looked into financial management capacity. It found that several factors have limited the capacity of local governments in Aceh (World Bank, 2007c).

Decentralization: Rapid decentralization in Indonesia meant that as fiscal responsibilities were devolved and financial resources shifted to the local government level there was no concurrent increase in the capacity of local governments to manage these resources. As the role of local governments prior to decentralization was primarily to carry out the development priorities of the central government, financial management systems were not adequately developed to cope with the devolved fiscal arrangements.

Propagation of districts: Aceh has experienced a significant rise in the number of local governments since 2000. Of the 22 local governments that exist today, 11 were formed since 2000. While this does not necessarily mean that capacity will always be lower in newly formed local governments, the results of the World Bank survey indicate that, on average, financial management outcomes were in fact lower in the newly formed local governments. This may be due to:

- a lack of government infrastructure in the new districts to carry out local government functions effectively;
- a lack of skilled and experienced personnel if civil servants remain in the originating district;
- a lack of time to develop financial management practices; and
- insufficient time to pass supporting regulations.

Conflict: The 30-year separatist conflict may have also adversely affected the capacity of local governments. The conflict may have resulted in a “conflict trap” whereby violence in turn weakens security and institutional capacities, reduces growth, lowers incomes, destroys infrastructure, and redirects resources from development (Collier 2007). This unwinding reverses development gains. It makes the post-conflict environment even more vulnerable to collapse than the pre-conflict. “Civil war,” Collier asserts, “is development in reverse.” Not only were local governments challenged by the post-conflict environment, they were faced with a massive reconstruction program too.

One of the most important milestones in reconstructing Aceh was the signing of the peace accord in Helsinki between the Government and the Free Aceh Movement (GAM) on August 15, 2005. The signing ending a 30-year conflict and led to the first democratically held direct elections in Aceh. These resulted in a large number of newly elected *bupati* (district heads) and *walikota* (city heads), many with only very limited experience in public administration or development. Nevertheless, making local governments effective partners in the reconstruction program was an important goal for BRR, not least because when BRR and the international community leave Aceh, it is local governments that will be relied upon to maintain public facilities and deliver basic services (BRR and

Partners, 2005a). However, the involvement of local governments in the relief and reconstruction effort has been largely symbolic. This is mainly due to their previous weaknesses rather than the tsunami.

Ghani and Lockhart (2008) discuss a disjunction between a state’s capacity to govern by law and its capacity to provide for the needs of the people in practice. What is missing in fragile states such as Aceh, they argue, is “a process for connecting citizens’ voices to government and making government accountable to citizens for its decisions.” In an attempt to better connect communities with local governments, and following a request from the newly elected *bupati* and *walikota* for a strategy and planning platform, city and district Recovery Forums (KRFs) were created (starting in May 2007), at which district governments and community stakeholders could engage in meaningful recovery planning and coordination. With support from the UN Office of the Recovery Coordinator, two major deliverables were developed: a city/district-wide recovery strategy outlining key strategic priorities and challenges for city/district recovery, and a city/district data profile for planning, benchmarking and monitoring of recovery activities. However, despite the need for open dialogue between district governments and development stakeholders, the success of the KRFs has been limited.

Given this context of newly elected (and often inexperienced) district leaders, serving in many newly formed local administrations, in a post-conflict setting, faced with large increases in budgets due to decentralisation, it is unsurprising that local governments have had competing priorities and were not as involved in the reconstruction effort as they otherwise could have been.

Coordination of United Nations agencies

The United Nations Office of the Recovery Coordinator (UNORC) was established in September 2005 to take responsibility for facilitating coordination amongst the United Nations agencies, the international NGO community, and bilateral donors in full and timely support of the Government's reconstruction and recovery efforts. UNORC served as the main point of contact between the United Nations system and BRR, and provincial and district governments. It aimed to: facilitate a unified United Nations system approach among the United Nations bodies; put into place structures for coordination at all levels; minimize gaps in the response; and provide linkages and strategic policy that transcend all sectors. UNORC and BRR signed a Memorandum of Understanding in November 2005 to formalize the role that the United Nations had assumed in maintaining the capacity to respond to emergencies and to reach out effectively to the communities on behalf of the Government as the reconstruction and recovery phase progressed. As BRR became more involved in implementation, and less involved in coordination, BRR appears to have relied increasingly on UNORC to facilitate the coordination of NGOs.

In partnership with the aid community, UNORC has established numerous sector coordination bodies that meet on a regular basis, including the Inter-Agency Steering Committee (IASC). The IASC comprises United Nations agencies, the Asian Development Bank, the World Bank, the Federation of the Red Cross and Red Crescent, and most of large international NGOs such as Oxfam, Mercy Corps, Plan, Care, Save the Children, World Vision, GITEC and CRS. The "added value" of these meetings is varied but they offer good networking opportunities between agencies, helping to limit the duplication of activities. Although these

meetings were supposed to discuss strategy and strengthen coordination, they became largely information-sharing forums. This created a vicious spiral in which agency leaders, busy on their own programs and uninterested in attending largely informational meetings, left future meetings to more junior staff, reinforcing their informational rather than strategic content (World Bank 2007).

Another form of coordination that grew organically from the grassroots level is thematic working groups. These have been relatively successful, with several sectoral working groups emerging to respond to coordination needs,²⁰ such as Monitoring and Evaluation, Health, Livelihoods, Education, Child Protection, Shelter, and Water and Sanitation working group meetings. These forums have helped the flow of technical information between actors and the sharing of lessons learned.

Multi-Donor Trust Fund (MDF)

At the request of the Government, the World Bank established a multi-donor trust fund (MDF) to pool donor contributions to finance reconstruction projects and provide assistance for Government programs that were part of the rehabilitation and reconstruction effort. The MDF is guided by the Government's reconstruction strategy and all its activities should be consistent with, and guided by, the Government's Master Plan under the leadership and direction of BRR. A "better" Aceh and Nias are envisaged by improving infrastructure and adhering to social concerns such as reducing poverty, improving livelihoods and increasing equity. The MDF mechanism also provides for increased opportunities for interaction between donors, and national and regional governments.²¹

The advantages of such a fund are numerous. In addition to minimizing transparent administration costs,

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

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

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

Not all bilateral or multilateral donors contributed to the MDF and no NGOs made contributions—despite

the obvious advantages of such a mechanism. Some bilateral agencies emphasized the importance of maintaining influence through direct bilateral relationship with the Government, which would have been diluted had funds been channelled through the MDF, together with a loss of visibility.

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

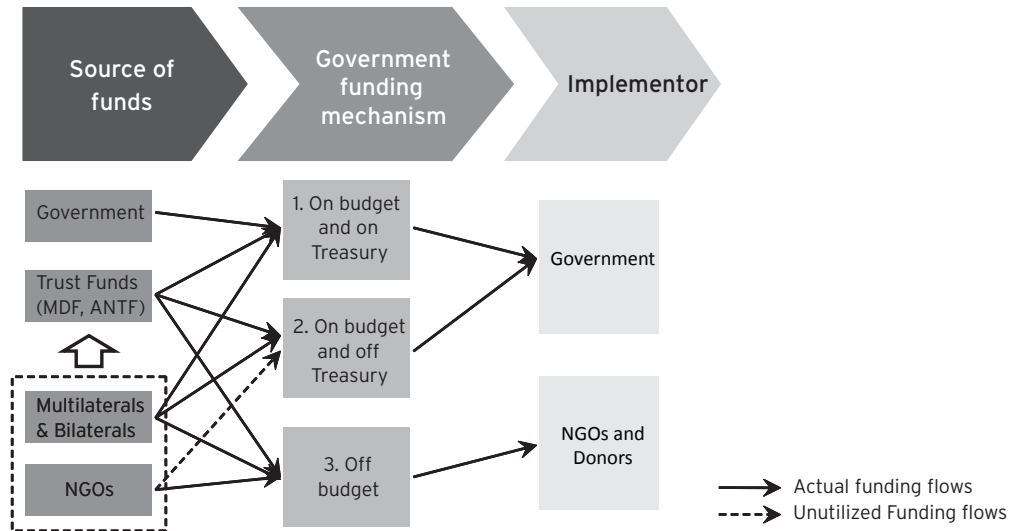
Flexible funding channels

Different funding channels have different strengths and weaknesses. In a disaster as broad and diverse as Aceh's it was extremely useful for the Government to have a range of funding channels that could be leveraged to address any particular need. The range of funding channels that the BRR was able to draw on (in this case meaning everything from implementing directly to simply making suggestions as to how funds should be directed) included:

Government on-Treasury funds: BRR had direct control over these funds but was often constrained by the rules and regulations surrounding them. However, BRR officials felt that the increased transparency provided by these regulations resulted in an estimated reduction of 20 percent in the value of contractors' bids for tenders.

Multi-Donor Fund: These funds were often directed to fill identified needs and gaps without pressure from donors to disburse in a particular sector. The MDF also encouraged open dialogue between donors whilst enabling them to scrutinize (rightly or wrongly) BRR programming.

Figure 18: Funding channels



Multi-lateral funds: The Asian Development Bank (ADB) directed funds through government channels and enabled the Government to take ownership of the agenda, with ADB's agreement.

Bilateral funding: The success of bilateral programs depended largely on the relationship between the Government and the bilateral partner. However, BRR was able to influence the allocation decisions of many bilateral partners into filling identified needs and gaps in the reconstruction program. Large and small donors responded positively to requests from BRR, and also contributed to providing technical assistance directly to BRR.

'Non-traditional' donors emerged in Aceh (such as Kuwait, Saudi Arabia, Portugal etc.) Whilst their money was welcomed by the Government, the direct transaction costs were large with BRR time and resources spent on many high-level visits. There was

also evidence of a lack of experience from these new donors, and lessons had to be learned unnecessarily. Small donors with limited development experience may achieve a greater impact by contributing funds through multilateral channels, or alternatively through multi-donor funding schemes.

Non-governmental organisations (NGO) funds: Through the "concept note" process (described further in the section on Information Systems), BRR was able to approve and guide the programming of funds from NGOs. However, the planned work of NGOs was rarely rejected by BRR and NGOs were generally left to do as they wanted. Nonetheless, the "concept note" process enabled BRR to track the reconstruction program of NGOs, and therefore identify any gaps arising in un-met needs.

Aceh-Nias Trust Fund (ANTF): The Aceh-Nias Trust Fund is a facility established and controlled by BRR

to pool and allocate the grants and contributions from various donor countries, corporations, government affiliates, private institutions and individuals. It was able to identify projects and disburse funds relatively rapidly, and therefore gave BRR a tool in which to access quick cash if it was required (such as in emergency situations). The ANTF was not governed by a steering committee, as exists with the MDF, and therefore the ANTF itself could retain full control over its funds, could earmark them as it wished and could avoid involving other parties in the process, thereby being less bureaucratic. However, the lack of steering committee also meant a lack of oversight, and potentially less stringent regulations that are often required by the international community.

Effectiveness of coordination systems

Generous funding from all over the world can be sufficient not only to rebuild what has been lost, but also to provide for better development. Many sectors have benefited from receiving funds in addition to minimal requirements. Even so, after three years of the reconstruction program, gaps still remain in some sectors. As highlighted in Figure 19, the environment, energy, flood control, and irrigation sectors have still not received sufficient funding to cover estimated core needs²³ to return them to pre-tsunami level. Meanwhile, other sectors have sufficient funding to cover the tsunami damage, in particular the social sectors, such as governance and the health sector, which together account for more than US\$1 billion. However, the sectoral gap is narrowing compared with previous years.

While most actors are aware of, and acknowledge, the need to fill sectoral gaps, they are constrained either by limited capacity and knowledge or by insufficient resources to address the gaps.

Disbursements have been higher in the social sectors, including health, governance, education, and livelihoods. Figure 20 shows that US\$400 million has been disbursed in the health sector in Aceh, improving on the health services that existed prior to the tsunami.²⁴ However, as pointed out by the local health authority, staff training for donated high-tech medical devices is still lacking, while donors admit that they have “limited” budgets to provide formal training.

In other sectors, disbursement gaps were inevitable due to the enormous challenges involved in implementing such programs. After three years of reconstruction, US\$300 million was yet to be spent on the housing program, demonstrating the immense challenges faced on this sector, as well as other sectors such as transportation.²⁵

In 2005, there was also a disproportional allocation of funds across geographical regions, as highlighted in Map 1. The areas around Banda Aceh city and Aceh Besar received more than adequate resources to rebuild. In contrast, other areas remain severely underfunded, particularly the hard-hit west coast south of Meulaboh, the Nias islands, and the northeast coast. Accessibility problems and associated increased costs resulting from the dislocation of the transport network have deterred actors from shifting resources to these areas. As access to these areas has improved, so allocations have been redistributed with more equitable outcomes.

Transitioning

Most actors have demonstrated a limited understanding of how to ensure success in the transition between the emergency and recovery phases to the longer-term reconstruction and development phases, or how to effectively manage the issue of sustainability itself. To be able to link from relief to rehabilitation and lon-

Figure 19: Allocation gaps by sector

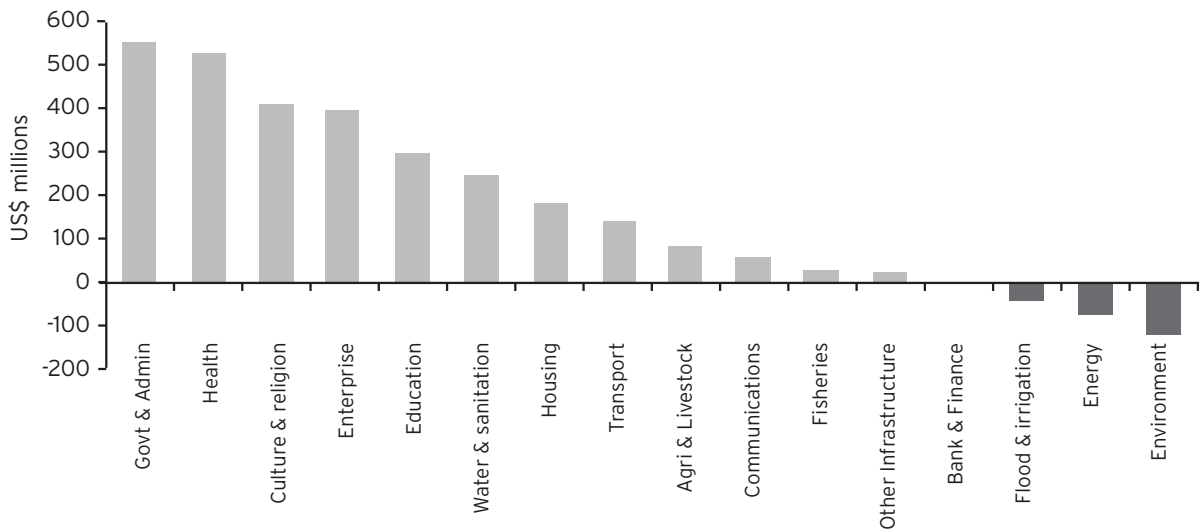
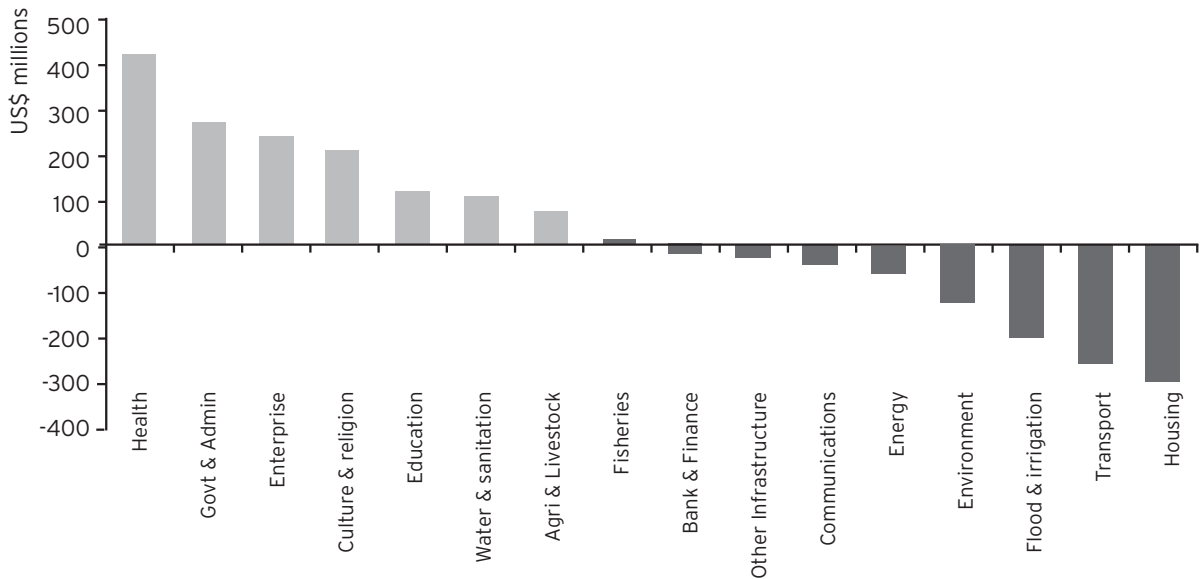


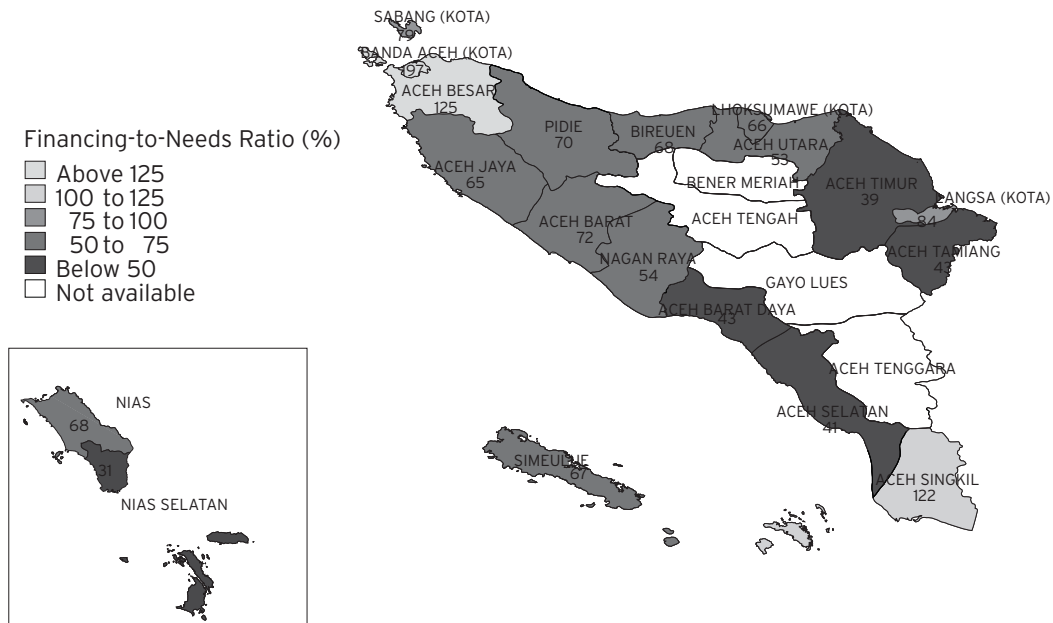
Figure 20: Disbursement gaps by sector



ger-term development, the programming must reflect the economic trends, opportunities and challenges present before the disaster, which are rarely part of programming calculations (Longley, Christoplos and Slaymaker 2006). Moving on from the “cash-for-work”²⁶ program at the emergency stage, many

agencies provided the affected communities with livelihood tools such as boats²⁷ and seeds that were often inappropriate in contributing to rebuilding an industry or encouraging wider involvement from private sector development (Phillips and Budhiman 2005).

Map 1: 2005 geographical gaps in allocations



Transition to local government

Given the setting of weak local governments, the transitioning of facilities and services to local government is even more challenging. Asset transfer considerations have been found to vary and are inconsistent. With such a large number of actors transferring assets (donors, NGOs, and BRR), there is the potential for inappropriate legal documentation to be prepared, and for provincial and local governments to be ill-equipped to manage the assets post-transfer.

Preparedness: In order to ensure an effective transition, local governments need to be well aware of the assets to be transferred so that they may allocate appropriate budgets to provide ongoing maintenance of the assets and to provide adequate staffing. Whilst BRR is making an effort to inform local governments ahead of time of the transfers, other reconstruction partners are not. Locating staff with appropriate ex-

perience and training is proving challenging for many local governments.

Legal transfer: Assets (including facilities and services) will be transferred from a large number of actors to the provincial government and district authorities. BRR has established an Asset Management Directorate to develop a strategy on transferring the assets in terms of the management/operational and legal ownership aspects. However, many local governments are unprepared to receive assets from NGOs and other actors using appropriate legal mechanisms and documentation.

Aligning priorities: Local governments may find that they have their hands tied when receiving assets that may not align with their own plans and needs. Whilst the Recovery Forums may have developed recovery strategies and outlined key strategic pri-

orities, the assets transferred may not fit into these priorities.

Appropriate funding mechanisms: The generous support from the international community is likely to continue beyond the lifespan of BRR, although it is unclear which funding channels will be used to support local governments. On-budget support will enable local governments to align the development needs of their communities with ongoing projects from financial supporters. Without effective communication structures to open dialogue, the use of off-budget mechanisms may further misalign the development goals of donors from the strategic priorities of the districts.

Transition to longer-term development

In an effort to address the transition from reconstruction to development, several activities are being

discussed or have been initiated. The provincial government is currently considering a number of options that will consider the longer-term development of the province. These include extending the tenure of BRR; expanding the mandate of national ministries; and establishing a provincial agency for the continuation of rehabilitation and reconstruction.

Donors have also started the process of establishing a second multi-donor fund, nicknamed MDF2, in which funds can be pooled in order to support non-tsunami-affected populations and broader development needs.

At this stage, it is too early to tell how successful these initiatives will be in a development setting.

INFORMATION SYSTEMS

Robust information systems have always played an important role in any development program. In the early stages after any natural disaster, there is no doubt that information and data are crucial, especially in assessing the immediate needs of the survivors. In the case of the tsunami in Aceh, numerous assessments were conducted by various agencies, with a multitude of areas of coverage and differing objectives. A study by Goyet & Morinière (2006) found that the needs assessment conducted by the UNDAC (United Nations Disaster Assessment and Coordination) failed to serve as a basis for decision-making, largely because of the late delivery of the report and the methodology employed. Goyet and Morinière also found that many of the published reports served only to justify existing programs already implemented in the field. Furthermore, numerous reports, updates and bulletins were disseminated by agencies without any clear baseline information, creating duplication and confusion.²⁸

Who did what, and where, during the emergency response?

The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) established a Humanitarian Information Centre (HIC)²⁹ immediately after the tsunami to coordinate information on “Who does What Where” (the 3W approach). The agency played an important role in collating data on agency activities in order to improve the effectiveness of the humanitarian response. The HIC evolved in 2007, under the United Nations Office of the Recovery Coordinator, into the Information and Analysis Section (IAS). The IAS now generates, coordinates and supports the delivery of strategic information products to enable evidence-based recovery, development planning, and analysis at provincial, district and village levels.

Recovery Aceh Nias (RAN) Database

With the huge influx of support from a vast number of actors, it was evident soon after the tsunami that the central collection and reporting of funding was required in order to enable all actors to allocate appropriate funds with minimal duplication and provide support where it most needed. The combination of large amounts of funding and the need for rapid action created an environment in which reliable analysis and information concerning reconstruction progress were vital. The Government opted to implement, with financial support from the United Nations Development Agency (UNDP), the Development Assistance Database (DAD), which had already proved successful in tracking donor funds in Afghanistan since 2003. The DAD system was a sophisticated IT application that allowed the capturing and reporting of financial commitments and disbursements, but that could also be customized by host governments. The system allowed users to filter, group, and sort various indicators. With an on-demand query and searching capability, the system could provide users with a wide range of analytical functions, including querying, reporting, charts and geographic information system functions (Agustina CD, 2007).

The system was inaugurated in November 2005 and renamed the Recovery Aceh Nias (RAN) database. The system was customized by BRR and went through substantial system development whilst live in the field. The development transformed the RAN, giving it extra functionality that was unavailable in the other tsunami-affected countries also using the DAD. The key development was the ability to enter project information in relation to planned and actual outputs (“key performance indicators”, or KPIs). This provided BRR with the ability to monitor physical progress, in addition to improving transparency around funding flows. This additional functionality created problems in practice, mainly due to the complex funding arrangements

between the large number of actors present in the field. On one hand, the system was attempting to track the financial inputs (commitments, disbursements and expenditures) between the original provider of funds and subsequent recipient agencies. On the other hand, implementing agencies were required to enter very specific project details. In practice, there was often a disconnect between these two goals of tracking the funds and monitoring the physical outputs. This led to some duplication of funding and project data, together with some data inconsistencies.

Project implementers were requested to enter detailed data on their project outputs at both a sector level and a geographical level. The level of detail required by the system was challenging for many agencies and, in order to satisfy the arduous monthly reporting requirements, the credibility of project data began to suffer. Agustina CD (2007) describes further how the RAN was cumbersome in its early days but enabled BRR to capture a broad picture—albeit not an entirely accurate one—of the reconstruction landscape.

Continually tracking the funds

Within weeks of the Consultative Group on Indonesia (CGI)³⁰ meeting in January 2005, donors had made substantial pledges towards Aceh's reconstruction close to US\$8 billion. At the same time, international donors were seeking necessary information to assist them in allocating funds appropriately. At the request of the Government, the World Bank set about designing a simple financial tracking system to provide a snapshot at regular intervals of where these pledges were being committed and allocated, and how the money was being spent on post-tsunami reconstruction. The resulting system was developed after a stock-take of available information. Figure 21 below illustrates the key elements of the methodology employed.

Although the system is based on the manual collection of data, making it relatively labor-intensive and time-consuming, it nonetheless proved effective in providing a broad overview of reconstruction financing at regular intervals. The manual nature of the system revealed that a simple process—one with a clear scope and methodology, and maintained by a small but dedicated team of analysts for collecting and analyzing data—can produce much needed output at low cost in a post-disaster environment. Building relationships with the key players created an environment in which proactive management of the data was possible, in contrast to more complex IT systems (McKeon 2007).

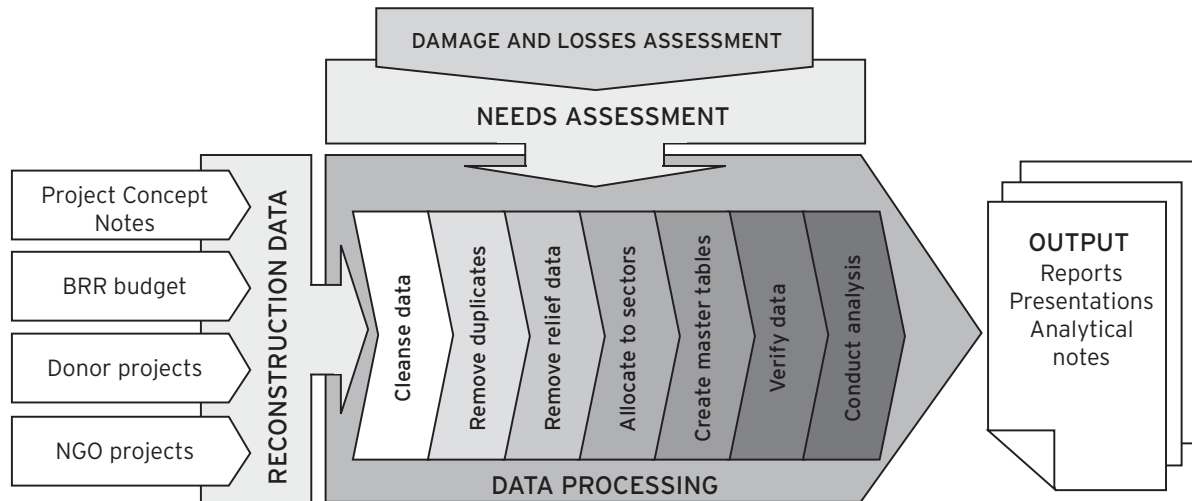
Government tracking of NGO projects

Shortly after its establishment in 2005, the BRR introduced the requirement that implementing agencies must provide detailed “concept notes” that describe the plans for reconstruction projects. These documents offer a wealth of reconstruction data in the following areas:

- project details and synopses
- budgets, costs and funding details
- sector and subsectors
- locations
- detailed project descriptions, including outputs
- impact assessments
- details of local community support
- monitoring processes
- milestones for project deliverables

The notes were examined internally by BRR to ensure completeness and accuracy. They were then presented

Figure 21: World Bank financial tracking methodology



Source: McKeon, 2007.

to a fortnightly concept note approvals meeting. These meetings assessed the projects to determine whether existing needs were filled by the projects and to avoid duplication with projects already approved. Whilst in practice projects were rarely rejected, the process enabled BRR to track and monitor the planned implementation of projects by non-government agencies. Having obtained the details on the planned outputs, BRR was able to identify gaps in needs and allocate resources appropriately to ensure that these gaps were filled. Data taken from the concept notes were then entered into the RAN as the planned activities for the agencies, after which agencies were required to keep the data and progress updated.

The data collected by BRR from the concept notes also became a key input into the World Bank's tracking

methodology as it enabled the Bank to verify other sources of data and provided a basis to challenge contradictory data sets.

Use of the system's output varied depending on the type of organization. It also changed over time. The Government and donors appear to have found the system more useful than NGOs and United Nations agencies, primarily because the latter tend to be more focused (or restricted) on specialist areas. There was broad support for the data collection and reporting process within the bounds of understanding the limitations of the output. Agencies suggested that with BRR being under such immense pressure and with limited capacity, it was beneficial that the system was situated within the World Bank.

Box 5: Tracking financial flows after disasters - lessons learned

SYSTEM: Monitoring and Managing

- Lesson 1 - Real people need to track real organizations
- Lesson 2 - Cover all players: government, donors, and NGOs
- Lesson 3 - Manage the top players proactively

DEMAND: Defining Needs

- Lesson 4 - Measure damage and losses with care and professionalism
- Lesson 5 - Understand that damage and losses are fundamentally different to needs
- Lesson 6 - Analyze how much public funding is needed as a minimum to build back ("core minimum needs")

SUPPLY: Tracking the Money

- Lesson 7 - Define sectors and match them with damage and loss categories
- Lesson 8 - Separate pledges from commitments and disbursements
- Lesson 9 - Separate emergency funding from reconstruction (and development) projects
- Lesson 10 - Depending on the number of reconstruction players, either focus on the executing or funding agency to avoid double counting

Source: Fengler 2007

CONCLUSION

Post-tsunami Aceh has been one of the largest reconstruction projects ever seen in the developing world. As such, the reconstruction experience in Aceh offers a unique insight into delivering reconstruction aid and development in a post-disaster environment. The international response to the tsunami was unprecedented and billions of dollars flowed into reconstruction along with the largest number of actors ever witnessed. Traditionally cash-strapped NGOs found themselves with more money than ever before, creating a unique and challenging reconstruction environment. Despite the presence of nearly 500 participating actors on the ground, results were achieved in a remarkably short time.

Aid volatility

The experience of high volatility in the delivery of aid was avoided in Aceh. With an estimated US\$7.7 billion promised for reconstruction, 83 percent had been allocated to specific projects after three years. The delivery of aid as promised was supported by the Government's sound management of macroeconomic conditions, well-managed funding mechanisms, and clear evidence that those affected by the disaster were benefiting from the aid.

Many actors struggled to deliver on their promises due to the emergence of inflation, which caused high output volatility. Despite low volatility in aid delivery, volatility in aid outputs became an issue. The vast area affected by the devastation resulted in production and supply constraints. These constraints led to sharp increases in prices, giving rise to funding shortfalls by some agencies. Further complicating matters, community needs evolved over time, creating "moving goalposts" for implementing agencies.

Aid fragmentation

Despite the presence of nearly 500 agencies, the reconstruction landscape was only "moderately" concentrated. Whilst this may surprise many, the "moderate" concentration of the reconstruction landscape reflects the efforts to pool substantial funds by the Government and major donors. The failure of NGOs to pool their funds in a similar way undoubtedly hindered the potential to increase concentration, although the upside of this fragmentation was that more innovation and new approaches were made possible.

The creation of a single agency, in the form of the BRR, to coordinate the Government's response, together with the pooling of funds by donors into a Multi-Donor Fund, had direct and significantly positive effects on coordination. By concentrating funds into these two agencies, direct and indirect costs were mitigated, forums for open dialogue were created and waste was significantly reduced.

The creation of peak representative bodies greatly improved the coordination effort. Government ministries, donors and United Nations agencies were represented by the BRR, MDF and UNORC, respectively, which greatly eased communication and coordination. However, NGOs failed to assemble a single point of contact, opting instead to convene multiple functional working groups. This reluctance to join forces, share resources, or find efficient ways of working together meant that opportunities for synergies were lost there was duplication of agency bureaucracies.

Information management

Robust information systems are vital and should be in place from the start of the reconstruction process to ensure effective coordination. The systems need to have full support from all actors through continu-

ally updating information in order to enable efficient planning, coordination and monitoring. A vigorous and consistent methodology is necessary, from the initial assessment of damage and losses through to the establishment of community needs and the on-going tracking and monitoring of expenditures from reconstruction players.

A simple, largely manual financial tracking system worked best in the Aceh context. Albeit more labor-intensive, systems based on manual data collection, using a simple and clear methodology, and managed by a small and dedicated team of analysts, seem to be most effective at providing much needed output at low cost in a post-disaster environment.

The Government's use of a mandatory mechanism to track NGO project information was critical to the success of the overall reconstruction effort. The design and use of "concept notes" by the Government to track projects by non-government actors was a critical success factor in the reconstruction effort. This mandatory mechanism to capture project information from NGOs gave the Government full details of reconstruction projects, including the financial value of the projects, the planned outputs and the location of the activities. It also provided the baseline data to identify

gaps in meeting needs and enabled the Government and other agencies to allocate resources to meet those needs.

Effective transitioning

The early involvement of local government agencies in decision-making processes supports the effective transition into longer-term development.

This involvement is important in the preparation for the transfer of assets that will need to be staffed and maintained by local governments. However, given that Aceh's local administrations were newly formed and often distracted by local elections and issues relating to decentralization, they assumed only minor roles in decision-making process. Although the district Recovery Forums (KRFs) were a valiant attempt to encourage their involvement, they came too late to be fully effective.

The issue of transitioning from the reconstruction phase to the development phase requires further study.

The broader issue of the transition to longer-term development in Aceh needs to be well managed if it is to be successful. More work is required in this area to ensure that the challenges that the transition presents can be overcome smoothly and the economic sustainability of the province protected.

ANNEX

Interviewee list

The authors would like to express their thanks to the following people who gave time and insight during the research:

Government of Indonesia: Amin Subekti, Edi Purwanto, Bambang Sudiarmo (all from the Government of Indonesia's Agency for the Reconstruction and Rehabilitation of Aceh and Nias); Suprayoga Hadi (National Development Planning Agency); Rahman Lubis (Aceh Local Development Planning Agency); and Mawardi Nurdin (Wali Kota (Major) of Banda Aceh).

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Dercon (UN Habitat); Tom Morris (USAID); Bernadette Whitelum (AUSAID); Pieter Smidt (Asian Development Bank); Saroj Khan and Safriza Sofyan (Multi-Donor Fund); Hagar Ligtvoet (Netherlands Embassy); and John Penny (European Commission).

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ENDNOTES

1. Allocated funds are reported here at the executing agency level. Whilst there were good arguments from donors to report at the donor level to ensure transparency, the complexities of this prevented detailed analysis at the sector (and geographical) levels. Therefore, data was reported at the executing agency level where it was possible to identify sources of funds, and remove these from the donor amounts. The effect is to understate the donor figures, and overstate the NGO contributions. However, there is more certainty that the double counting of funds is minimised, therefore providing more reliable data.
2. It is noted that donors have tended to allocate funds towards longer term projects, such as infrastructure, which have taken longer to identify, and to implement.
3. During 1970s and 1980s, humanitarian aid accounted for less than 3 percent of all official development assistance. Since 1999, it has accounted for 10 percent (Minear & Smile, 2004).
4. The Nias islands off the west coast of Sumatra had been struck by a major earthquake on 28 March 2005.
5. This was made possible through the Paris Club debt moratorium.
6. Core minimum needs are defined as (i) full replacement of all public sector damage (as per the 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 recent price trends.
7. Whilst it is generally agreed that 130,000 houses are required, there is still some debate over the accuracy of this figure. Executing agencies and the Government tried to collate a full list of beneficiaries requiring new housing; however, there is some evidence of double counting when individual agencies' lists are combined. Therefore the true number of houses may indeed be less.
8. WFP provided logistic support by providing ship transportation from June 2005
9. The index is commonly measure of the size of firms (share of the firm) in relationship to the industry and an indicator of concentration among them. It is an economic concept which widely applied in competition law and antitrust. In this case, it is to measure the share of funding across reconstruction players. The closer the index is to 1, the more concentrated the "market" is. An index below 0.1 indicates an unconcentrated, fragmented market; an index between 0.1 to 0.18 indicates moderate concentration whilst index above 0.18 indicates high concentration.
10. Which may exclude government contributions, and therefore not strictly comparable to the Aceh index
11. The concept notes contained detailed information about the projects, such as the financial value of the projects, outputs and locations of the activities.
12. Previously composed of nine Deputies and one Secretariat, the agency scaled down its operations in May 2008 to consist of four Deputies and one Secretariat (Scaling Down of the BRR NAD-Nias Structural Organization, BRR 12 May 2008)
13. Estimates from interviews with Bappeda staff.
14. There are 3 master plan of Aceh Jaya provided by various reconstruction's actor, due to lack of coordination between agencies, whilst the head of districts tended to receive any assistance provided.
15. On average, a university lecturer may triple his salary by working as a consultant for international agencies.
16. NGO steering committee meeting, 2007
17. One example of this was the number of new houses needed. In 2005, the Master Plan stated

- that 80,000 houses were required; by 2008, the number of new houses required was determined to be 130,000 then 139,000. Given its limited time mandate, BRR excluded several major projects which were detailed in the Master Plan, including the development an energy plant, and the building a railway.
18. The RAN database is an adaptation of the UNDP supported Development Assistance Database (DAD), designed to provide transparency around funding flows from donor agencies. The RAN was further developed to also capture and report on project output data.
 19. Which included Ambassadors, Agency Heads, Central and Local Government, Local NGOs and civil society organizations
 20. Several working group such as livelihood, housing in Aceh Barat are proven to be a good instrument on field coordination.
 21. KDP (Kecamatan Development Program) is one of The World Bank project, which has been used by BRR as the vehicle for their reconstruction project, especially for infrastructure using the community development driven.
 22. The 15 donors of the MDF are the European Commission, the Netherlands, the United Kingdom, World Bank, Sweden, Denmark, Norway, Germany, Canada, Belgium, Finland, Asian Development Bank, United States of America, New Zealand and Ireland.
 23. The core minimum needs are defined as (i) full replacement of all public sector damage (based on damage and loss assessment), (ii) financing of private sector needs such as housing, agriculture, fishing up to the limit set by Master Plan (iii) partial financing of environmental damage, which can only be addressed to a very limited degree by external interventions (iv) inflation adjustment given the recent price trends.
 24. In December 2007, there were 6 hospitals and 613 health centers have been built of 8 and 614 hospitals destroyed, and large number of high-tech medical devices have been supplied, as well as number of trainings have been conducted for paramedics.
 25. The main challenge in the transportation sector is land property rights, especially on the west coast (Aceh Road Information, USAID, 2007).
 26. Cash for work in general have been promoted as an improvement over food aid, (Oxfam, 2005). Several agencies have been led this activities, such as UNDP, Oxfam, Mercy Corps and IFRC.
 27. In fact, many of the boats that have been distributed are very low quality or inappropriate design. An estimated 40 percent of the small boats are expected to be unusable within 12-18 months (Aceh - Nias, One Year After Tsunami, BRR and International Partner, 2005)
 28. Since January 2005, at least 15 agencies posted regular situation reports, updates, briefing notes and bulletin on various website, the majority of which were United Nations bodies, Goyet & Morinière (2006).
 29. <http://ochaonline.un.org/AboutOCHA/tabid/1076/Default.aspx>
 30. The CGI was an international group of lenders first established by the Netherlands in 1967 as the Inter-Governmental Group on Indonesia (IGGI) to coordinate multilateral aid to Indonesia. It became the Consultative Group on Indonesia (CGI) in 1992, and was disbanded in 2006. Members included the Asian Development Bank, International Monetary Fund, United Nations Development Programme, World Bank, Australia, Belgium, Britain, Canada, France, Germany, Italy, Japan, Netherlands, New Zealand, Switzerland, and the United States.



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