Disaster, Generosity and Recovery: Indian Ocean Tsunami

Prema-chandra Athukorala

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Arndt-Corden Department of Economics
Crawford School of Public Policy
ANU College of Asia and the Pacific
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Prema-chandra Athukorala
Arndt-Corden Department of Economics
Crawford School of Public Policy
The College of Asia and the Pacific

Corresponding Address:
Prema-chandra Athukorala
Arndt-Corden Department of Economics
Crawford School of Public Policy
The College of Asia and the Pacific
The Australian National University
Coombs Building 9
Canberra ACT 0200

Email: Prema-chandra.Athukorala@anu.edu.au

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Prema-chandra Athukorala
Arndt-Corden Department of Economics
Crawford School of Public Policy
College of Asia and the Pacific
Australian National University
Canberra
ACT 0200
Australia
Tel. 61 2 6125 8259
Fax. 61 2 6125 3700
Prema-chandra.athukorala@anu.edu.au

Abstract
This paper is an exploratory investigation into the nature and effectiveness of international humanitarian aid effort after the Indian Ocean tsunami disaster. Relief assistance poured in quickly and copiously, and helped avert ‘second mortality’ from exposure and starvation in the tsunami-affected countries. Foreign aid also provided a vital leeway in the reconstruction phase, but limited aid absorptive capacity of the recipient countries and excessive competition among aid organizations (mostly NGOs) hindered effective aid utilization. The findings make a strong case for designing policies and programs for dealing with disasters as an integral part of national development strategies and highlight the need for combining international aid commitments with solutions to the limited aid absorptive capacity of disaster-affected countries.

Key words: tsunami, natural disasters, foreign aid

JEL codes: F35, O35, Q54

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1. Introduction

The occurrence of natural disasters is beyond the control of mankind, but its impact on a given country is determined by economic forces and societal factors. There is no evidence that developing countries are more exposed to natural hazards, yet fatalities and the direct economic damage caused by natural disasters are significantly higher in these countries compared with developed countries (Kahn 2005, Cavallo and Noy 2010, Sachs 2005). In addition to fatalities and direct economic damage, occurrence of disasters hinders the process of growth and development. The international donor community has, therefore, begun to place emphasis on disaster management\(^1\) as an integral part of the international development effort (Clinton 2006, UN 2009). Notwithstanding this policy emphasis, the evolving understanding of the issues and challenges involved in timely and efficient delivery of disaster aid is still in its infancy. Documented case studies and lessons to be learned from previous disaster situations are still scarce for guiding possible best practices. This paper aims to fill this gap by examining the role of international humanitarian aid in the recovery and reconstruction process in countries affected by the Indian Ocean tsunami of 26 December 2004.

The Indian Ocean tsunami provides a valuable case study of disaster management issues in the new millennium. With a death toll of 227 thousand and 1.8 million displaced people spread over a dozen countries, it is by far the worst natural disaster of its kind in recorded human history. In financial terms, the humanitarian aid mobilization (over US$ 14 billion) was the largest ever international response to a natural disaster on record. The number of donor countries and the number of humanitarian organizations involved were also far greater than in any previous natural disaster. The massive tsunami

\(^1\) The term disaster management is used here to refer to the entire process of relief and reconstruction following the occurrence of a disaster, and measures to mitigate disaster risks and building coping capabilities.
aid flows have drawn attention to a number of new issues facing international aid operations including avoiding duplication of tasks, setting up of procedures for translating aid pledges into actual aid flows, and finding ways and means of avoiding untoward effects of massive aid inflows in an unplanned fashion to the affected countries. The unprecedented preference shown by individual donors to informal private channels (mostly non-governmental organization (NGOs)) has thrown into sharper relief the diminishing public confidence in aid organizations and receiving-country governments. Significant involvement of NGOs in aid delivery, and, in particular, NGOs participation in reconstruction activities going beyond their traditional domain of disaster relief, raised new issues relating to the coordination of their activities with those of the ‘official’ (governmental) aid organizations, and matching actual needs of the disaster victims with NGOs’ attempts to please their stake-holders.

There is now a sizeable body of literature consisting mostly of project reports and performance assessments conducted by numerous donor agencies, and also an increasing number of multi-disciplinary scholarly publications on the post-tsunami emergency relief and reconstruction process. In this paper, we attempt to piece together from this literature material pertaining to the international humanitarian effort and analyse it from a comparative perspective in the context of the wider literature on humanitarian aid. The prime focus of the paper is on the experiences of Indonesia (Aceh province) and Sri Lanka, the two countries most severely affected by the disaster and hence where the international humanitarian effort was heavily concentrated.

The remainder of the paper is arranged as follows. Section 2 provides an overview of the tsunami disaster – the nature and extent of the calamity – in order to set the scene for the ensuing discussion. Section 3 examines the international donor response from a comparative perspective, focusing on the size, donor-country and the recipient distribution of aid flows; relative importance of governmental and non-governmental donors and the drivers of aid flows. It also aims to shed light on the possibility of humanitarian aid crowding out normal development aid. Section 4 examines the process of aid delivery and its effectiveness, focusing in turn on its role in the relief and
reconstruction phases of the recovery process. It also contains a comparative analysis of aid absorption experiences in Sri Lanka and Aceh, Indonesia. The final section summarizes the key findings and draws policy lessons.

2. The Indian Ocean Tsunami disaster: An Overview

The earthquake (measuring 9.0 on the Richter scale) occurred on 26 December 2004 about 30 km off the west coast of Sumatra, Indonesia was the fifth largest earthquake for a century and the largest since the one in Prince William Sound in Alaska in 1964 (9.2 on the Richter scale) (Lay et al. 2005). It ruptured about 1300 km of the fault boundary between the Indo-Australian Plate under the southeastern Eurasian plate, lifting the seabed by as much as by 5 meters. The fault line of the earthquake was in a north-south orientation and hence the strength of the long-distance tsunami that split after the rupture was in east-west direction, sending energy pulses towards the Sumatra coast and across the open seas in the Bay of Bengal at a speed up to 800 km an hour. The long-distance tsunami widened its arc as it continued west, affecting coastal areas of Thailand, Malaysia, Myanmar, India’s Andaman Island and Nicobar islands and Tamil Nadu state, Sri Lanka, Maldives, and with much less rigor some parts of the coastal areas of Somalia and Kenya.

The Aceh province, the land mass closest to the epicenter of the earthquake, bore the full brunt. About 15 minutes after its eruption, tsunami hit the west coast of Aceh (particularly the two coastal cities of Banda Aceh and Meulaboh), and Nias and Simeulue islands.\(^2\) In some places, waves went inland approximately 7.5 km from the coastline. Sri Lanka was the next worst affected because there was no other landmass between it and the epicenter. Over 2260 km of coastline in the east and north of Sri Lanka was hit by the waves. In many areas, the walls of water were up to 10 meters high when they lashed against the shoreline. In some areas waves did not exactly break, but rather continued inland as a fast stream of high water up to 5 km from the coast. However, the tsunami

\(^2\) On 28 March 2005 another earthquake (8.7 on the Richter scale) devastated the Nias Island
waves missed the capital city, the major urban areas and important industrial assets. Port of Colombo and its infrastructure was not affected, apart from some minor damages to a few container ships.

The affected countries were entirely unprepared for the disaster. The Pacific Tsunami Monitoring Centre (PTMC) in Honolulu, Hawaii issued a communiqué indicated the possibility of a tsunami affecting countries in the Indian Ocean 65 minutes later. This information was, however, not communicated to the countries in the Indian Ocean region, as the PTMC officials did not have required contacts in their address book. Moreover, unlike in the Pacific Ocean, tsunami has been a very rare occurrence in the Indian Ocean and historically tsunami-related calamities had been of minor importance compared to other natural disasters (Abbott, 2011, Ch. 3; Albala-Bertrand 1993, Ch. 2). In many coastal towns and tourists resorts in Sri Lanka, Aceh, India and Thailand, many people were reported to have watched the prior receding of the sea with curiosity or took the opportunity to collect stranded fish and thus easily succumbed to the waves.

The total official death toll of the disaster (including unaccounted people) was over 226 thousand, with the Aceh province of Indonesia accounting for over 70% of the total (165 thousand) (Table 1). Over 2.4 million people were displaced, with Sri Lanka accounting for over 45% (1.02 million) of that number. In terms of the death toll and the number of displaced people, this was the worst natural disaster in recorded history in Indonesia, Sri Lanka and Thailand. The total economic cost of damage was estimated at US$ 9.4 billion. In Aceh the cost of damage (US$4.5billion), was almost equal to its GDP in the previous year.

Table 1 about here

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3 Even if the information were made available, it would not have made a big difference because these countries had no effective civil defence mechanism for getting the information to the people and organising rescue operations.
The devastation caused by the tsunami revealed a close connection between the magnitude of the damage caused by the killer waves and long-standing failures in coastal resource management. There is evidence that the sheer number of losses of human lives was partly a result of modern progress, ruthless destruction of natural defenses such as coral forests and mangrove swamps, and building oceanfront hotels and villas in violation of coastal conservation legislation. For instance, the impact of the tsunami was less severe in areas along the west and east coast of Aceh, where the coastal ecosystem remained in relatively good shape. Also the death toll in the island of Simeuleu in Indonesia was relatively low, partly due to mangrove forests that surrounded the island (Athukorala and Resusudarmo 2006). Uprooting or snapping off at mid-trunk of mangroves caused extensive property damage in Thailand (Nidhiprabah 2007). In India, in tsunami-affected Pichvaran in Tamil Nadu, the hamlets within the physical cover of the mangrove forests were largely protected, and there were no tsunami associated deaths at all (Kesavan and Swaminathan 2006). In Sri Lanka the damage was much severe in some coastal areas where there had been gross violation of regulations prohibiting mining coral reefs and destroying coastal mangrove forests, which act as splendid bulwarks against the wrath of the sea (Clark 2005).

3. International donor response

The international donor commitment to the tsunami was the largest humanitarian response to a natural disaster on record. According to the records maintained by Tsunami Evaluation Coalition a total of over US$ 14 billion was pledged by the international community (Table 2). This was more than seven times the amount of emergency aid provided to all recorded natural disasters during the 1992-2004 period (US$1.91 billion) (Fink and Redaell 2008, fn 16). When the total official aid pledges are related to an

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4 TEC is a multinational learning and accountability initiative established in February 2005 in the wake of the India Ocean tsunami. Its membership included all member countries of the Development Assistance Committee (DAC), some other major donor countries (including China), all UN donor agencies and multilateral banks, European Commission, Swedish International Development Agency (SIDA) and major international NGOs (including the Red Cross and Red Crescent movement).
estimated number of around 2.4 million people directly affected by the disaster (Table 1), per head aid contribution turns out to be over US$ 5700. The norm in previous international fund raising attempts for natural disasters was a mere US$40 per affected person (Economist 2005).

Table 2 about here

Table 3 about here

It is important to note that the TEC figure of US$14 million relates to validated contributions which could be traced back to their original sources. It does not include funds contributed by small donor countries and NGOs not covered by TEC funding studies and donations directly made by foreigners and nationals of affected countries living overseas (migrant workers and members of the Diaspora). In addition to direct aid pledges, the Paris Club of creditor nations declared at its January 12 meeting in Paris a moratorium on the foreign debt of the tsunami hit countries. The IMF and World Bank officially endorsed the moratorium and the major international credit rating agencies declared that they would not take into account deferral of debt service payments as a negative factor in their risk assessment and credit rating. Subsequently, the IMF and the World Bank also announced considerable debt relief for the affected countries, in particular for the Maldives, Sri Lanka and Indonesia.

An unprecedented number of countries (99, according to TEC records) contributed to tsunami funds. Over half of government pledges came from five countries: the USA, Australia, Germany, the European Commission (EU) and Japan (Flint and Goyder 2006). Three-quarters of the funding committed was for the four worst affected countries, Indonesia, Sri Lanka, India and Maldives (Table 3). The governments of India and Thailand turned down financial support from foreign governments. Therefore fund

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5 Fernando and Hilhorst (2006) contains interesting vignettes of some Dutch volunteers who had visited Sri Lanka before as tourists played an active role in disaster relief there using funds raised in their home country.
flows to India were limited only to soft loans from multilateral donors, while those to
Thailand were predominantly from international NGOs. In Indonesia and Sri Lanka, aid
commitments exceeded initially estimated economic loss (compare data in Table 1 and
3). In Maldives, commitments fell short of estimated losses by nearly $100 million. This
gap was subsequently filled by UNDP through an innovative fund-raising initiative
(‘adopt-an-island’) under which donor support was harnessed to directly finance specific
projects (ADB 2009).

A striking feature of the composition of tsunami aid pledges compared to those of
the previous crisis is the large share of private contributions. Of the total aid pledges,
over 40% came from private donations (Table 2), compared to a mere 10% share of
humanitarian aid to natural disasters during the period 1995-2004 (Stromberg 2007, p
212). Interestingly, total private donations (US$5.5 billion) exceeded the total pledges by
the member countries of the Development Assistance Committee (DAC) of OECD, a
reflection of ‘the altruistic activism’ in the developed world that has been gathering
momentum over the past few decades (Bhagwati 2004, p. 38). In some donor countries
such as the UK, USA, Germany, Canada, Netherlands and Italy private donations
exceeded the government contributions by a wider margin (Inderfurth et al 2005, Flint
and Goyder 2006). In Japan the bulk of private contributions came from corporations
whereas in all other countries the general public provided the vast majority of donations.
The majority of private donations went to NGOs (89%) with the balance going to the UN
organizations (mainly to UNICEF). According to TEC studies, some donors increased
their funding to the UN organizations only because NGOs were not able to accept their
offers (Flint and Goyder 2006, p. 53). This reflects waning confidence of the general
public in the conventional role of the UN system in coordinating international
humanitarian response to crises.

How do we explain this unprecedented humanitarian response? In answering this
question, it is important to distinguish between private and official donations. Private
donations are probably driven predominantly on humanitarian motive (human sympathy),
whereas economic or geopolitical interest (political and strategic factors) are perhaps
more important in determining official donations. Factors such as geographic distance and common colonial past may affect both types of donations, in line with general aid flows. When a disaster come under the media spotlight, ‘band wagon’ effect (trying to follow and match others) can also become a powerful force driving aid flows of both types (Stromberg 2007, Fink and Redaell 2010)

The ‘outburst of human sympathy’ (Sen 2005) to the tsunami disaster is commonly considered a reflection of the ‘news effect’. There is, indeed, evidence that the news effect biases relief towards disasters that are more news worthy and that ‘earth quakes [and tsunami] and volcanoes are more often covered by the news than equally severe disasters of other types’ (Eisencee and Stromberg 2007). There are also a number of specific factors which brought the Indian Ocean tsunami under the media spot light: the magnitude of the distance and its unprecedented geographic spread from Southeast Asia to South Asia and even to East Asia, the number of Western tourists killed\(^6\), and screening of dramatic video footage of the disaster. In addition to the media effect, the timing of the disaster, its occurrence just after the Christmas, and the death of a large number of tourists also directly contributed to donors’ sympathy. The wide-ranging funding initiatives triggered by these factors soon became media stories themselves, creating a bandwagon effect on the humanitarian aid campaign (Flint and Goyder 2006, p. 13). All in all, the massive humanitarian response to the tsunami disaster is consistent with the view that international relief effort favors high-profile disasters (Stromberg 2007).

There is evidence to suggest that geopolitical considerations played some role in determining official (bilateral) aid to tsunami affected countries. Colin Powell, the then

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\(^6\) The tsunami disaster occurred at a time when the tourist season was at its peak in that part of the world. The number of tourists succumbed to the killer waves was 3322 in Thailand (Nidhiprabha 2007) and over 900 in Sri Lanka (Athukoral and Resudarmo 2006).
U.S. Secretary of State stated that the U.S. relief effort was to rebuild America’s national image, particularly in Indonesia, the world’s most populous Muslim country, whose people overwhelmingly opposed the invasion of Iraq (Zhang. 2005, p. 28). There was a significant military dimension to the US relief effort: by 28 December, the US had diverted substantial military forces to the tsunami-affected region, with the bulk of its relief effort being focused on Aceh. This move helped strengthen links between the US and the Indonesian armed forces, which had been stymied since the late 1990s because of US congressional human rights concerns (Huxley 2006, 125-126). Among all bilateral donors, China was the single largest contributor to tsunami aid to Sri Lanka (US$318 million, amounting to a quarter of total bilateral aid) (Jayasuriya and McCawley 2010, Table 3.2), reflecting close economic and political links between the two countries under the current political leadership in Sri Lanka.

Australia contributed US$1.1 billion to Indonesian recovery effort, by far the single largest bilateral contribution made by any donor country to a tsunami-affected country. This was seemingly a significant foreign policy step by Australia aimed at strengthening relationship with the largest and geopolitically most important Asian neighbor (Sukma 2006). The bandwagon factor seems to have played a role in determining official aid as well. Pledges by most countries occurred in an incremental sequence (rather than in the form of lump-sum commitments) as the humanitarian response gathered momentum in the wake of the tsunami (Inderfurth 2005, Zhang 2006).

To what extent was the tsunami aid a real addition to the aid flows which the donor countries would have provided to the Tsunami affected countries in the normal course of event? In other words, has there been a ‘crowding out’ effect of humanitarian aid on development aid? This is a relevant concern for understanding the developmental impact of the massive tsunami aid on the affected countries (Jayasuriya and McCawley 2010). To shed light on this issue, data on disbursement of humanitarian assistance and

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7 For instance, donations pledges by US increased from US$15 million to US$35 million, and finally to US$ 350 million (Zhang 2006, p. 29)
developmental aid by the member countries of the Development Assistance Committee (DAC) to Indonesia and Sri Lanka over the period 2000-2010 are plotted in Figure 1. Humanitarian aid flows to both countries surged following the tsunami disaster, and during the ensuing five year remained well above the average level during the preceding five years. Interestingly, the relative behaviour of the humanitarian assistance and official development aid series is not consistent with the crowding out hypothesis: the two series have behaved independently of each other.

Figure 1 about here

Based on interviews conducted with officials of the Canadian International Development Agency (CIDA), Hyndman (2008) argues that tsunami disaster, in fact, would have had some ‘crowding in’ effect on official development aid to Sri Lanka and Indonesia. The disaster occurred at a time when CIDA had decided to shift the emphasis of its aid policy from Asia and towards Africa and accordingly drop Sri Lanka and Indonesia from its priority of twenty-five ‘development partners, the focal point of its bilateral aid program for the next five years. This decision was reversed following the tsunami.

4. Aid Effectiveness

In this section we examine the role of foreign aid in the recovery from the tsunami disaster, focusing separately on rescue and reconstruction (recuperation) phases in the recovery process. The relief phase involves meeting the prime needs of shelter, food and clothing, sanitary facilities and medical aid. The reconstruction phase is when measures are taken to restore the economic viability of the affected area. It is important to distinguish between the two phases because patterns of spending and institutional factors impacting on aid absorption tend to differ.
Disaster relief
In Thailand, Sri Lanka and India, international support (rescue, relief and medical personnel) started arriving within a day. In Aceh it took about three days because of the delay in news about the calamity to filter out into the western media. It is a remote province in Indonesia which is barely known to international tourists. Moreover, the conflict between the Free Aceh Movement and the Indonesian government (see below) had impeded the dissemination of information on Aceh not only to the rest of the world but also to other parts of Indonesia.

Relief efforts in all tsunami-hit countries encountered some problems, which were largely unavoidable given the scale of the disaster and the large number of actors/organizations involved. The lack of coordination between the local health administration and various non-governmental organizations and also the failure of the national governments to compile and disseminate information resulted in duplication of services (Yamada et al 2006, Lee 2005). Foreign medical personnel encountered linguistic and cultural barriers because local resources were not readily available to bridge the cultural and linguistic gaps. As a result, some survivors received multiple immunizations and medications from different visitors. Some received unnecessary vaccinations for cholera or anti-malarial prophylaxes. As some observers have argued, the continuation of relief aid delivery for too long would have impeded a swift transition to the recovery phase (Reigner et al 2008, Thevenaz and Resodihardjo 2010).

Notwithstanding these shortcomings, the post-tsunami emergence relief effort is widely considered a remarkable success compared to other major natural disasters (eg. Clinton 2006, Flint and Goyder 2006, Thevenaz and Resodihardjo 2010, Jayasuriya and McCawley 2009). At the beginning, there was fear of ‘second mortality’ from exposure to communicable disease and starvation. This fear never materialized. No outbreaks of epidemics or unusual cluster of communicable diseases has been reported, other than a few sporadic cases of diarrhea and acute respiratory infections. In a comparative study of disaster relief experiences following major natural disasters in recent years, Thevenaz and
Resodihardjo (2010, p. 8) conclude that emergency response was better handled in the wake of the Indian Ocean tsunami than after hurricane Katrina in the USA.

What explain the success? Pouring in relief aid so quickly and copiously certainly played a pivotal role. Also, given the scale of the disaster, human solidarity rooted in common concern for the victims overwhelmed conflicting political interests and other issues which, as we will see below, impeded effectiveness of aid delivery in the reconstruction phase. It is a common experience in the immediate aftermath of massive disasters that economic rationality plays a secondary role and cooperative behaviour helps rescue and relief activities (Hirshleifer 1993).

In Sri Lanka, where the relief operations was most successful among the Tsunami hit countries, past investment in public health and education paid off in this disaster. The broad-based public health system and community awareness of basic sanitary and hygienic practices ensured that there was no disease outbreak (Yamada et al 2006, Jayasuriya and McCawley 2010).

**Reconstruction**

The sole focus of this sub-section is on the reconstruction experiences in Aceh and Sri Lanka where the international aid effort was primarily concentrated. In India, Thailand and Malaysia reconstruction activities were almost completely undertaken by the national governments and local civil society organizations. International donors did play a significant role in the reconstruction process in Maldives (ADB 2009, Fritz et al 2006), but there is little information about their operations.

In the immediate aftermath of the disaster, massive aid commitments fueled much optimism in Indonesia and Sri Lanka about the reconstruction outcome. ‘Building back better’ turned out to be the motto of both the recipient governments and the donors. However, the task of disaster management became increasingly complex when it moved beyond the relief phase. As the novelty of the disaster and the humanitarian spirit
dissipated perennial issues of aid absorption begun to surface. The broader picture emerging from various project performance reports and independent assessments is that the overall reconstruction outcome has been neither as effective nor as efficient as it should have been, given the massive aid flows (eg. ADB 2009, UN 2009, Henderson and Lee 2011, Jayasuriya and McCawley 2009, Reigner et al 2008). Various shortcomings alluded to in these studies include failure to keep up with original initial time schedules, duplication of tasks, mismatch of aid delivery with the actual need of the recipients, poor quality of newly constructed houses, and failure to engage local communities in the reconstruction process. A comprehensive analysis of the effectiveness of the international aid effort to identify the underlying causes of these problems is yet to be undertaken. In order to facilitate future research, some conjectural inferences from the preliminary studies undertaken so far are summarized below.

**Coordination challenge**

The arrival of a large number of international aid organizations with massive aid funds posed a massive coordination challenge for national governments at all levels. Arranging an acceptable level of liaison between the newly arrived international donors, on the one hand, and numerous national relief agencies on the other turned out to be well beyond the capacity of the institutional capabilities of these countries. The fact that many new assistance providers had little knowledge of the context in which they are operating imposed further strains on local administrative systems. Conflict of interest among various donor agencies, and the lack of coordination among official donors (multilateral agencies and aid administration institutes of donor governments) themselves and with international NGOs, compounded the coordination challenge faced by the national governments. To make matters worse, most NGOs, which had operational flexibility with ample access to funds, had few incentives to coordinate their activities with local governments or other organizations, preferring to pursue their own agenda. Some NGOs, given their natural preference to operate outside the formal apparatus of the state, were openly hostile to government action that seemed to place ‘controls’ on their independence (Telford and Cosgrave 2006).
Institutional and procedural bottlenecks

The ‘On budget’ modality, that is, channeling funds through the reconstruction program implemented by the recipient government through formal budgetary procedures, was the preferred means of aid delivery of the official donors. This invariably resulted in substantial delays in funding projects due to administrative bottlenecks involved in generating counterpart (matching) funds by the government, and using public sector procurement procedures for contracting civil works, goods and services. Some international donors subsequently turned to alternative ‘off-budget’ modes of aid delivery, such as contracting construction work to private companies (both local and foreign) and NGOs, funding community-based housing programs, and, in some cases undertaking construction work by themselves (Henderson and Lee 2011, Steinberg 2007, ADB 2009). However, the ‘on-budget’ channel continued to account for the delivery of the bulk of reconstruction aid by official donors: over 70% in Indonesia (MDF 2009) and over 80% in Sri Lanka (Jayasuriya and McCawley 2010).

Excessive competition among NGOs

A large number of international NGOs (around 250 in Sri Lanka; over 300 in Aceh in Indonesia) were involved in aid delivery. Their operations were not directly subject to the institutional bottlenecks associated with the on-budget mode of aid operation, as they operated outside the formal apparatus of the state. However, this apparent operational flexibility had other untoward consequences (Fernando and Hilhorst 2008, Hilhorst and Janson 2010, Hollenbach and Ruwanpura 2010, Stirrat 2006)). The ‘turf war’ among international NGO driven by their attempt to build their international image and to please their donors often undermined the quality of aid delivery. There were many complains of their penchant for ‘visible projects’ at the expense of using aid funds to meet the actual needs of the tsunami victims.

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8 Providing housing assistance to organized community groups of individual beneficiary households, who themselves will contract labour, purchase construction material and supervise civil work (Steinberg 2007).
Proliferation of international NGOs also created a boom in employment opportunities with these agencies. Consequently local NGOs soon faced a human resource crisis as their employees moved to take-up these more lucrative job opportunities. This presumably retarded national emergency response capabilities and community participation in reconstruction activities (Harris 2006). In Aceh, intense competition among NGOs pushed up prices of building material and labour (Chang et al 2011).

Multiple objectives
Assistance programs of donor agencies entailed a number of cross-cutting objectives other than immediate reconstruction priorities. These included redressing gender imbalance, paying attention to attention to children and aged persons, community participation, environmental concerns, and the sustainability of economic activities in the affected areas beyond recovery. Some donors urged that reconstruction should not be aimed just towards immediate recovery, but towards making the affected societies socio-economically stronger and more resilient to future risk. Incorporation of these multiple objectives into program required additional time and placed burden on limited local expertise in these specific areas.

Sri Lanka versus Aceh, Indonesia
The problems discussed above were common to both Aceh and Sri Lanka. However, various performance reviews and independent studies give the general impression that Aceh has done better than Sri Lanka in the reconstruction phase. The recovery and reconstruction programs in Aceh had been fully implemented by mid-2010, fully utilizing aid pledges without imposing any extra burden on the national budget. The quality of reconstruction is also considered to be generally consistent with the ‘build back better’ norm (ADB 2009). In Sri Lanka, the funds initially committed by the donors were more than adequate to meet the entire reconstruction cost. However, within about three years shortages of funds begun to be a constraint on the implementation of reconstruction programs (Japasuriya and McCawley 2010, Chapter 5). Reconstruction of houses was basically completed by the end of 2008, but restoration of most of the damaged
infrastructure (railway lines and main bridges) has not gone beyond the initial preliminary repair stage. According to survey-based studies, there is widespread dissatisfaction among the tsunami-affected people in Sri Lanka about the way the aid funds were utilized by the government (Lyons 2009, de Silva 2009, Samaratunga et al 2011).

This contrast between Aceh and Sri Lanka deserves attention particularly because, with hindsight, one would have expected Sri Lanka to perform better. Both the death toll and damage to physical-asset proportionate to the economy was much larger in Aceh (Section 2). Unlike in Sri Lanka, the Tsunami changed much of the physical landscape in some parts of Aceh, virtually destroying the entire administrative infrastructure. Moreover, given its remote locations, Aceh had to face considerable logistical problems in the reconstruction process. In Sri Lanka, trade and procurement links between the tsunami-affected areas and the rest of the country were swiftly restored within a short time after the disaster.

The tsunami disaster occurred both in Aceh and Sri Lanka against the backdrop of brutal civil conflicts that had persisted for over three decades and the negotiation process to end it though political means was under severe stress. In Aceh, the local Free Aceh Movement (GAM) had mounted a worrisome challenge to national security within the province. Significant presence of the Indonesian army in the province in response to the GAM challenge had fueled local resentment. In Sri Lanka Liberation Tigers of Tamil Elam (LTTE) had severely tested the authority of the central government and security issues concerning the LTTE had become an overriding concern for the national government. Fortunately in Aceh the tsunami devastation set the stage for resolving the civil conflict (Beardsley and McQuinn (2009). In August 2005, the Free Aceh Movement (GAM) and the Indonesia government signed the Helsinki Peace Accord. Restoring peace greatly helped smooth implementation of the reconstruction program. In Sri Lanka, there were hopes among policy/political circles in the wake of the disaster that it would present an opportunity for cooperation between the government and the LTTE. This was particularly so because much of the devastation took place in the Eastern
province, the power base of the LTTE. The tsunami destroyed the bulk of assets and personnel of the LTTE naval force (The Sea Tigers) and, in relative terms, the overall death toll and economic destruction was much larger in the LTTE-dominated east, compared to the rest of the country. However, these hopes were soon dashed as the government and the international aid community failed to draw up a conflict-sensitive disaster management strategy involving the LTTE as an equal partner. Consequently, disaster management in Sri Lanka, unlike in Aceh, involved a complicated political dimensions.

The post-tsunami recovery was intensely politicized in a context of the unresolved ethnic conflict and an incomplete, stalled peace process (Uyangoda 2005, Brun and Lund 2008, de Silva 2008, Hilhorst and Janson 2010). LTTE took efforts to control the provision of aid by denying NGOs access to the affected regions in the North and East provinces. It ordered all aid relief agencies to channel relief through its aid body, the Tamils Rehabilitation Organization (TRO). The government’s attempts to control tsunami aid going to the areas under control of LTTE strained its relations with some aid agencies (mostly NGOs) operating in those areas. Thus, the continuing ethnic conflict certainly hindered Sri Lanka’s capacity to effectively absorb humanitarian aid in the reconstruction process. But this was not the only explanation for the Aceh-Sri Lanka contrast in reconstruction experience. Perhaps the main explanation seems to lie in difference in the underlying institutional framework.

In April 2005 the Indonesian government created a new body, the Aceh-Nias Rehabilitation and reconstruction Agency (BadanRekonstruksi and Rehabilitasi, BRR) to manage the disaster. With a four year mandate for managing and coordinating the reconstruction effort in the province, and located in Banda Aceh (not in Jakarta), BRR was able to coordinate activities of various aid organization without being influenced by potential inter-ministry politics, while responding and adapting to the evolving local conditions. A former minister with a reputation for toughness and honesty (Kuntoro Mangkusubroto) was appointed as the director of BRR. He was given cabinet rank and a free hand in hiring staff and setting salaries. The creation of BRR helped keep
disagreement between the central government and local government in Aceh to a minimum when making decisions about recovery and reconstruction (Sen and Steer 2005).

BRR set up a ‘one-stop shop’ for processing all visas, customs, tax and other clearance requirements for the aid workers and importation of construction material. It also set up a comprehensive information management system, the Recovery Aceh-Nias database (RAND) in order to ensure access to information on the utilization of tsunami funds for all agencies involved in reconstruction projects. All agencies involved in tsunami recovery were required to register with BRR, and send regular updates on the funds committed and disbursed to be incorporated in RAND. To complement RAND, a survey-based housing geopolitical database was created to provide timely information on the progress in housing construction (ADB 2009). An anti-corruption unit was set up in BRR to work closely with the other government organizations, international organizations, and Transparency International (BRR). This institutional structure, which ensured swift decision making and maintaining transparency of operation, enabled BRR to effectively coordinate its activities with the donors via the Global Consortium for Tsunami Recovery, the Multi Donor Fund, and the UN Office of the Recovery Coordination for Aceh and Nias.

In Sri Lanka, three taskforces were set up immediately after the tsunami struck: the Task Force for Rebuilding the Nation (TAFREN), the Task Force for Relief (TEFOR) and the taskforce for Logistics and Law and Order (TAFLOL). Of these TAFREN became the lead agency charged with the task of overseeing the recovery and reconstruction phase. It was dominated by private sector representatives, and lacked links to line ministries and a clear line of authority. This resulted in considerable delays in reconstruction activities. In November 2005, the government amalgamated the three task forces into a Reconstruction and Development Agency (RADA) by an Act of Parliament and placed it under the purview of a newly created Ministry of Reconstruction and Rehabilitation. Unlike TAFREN, RADA had authority over organization of tsunami reconstruction and development, monitoring their activities and issuing licenses to carry
out specific activities. However vesting of such wide power in a single centralized body under the existing ‘command and control’ mode of governance created serious problems for the smooth implementation of reconstruction activities. RADA could ignore inputs from line ministries and local-agents, making the reconstruction process centrally driven. Therefore, in the highly politicized system of governance in the country, politicians could directly assert control over the allocation of foreign aid, resulting in highly-publicized malpractices in the utilization of tsunami aid. In the absence of institutional procedures for information dissemination and ensuring transparency of operation, RAND, unlike BRR, failed to effectively coordinate activities of international organization involved in aid delivery (Jayasuriya and McCawley 2010, pp. 152-53, Korf et al 2010, samaratunga et al 2010).

Speedy absorption of foreign aid for reconstruction in Sri Lanka was also seriously hampered by an ill-conceived ‘buffer zone’ legislation promulgated by the government in January 2005 as a safety measure against future tsunami (Hyndman 2008, Boano 2009)). This legislation prohibited rebuilding activities within 100-meaters from the sea in the Southern province, and within 200 meters in the Eastern province where tsunami-related devastation and damage proved greatest. The legislation was enacted without combining it with a plan for the resettlement of displaced people. Given high density of population and scarcity of land in the affected areas, the failure to come up with a resettlement plan made the proposal highly contentious. The displaced fishermen who were previously living within the zone demanded that they be given houses built on the immediate adjacent stretch of land. Their worry was the safety of their boats and easy access to the sea. The hotel industry was concerned about the adverse implications of the buffer zone on its construction plans. To make matters worse, the main opposition party sided with the protesters and declared that it would rescind the buffer zone requirement if it was elected into power. All these add up to making the buffer zone proposal a major stumbling block in the implementation of the resettlement program until it was abolished a year later.
In Indonesia, early plans for reconstruction in Aceh called for mandatory buffer zone from the sea and other land-use zoning. These were swiftly abandoned ‘after it was recognized that citizens directly affected were better equipped to make such judgment than bureaucrats in Jakarta’ (Sen and Steer, 2005, p. 301). However, subsequently BRR skillfully incorporated appropriate land-use-zoning requirements in its rebuilding plans.

5. Conclusions and Lessons

International humanitarian response to the Indian Ocean tsunami response was swift and remarkable. It was the largest ever international aid commitment to a natural disaster, in term of both the total volume of trade and aid per affected person. A striking feature of international aid mobilization was the massive private contribution. For the first time total private donations well exceeded total official aid pledges. This altruistic activism made NGOs important actors in aid delivery compared to previous humanitarian crises.

Quick and copious influx of humanitarian assistance played a pivotal role in disaster relief. There was no ‘second mortality’ from diseases and starvation unlike in many other disasters in the developing world. Foreign aid also provided vital leeway in the reconstruction phase, but a number of problems relating to the limited aid absorptive capacity of the recipient countries, and excessive competition among aid organizations (mostly NGOs) hindered effective aid utilization.

The evidence from Indonesia and Sri Lanka confirms evidence coming from previous disaster situations that mere availability of funds does not guarantee speedy implementation of reconstruction/rebuilding programs. Effective absorption of aid depends crucially on the ability of the authorities of the affected country to engage local organizations, local communities and international donor agencies both in the planning and implementation processes. The international donor community also should give serious consideration to designing innovative strategies for improving aid effectiveness in specific disaster situations since it is difficult for developing countries to arrange for effective cooperation from international donors. Given the significant involvement of
NGOs in aid delivery, and, in particular, NGOs’ participation in reconstruction activities going beyond their traditional domain of disaster relief, it is vital to paying attention at the international level to coordinating their activities with those of the ‘official’ (governmental) aid organizations.

For disaster prone countries such as Indonesia, there is a clear need for setting up an institutional mechanism, backed by a central disaster management fund, with capacity to engage swiftly in rescue and initial rehabilitation operations following a disaster. To be effective such institutional mechanisms/procedures could be developed in such a way as to maintain operational links with national and international NGOs, other charitable organizations and various UN organizations involved in disaster management.
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Table 1: The Tsunami Devastation: Deaths, Displacements and Economic damage

<table>
<thead>
<tr>
<th>Areas affected</th>
<th>Deaths</th>
<th>Displaced people</th>
<th>Economic impact (damage)</th>
<th>US$ million</th>
<th>Relative to GDP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>16,389</td>
<td>654,512</td>
<td>1,023</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>165,708</td>
<td>532,898</td>
<td>4,452</td>
<td>2.0 (97.4)</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>80</td>
<td>5083</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maldives</td>
<td>102</td>
<td>27,214</td>
<td>470</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myanmar</td>
<td>71</td>
<td>15,700</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>35,399</td>
<td>1,019,306</td>
<td>1,317</td>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>8,345</td>
<td>67,007</td>
<td>1,690</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Somalia</td>
<td>298</td>
<td>105,083</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>226,392</td>
<td>2,426,803</td>
<td>9,362</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes
1. This figure does not include the death toll in some coastal areas in the Southern and Eastern provinces of the country which were at the time under the control of the Liberation Tigers of Tamil Elam (LTTE). The unrecorded death toll in these areas could have been in the range of 32 to 35 thousand (Noyalhr 2005).

2. This figure is from Nidhiprabha (2007).

3. Bracketed figure is damage relative to GDP in Aceh province in 2003 (Nazara and Resusudarmo 2007)

Source: International Disaster Database, Centre for Research on the Epidemiology of Disasters, University of Louvain (http://www.emdat.be).
Table 2: Tsunami Aid by Source of Funding$^1$
(US$ million)

<table>
<thead>
<tr>
<th>Source</th>
<th>US$ million</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) International sources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governments$^2$</td>
<td>6,481</td>
<td>36.7</td>
</tr>
<tr>
<td>DAC member countries$^3$</td>
<td>5,888</td>
<td>33.3</td>
</tr>
<tr>
<td>Non-DAC member countries</td>
<td>593</td>
<td>3.4</td>
</tr>
<tr>
<td>Private donations$^4$</td>
<td>5,490</td>
<td>31.1</td>
</tr>
<tr>
<td>Donations to NGOs</td>
<td>3,214</td>
<td>18.2</td>
</tr>
<tr>
<td>Donations to UN agencies</td>
<td>494</td>
<td>2.8</td>
</tr>
<tr>
<td>Donations to Res Cross/Red Crescent$^5$</td>
<td>1,783</td>
<td>10.1</td>
</tr>
<tr>
<td>(b) National sources (in affected countries)</td>
<td>3,590</td>
<td>20.3</td>
</tr>
<tr>
<td>Governments</td>
<td>At least 3,400</td>
<td>19.3</td>
</tr>
<tr>
<td>Private donations</td>
<td>At least 190</td>
<td>1.1</td>
</tr>
<tr>
<td>TOTAL (a + b)</td>
<td>17,657</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Notes:
1. Including debt relief.
2. Covers only validated contributions which can be traced back to the original sources.
4. Excluding unclassified (‘other’) private donations amounting to US$1.7 billion. Some of these could be in addition to the funds directly accounted for by NGOs and the Red Cross/Red Crescent.
5. US$ 1700 million from the general public and US$83 million from the corporate sector.

Source: Flit and Goyder (2006), Table 2.1
Table 3: Distribution of Tsunami Aid by Recipients

<table>
<thead>
<tr>
<th></th>
<th>US$ million</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>4,839</td>
<td>34.4</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>3,503</td>
<td>24.9</td>
</tr>
<tr>
<td>India</td>
<td>1,758</td>
<td>12.5</td>
</tr>
<tr>
<td>Maldives</td>
<td>352</td>
<td>2.5</td>
</tr>
<tr>
<td>Thailand</td>
<td>84</td>
<td>0.6</td>
</tr>
<tr>
<td>Myanmar</td>
<td>14</td>
<td>0.1</td>
</tr>
<tr>
<td>Somalia</td>
<td>14</td>
<td>0.1</td>
</tr>
<tr>
<td>Seychelles</td>
<td>6</td>
<td>0.04</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1</td>
<td>0.01</td>
</tr>
<tr>
<td>Unmarked funds</td>
<td>3,503</td>
<td>24.9</td>
</tr>
<tr>
<td>Total</td>
<td>14,067</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Flit and Goyder (2006), Table 2.1 and Figure 2.3.
Figure 1: Bilateral Aid\(^1\) to Indonesia and Sri Lanka, 2000-2010
(US$ million)

(a) Indonesia

(b) Sri Lanka

Note: Total disbursements by the member countries of the Development Assistance Committee, OECD. Development aid: aid for promoting economic development and welfare in developing counties. Humanitarian aid: Rapid assistance and disaster relief to populations temporarily needing support after natural disasters, technological catastrophes, or conflicts, generally defined as complex emergencies.

Source: Based on data compiled from DAC data base
(http://stats.oecd.org/Index.aspx?DatasetCode=TABLE2A)
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