



**Economic Challenges of Post-Tsunami Reconstruction in  
Sri Lanka**

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This study updates and extends the report on the Post-Tsunami Recovery: Issues and Challenges in Sri Lanka, ADBI Research Paper 71, published in June 2005, using more recent data on the progress of the reconstruction effort and also drawing on a survey of affected households. This report was produced as part of an ADBI sponsored study of post-tsunami recovery and reconstruction in Indonesia, Sri Lanka, and Thailand undertaken by national research teams. The study was coordinated by Sisira Jayasuriya (Director Asian Economics Centre, University of Melbourne) and Peter McCawley (previously Dean, ADBI and currently Visiting Fellow, Australian National University).

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**Abstract**

After successful emergency relief operations, Sri Lanka initiated post-tsunami reconstruction with optimism and a relatively rapid recovery was expected. However, initial expectations have turned out to be overly optimistic. Coordination problems between agencies, constraints on aid absorption capacity, and inequities in aid distribution among regions have hampered reconstruction. Infrastructure reconstruction targets have not been fully met. Initial expectations that the tsunami experience would lead to peace were not fulfilled, inequitable distribution exacerbated mistrust, and large-scale conflict has resumed. Macroeconomic management and efficient absorption of a large, necessarily temporary, inflow of foreign funds has been a daunting task. Construction costs rapidly escalated, producing unanticipated funding gaps and aggravating fiscal deficit problems. Sri Lanka's experience highlights the need for anticipating such cost increases when assessing needs following major disasters, as well as the need for formulation of a phased programme of reconstruction which takes into account the supply side constraints of construction inputs.

**JEL Classifications:** Q54, F35, H54, I38, O19

## 1. BACKGROUND

The earthquake that caused the tsunami on 26 December 2004 occurred at 6:58 am Sri Lanka time with the first large wave hitting the east coast at 8:35 am. Within a very short time over 36,000 people were dead (this total includes the 5,644 who remain classified as 'missing'), and several hundred thousand had been displaced. Massive damage had also been inflicted on thousands of houses and other buildings, railways, bridges, communication networks, and other infrastructure and capital assets.

Although Sri Lanka had experienced periodic droughts, floods, landslides, and the occasional cyclone, in recorded history it had never experienced a tsunami, or indeed any other type of natural disaster of this scale and magnitude.<sup>1</sup> Although the country was completely unprepared for a disaster of this scale, the relief effort that got underway almost immediately—initially organized by local communities, followed by the government and international agencies—was able to feed, clothe, and shelter survivors; provide the injured with medical attention; and ensure that the thousands of bodies were cremated or buried, avoiding any disease outbreaks. The initial response is generally agreed to have been a success despite the understandable confusion which accompanied this effort at times.

However, as described in our earlier report on this issue (Jayasuriya, Steele and Weerakoon, 2006), it became clear as the reconstruction and rehabilitation phase proceeded that moving from the immediate relief effort to addressing the massive reconstruction tasks posed a different set of challenges that was in many ways more complex. The tsunami had come at a time of deterioration of the macroeconomic environment: GDP growth was slowing from the second quarter, inflationary pressure had been persistently building from the middle of 2004, fiscal and external current account deficits were growing, and the currency was rapidly depreciating.

As explained in the earlier report, the tsunami—paradoxically—brought a measure of stability to the economy, which had been straining under growing macroeconomic imbalances. For Sri Lanka, as for other affected countries that were ready to accept external assistance, the promised international assistance appeared to be more than adequate to cover the full costs of immediate relief and reconstruction, and produced an almost euphoric (though impermanent) national mood. In particular, it provided an unanticipated source of foreign capital inflows for the relief and reconstruction effort and enabled the country to avoid the slide towards a currency crisis. Not only did the additional influx of foreign capital allow Sri Lanka to maintain a fairly healthy balance of payments (BOP) during 2005–2006, but relief and reconstruction-related expenditures also boosted GDP growth to a healthy annual average of 6.7 per cent over the same period.

While the tsunami diverted attention away from the growing structural imbalances in the economy, they were not eliminated. As the reconstruction and rehabilitation phase proceeds—albeit at a slower pace than initially anticipated—issues taking centre stage

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<sup>1</sup> Sri Lanka had no effective domestic hazard warning system, and had not felt the need to be part of international early warning systems, such as the Tsunami Warning System (TWS) in the Pacific (which has 26 member countries).

relate to the effectiveness with which resources were mobilized, the effectiveness of delivering assistance and its coordination, and the gaps opening up in financing reconstruction and the implications of these financing gaps for macroeconomic policy management. The aim of this study is to contribute to the discussions and debates on appropriate policies for the medium-term reconstruction effort by providing an analysis of some of the priority issues emerging from Sri Lanka's experience of post-tsunami reconstruction and rehabilitation. We update and expand the discussion and analysis of the earlier report and draw on a survey of affected households in an attempt to obtain a broader understanding of the perceptions of the recovery process at the grass-roots level.<sup>2</sup>

## 2. IMPACT OF THE TSUNAMI

The final death toll has been estimated at around 36,000. Initial estimates of those displaced placed the number around 800,000. By mid-2005 this number had come down to around 516,000 as some of the misplaced found alternative sources of accommodation with friends and relatives. Damage to buildings and physical infrastructure was massive. Tens of thousands of houses were damaged or destroyed, many hotels were severely damaged, and six hotels were completely washed away. More than 240 schools were destroyed or sustained serious damage. Several hospitals, telecommunication networks, and the coastal railway network were also damaged.

### Box 1: Immediate Impact

Killed/missing persons: 35,322	
Injured persons: 21,441	
Internally displaced persons: 516,150	
Widowed, orphaned, affected elderly and disabled persons: 40,000	
Lost livelihoods: 150,000 (75% of the total fishing fleet)	
Value of lost assets: US\$900 million	
Houses destroyed: 89,000	
Schools destroyed or damaged: 183	
Schools used as camps for IDPs: 446	
Schoolchildren affected: 200,000	
Health facilities destroyed or damaged: 102	
Tourism infrastructure damaged:	Large hotels: 53 out of 242
	Small hotels: 248
	Related small enterprises: 210
Cultivated arable land affected by salinity: 23,449 acres	

Note: IDP = internally displaced person

Source: GOSL (2006).

The geographic impact of the tsunami was uneven. Much of the coastal belt of the Northern, Eastern and Southern Provinces and some parts of the Western Province

<sup>2</sup> Two household surveys of the tsunami-affected families were carried out by the Institute of Policy Studies of Sri Lanka (IPS). The first survey was carried out in April 2005 (IPS-TS 2005) covering 622 households in six affected districts. The second survey of the same households was carried out in July 2006 (IPS-TS 2006). See Appendix 1 for details on methodology and coverage of the survey.

were severely damaged. The Eastern Province was particularly hard hit accounting for nearly half of total deaths and displaced persons as well as numbers of houses damaged (Table 1). The severity of the tsunami disaster in the Northern and Eastern Provinces compounded problems arising from two decades of conflict between the Government of Sri Lanka (GOSL) and the Liberation Tigers of Tamil Eelam (LTTE). The majority of an estimated 360,000 conflict-related internally displaced people lived in these two provinces. From the very early stages, there were concerns about how assistance could be channelled to LTTE-controlled areas. However, basic relief supplies did manage to get through to affected people during the early phases of the relief effort.

**Table 1: Key Human and Asset Loss by District/Province**

District/Province	No. of Deaths <sup>a</sup>	No. of Displaced <sup>a</sup>	No. of Damaged Houses <sup>b</sup>
Galle	4,214	128,077	12,781
Matara	1,342	13,305	7,464
Hambantota	4,500	17,723	4,084
<b>Southern Province</b>	<b>10,056</b>	<b>159,105</b>	<b>24,329</b>
Colombo	79	31,239	5,984
Gampaha	6	1,449	675
Kalutara	256	27,713	6,124
<b>Western Province</b>	<b>341</b>	<b>60,401</b>	<b>12,783</b>
Ampara	10,440	75,238	24,438
Batticaloa	2,840	61,912	17,948
Trincomalee	1,078	81,643	8,074
<b>Eastern Province</b>	<b>14,354</b>	<b>218,727</b>	<b>50,460</b>
Jaffna	2,640	39,907	5,109
Mullaitivu	3,000	22,557	5,556
Killinochchi	500	1,603	288
<b>Northern Province</b>	<b>6,200</b>	<b>64,067</b>	<b>10,953</b>
<b>Total</b>	<b>30,955</b>	<b>502,366</b>	<b>98,525</b>

Notes: <sup>a</sup>As of January 2005; <sup>b</sup>As of October 2005.

Source: Department of Census and Statistics (DCS).

The preliminary assessment of damages completed by end-January 2005 through a joint effort of the Asian Development Bank (ADB), the Japan Bank for International Cooperation (JBIC), and the World Bank (WB) estimated that Sri Lanka had suffered asset damages of around US\$1 billion (4.5 per cent of GDP), and estimated that the medium-term financing needs (including immediate relief) would be around US\$1.5–1.6 billion (7.5 per cent of GDP). The largest financing needs were in the housing sector.<sup>3</sup> The destruction of private assets was substantial (US\$700 million), in addition to public infrastructure and other assets. Loss of current output in the fisheries and tourism sectors—which were severely affected—was estimated at US\$200 million and US\$130 million, respectively. Key industrial, agricultural, and metropolitan centres were relatively unaffected and the damage to capital assets was primarily to the tourism and fisheries sectors, each of which contributes only around 1.5–2 per cent of GDP.

<sup>3</sup> The significant differences between total recovery needs and damages in some sectors are due to the fact that the recovery strategy for those sectors focuses on long-term development targets rather than merely on restoration.

**Table 2: Estimates of Losses and Needs Assessment on Reconstruction and Rebuilding (US\$ million)**

	ADB/JBIC/WB <sup>a</sup>		GOSL	
	Losses	Needs	Feb. 05 <sup>b</sup>	May 05 <sup>c</sup>
Housing	306–341	437–487	400	400
Roads	60	200	210	353
Water & sanitation	42	117	190	205
Railways	15	130	77	-
Education	26	45	90	170
Health	60	84	100	100
Agriculture	3	4	10	10
Fisheries	97	118	250	200
Tourism	250	130	58	
Power	10	67–77	—	115
Environment	10	18	30	30
Microfinance	—	—	150	157
Other	90	180	239	424
Total (\$ bn.)	0.9–1.0	1.5–1.6	1.8	2.2

Notes: <sup>a</sup>ADB/JBIC/WB (2005); <sup>b</sup>GOSL (2005d); <sup>c</sup>GOSL (2005c); <sup>d</sup>MFP (2005), *Budget Speech 2006*, (December 2005).

Source: ADB/JBIC/WB and GOSL.

These aggregate figures for financing needs were quite close to the government's own estimate of US\$1.8 billion presented in February 2005, though there were some important differences at the sector level damage estimates (GOSL, 2005d). Subsequently, the GOSL firmed up the country's total investment needs to be US\$2.2 billion (GOSL 2005c).<sup>4</sup> Some of the differences between these estimates reflected the government's more ambitious longer-term plans while the donor assessment was largely geared to restoring the pre-tsunami situation. In line with the regional variation in the extent of damages incurred, the largest financing needs were identified in the East (45 per cent), followed by the South (26 per cent), North (19 per cent), and West (10 per cent).

### 3. IMMEDIATE RESPONSE

In the immediate aftermath of the tsunami, the Ministry of Public Security, Law and Order set up an operations centre, the Centre for National Operations (CNO), to handle the response, and the Secretary to the Ministry was appointed as the Commissioner General of Essential Services to oversee the coordination of government agencies involved in rescue and relief. Three task forces were set up to address specific aspects of the relief effort: the Task Force for Rescue and Relief (TAFRER); the Task Force for Logistics, Law and Order (TAFLOL); and the Task Force for Rebuilding the Nation (TAFREN).

<sup>4</sup> The GOSL identified its needs for a 3–5 year rehabilitation phase.

While there were hiccups and confusion in organizing the relief, for a country that had not previously experienced such a disaster, Sri Lankan institutions responded reasonably well. Essential medical aid, emergency food, and other relief supplies were mobilized within a day. Temporary shelter for the displaced was provided in schools, other public and religious buildings, and tents. Communities and groups cooperated across barriers that had divided them for decades. Public and private sector organizations cooperated and organized relief efforts at many levels. Sri Lanka's past investments in public health paid off in this emergency: the broad-based public health system and community awareness of basic sanitary and hygienic practices ensured that there were no disease outbreaks.

Once the immediate relief and rehabilitation measures for provision of food, shelter, clothing, clean water, and sanitary and medical facilities to affected families had been provided, it was necessary to address community needs to cope with the trauma and start rebuilding lives. The initial provision of cash grants to meet immediate needs included (i) compensation of SLRs.15,000 (US\$150) for victims towards funeral expenses; (ii) payment of SLRs.375 (US\$3.75) in cash and rations for each member of the family unit per week; and (iii) a payment of SLRs.2,500 (US\$25) towards basic kitchen equipment. These initial measures were largely successful, though there were some problems with lack of coordination.<sup>5</sup> Overall, the emergency relief was quite successful in meeting the immediate needs of the affected people.<sup>6</sup>

#### **4. SHORT-TERM ECONOMIC IMPACT**

The tsunami struck at a time when the Sri Lankan macro economy was already under pressure on several fronts, reigniting fears of a slide into the kind of crisis that was seen in 2001 when the economy contracted by 1.5 per cent (Table 3). On the policy front, there was considerable unease within the business and investor community about the direction of economic policy under a new government elected in April 2004. Its programme, with the stated goal of "growth with equity," and a strong emphasis on rural economic development, was viewed by sections of the business and investor community as being populist and interventionist.

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<sup>5</sup> For example, while food rations were generally available, there were problems with the provision of adequate variety and quality in some locations; complaints emerged about the application of different rules in different areas for the distribution of rations and cash grants.

<sup>6</sup> An assessment of the initial response to the tsunami at the Sri Lanka Development Forum 2005 can be found at [www.erd.gov.lk/DevForum/](http://www.erd.gov.lk/DevForum/)

**Table 3: Selected Macroeconomic Indicators: 2001–2005**

<b>NATIONAL ACCOUNTS</b>	Unit	2001	2002	2003	2004	2005	2006
GDP	US\$ billion	15.1	16.4	18.2	19.4	23.2	26.0
GDP growth	%	-1.5	4.0	6.0	5.4	6.0	7.4
Agriculture	%	-3.4	2.5	1.6	-0.3	1.5	4.7
Industry	%	-2.1	1.0	5.5	5.2	8.3	7.2
Services	%	-0.5	6.1	7.9	7.6	6.4	8.3
Investment	% of GDP	22.0	21.3	22.1	25.0	26.5	28.7
Savings	% of GDP	15.8	14.5	15.9	15.9	17.3	17.1
<b>EXTERNAL SECTOR</b>							
Exports	US\$ million	4817	4699	5133	5757	6347	6883
Imports	US\$ million	5974	6105	6672	8000	8863	10253
Trade balance	% of GDP	-7.3	-8.5	-8.4	-11.2	-10.7	-12.5
Current a/c balance	% of GDP	-1.4	-1.4	-0.4	-3.2	-2.8	-4.9
FDI	% of GDP	0.5	1.1	0.9	1.1	1.0	1.7
Official reserves	US\$ million	1338	1700	2329	2196	2735	2837
Tourist arrivals	'000 persons	336794	393174	500642	566202	549308	559603
Tourist earnings	US\$ million	202	250	340	408	356	410
<b>FISCAL VARIABLES</b>							
Govt. expenditure	% of GDP	27.5	25.4	23.7	23.5	24.7	25.4
Govt. revenue	% of GDP	16.7	16.5	15.7	15.4	16.1	17.0
Fiscal balance	% of GDP	-10.8	-8.9	-8.0	-8.2	-8.7	-8.4
Govt. debt	% of GDP	103.2	105.4	105.8	105.5	93.9	93.0
<b>PRICES AND MONEY</b>							
Rate of inflation	%	14.2	9.6	6.3	7.6	11.6	13.7
Interest rate <sup>a</sup>	%	13.74	9.91	7.24	7.65	10.37	12.96
Broad money (M2)	% change	13.6	13.4	15.3	19.6	19.1	17.8
Exchange rate	Rs/US\$	93.2	96.7	96.7	104.6	102.1	107.7
ASPI <sup>b</sup>	1985=100	621.0	815.1	1062.1	1506.9	1922.2	2722.4

Notes: <sup>a</sup>2-month Treasury bill rate ; <sup>b</sup>All share price index.

Source: Central Bank of Sri Lanka, *Annual Report*, various issues.

Economic growth began to slow from the second quarter of 2004 and ended the year with a growth rate of 5.4 per cent. While the election-related uncertainties and the ensuing policy vacuum no doubt contributed to the slowdown in economic activity, some policy weaknesses and the slow pace of reforms contributed to the lacklustre performance. The most visible, and potentially the most destabilizing manifestation of weakening macroeconomic management in 2004 was a persistent build up of inflationary pressure from the mid-year onwards. Inflationary pressure was fuelled on multiple fronts, not least by the conduct of an expansionary fiscal policy driven by increased subsidies and transfers.

Domestic imbalances were exacerbated by a ballooning oil import bill which saw the current account deficit on BOP widening to over 3.3 per cent of GDP in 2004 (from 0.4 per cent in 2003). This was accompanied by a deceleration of capital inflows, with long-term inflows to the government (consisting primarily of foreign concessional loans) declining by US\$130 million in 2004. Foreign borrowings by the commercial banking sector increased significantly in 2004 raising the country's foreign private debt exposure. The currency depreciated by 8.5 per cent against the US dollar despite efforts to bolster the exchange rate, which contributed to the decline in Sri Lanka's gross official reserves from US\$2.3 billion at the beginning of 2004 to US\$1.9 billion by November.

These domestic and external developments led to an acceleration of inflation from mid-2004, and real interest rates turned negative. Symptoms of a bubble economy began to emerge: a sharp increase in credit growth in excess of 20 per cent and a boom in the Colombo stock market unsupported by major indicators of economic fundamentals. The peace process between the GOSL and the LTTE appeared to have stalled, and with privatization initiatives shelved concerns over the government's ability to reduce the fiscal deficit began to increase. Markets started to get jittery with the growing realization that fundamental imbalances in the economy were intensifying. Though the external payments situation improved marginally in December 2004, rupee depreciation again gathered pace. On 17 December 2004, the currency fell to an historical low of SLRs.105 against the US dollar.

Against this backdrop, the immediate negative impact on output as measured by the GDP figure was expected to be fairly limited, ranging from a 0.5 to a 0.7 per cent reduction in 2005 GDP. The relatively small impact on GDP appeared somewhat surprising given the extent of human and asset losses. This was not only owing to the fact that only a relatively small sector of the economy was affected, but also because GDP captures only the annualised flow of damages to the stock of asset damages, and spending on relief efforts was expected to have an immediate positive effect on current GDP.

## **5. REHABILITATION, RECONSTRUCTION, AND RECOVERY PHASE**

### **5.1 Recovery Targets and Actual Progress**

The government planned the reconstruction and rehabilitation phase to be spread over three to five years (GOSL, 2005c). Nevertheless, there were pronouncements at the political level that all permanent housing needs would be met within a year. Over time, it has become clear that these were optimistic pledges. In fact, housing needs, for example, had not been met fully even by the end of 2006, while reconstruction of damaged schools and hospitals, and rehabilitation of roads, bridges, etc. is likely to take longer than envisaged.

#### **5.1.1 Infrastructure**

A total of 182 schools and 222 health institutions were affected by the tsunami. Targets in the education and health sectors included the reconstruction and renovation of 183 schools, four universities, seven Vocational Training Authorities, 444 internally displaced

person (IDP) schools (schools used as refugee camps), and the reconstruction and renovation of 102 health institutions.

The pace of recovery, particularly of larger scale infrastructure projects, has been slow with an estimated 50 per cent of construction projects yet to commence by end 2006 (GOSL, 2006). By end 2006, 57 per cent of damaged schools were estimated to be in various stages of construction with only 10 per cent of projects completed and handed over (GOSL, 2006). Similarly, in the health sector only 55 of a total of 102 damaged buildings have been completed (Table 4).

**Table 4: Progress in Education and Health Infrastructure**

	Education	Health
No. affected	183	102
Without donors	11	—
Completed	18	55
In-progress	105	—
Not commenced	49	—

Source: GOSL (2006).

The bulk of infrastructure damage was to roads and railways (Table 5). A total length of approximately 800 kilometres of national road network and 1,500 kilometres of provincial and local government roads were damaged. The railway infrastructure on a 160-kilometre-long stretch along the tsunami-affected coastline was also severely damaged. The target date for completion of road and bridge reconstruction was set at 2009. As we shall discuss below, this target date may prove difficult to meet because of serious capacity constraints and cost escalations. The government itself has recognised that the construction industry does not have the necessary contractors, equipment, or skilled workforce for such a major reconstruction effort (GOSL, 2005a).

**Table 5: Progress in Infrastructure**

	Damage	Progress 2006
Water & sanitation		130 projects planned. Donor commitment for 96 projects
Roads	Rehabilitation of 1.172 km of roads	2 projects under way. 8 in tendering process.
Bridges	25 major bridges	4 commenced construction; 10 in tendering process.

Source: RADA (2006).

In addition to the rehabilitation of damaged infrastructure, new demands for infrastructure services were created by relocated communities. As described in detail later, a significant proportion of relocated households was found to have inadequate access to water, roads, pre-schools, and health clinics, and was worse-off than before.

### 5.1.2 Housing

The immediate requirement in housing was to provide “transitional” shelters where a total of 57,057 transitional shelter units were estimated to be needed to accommodate 50 per cent of the 500,000 internally displaced (GOSL, 2005a). The remainder of the displaced were assumed to have received shelter from friends, relatives, etc. Progress on providing transitional shelters, by and large, was fairly good; by end-2005 over 56,000 units had been completed.<sup>7</sup>

**Table 6: Post-tsunami Numbers of Displaced Persons in Transitional Shelters**

	Jan. 2005	Dec. 2005	June 2006 <sup>a</sup>	Dec. 2006
Government Camps	56,000	53,000	42,196	17,083
Private Homes	42,525	32,525	32,367	
Total	98,525	85,525	74,563	17,083

Note: <sup>a</sup>Post housing policy revision.

Source: RADA (2006).

The total number of displaced persons as of January 2005 was estimated at 98,525, of whom 56,000 were in government camps (transitional shelter) while the rest were with families/friends (RADA, 2006). By end December 2005 the numbers of displaced had dropped to 85,525, of whom 53,000 were in transitional shelters. This figure was estimated at around 40,000 by end 2006.

There have been significant revisions regarding housing policy. An initial declaration by the government of a buffer zone between land and sea of 100 metres on the south and southwest coast and 200 metres on the north and east coast of the country led to the initiation of two types of housing programmes: (i) donor-built housing reconstruction and (ii) home owner-driven housing reconstruction. No reconstruction of houses (partially or fully damaged) was to be allowed within the buffer zone. Thus, all affected households within the demarcated buffer zone were to be provided with a house built with donor assistance on land allocated by the state while allowing them to retain ownership of the original land. Households were not required to demonstrate ownership of the land to qualify for such assistance.

For those whose damaged houses were deemed to be outside the designated buffer zone, the government agreed to provide grants and loans for households to re-build at the same location. In order to qualify for the entitlement, households were required to prove ownership of the land. The criteria set down in terms of financing such reconstruction included an assessment of damages on a points basis where a house deemed to be more than 40 per cent damaged would qualify for a grant of SLRs.250,000 (US\$2,500) in four instalments, based on progress. A grant of SLRs.100,000 (US\$1,000) was made available to rebuild a house deemed to be less than 40 per cent damaged, disbursed in two stages.

<sup>7</sup> As of end 2006, 42,096 of the 57,057 shelters originally constructed had been decommissioned with only 14,961 shelters remaining occupied (GOSL, 2006).

Predictably, the buffer zone became a politically controversial issue from the very outset. The limits were set in a fairly arbitrary manner, not taking into account topographical and other relevant features of the land that would affect hazard risk. There was also dissatisfaction that the rules were not to be applied across all building units, with tourist enterprises being permitted to rebuild within the designated zone. Many of the tsunami-affected fishermen, for example, argued the need to retain land close to the sea to sustain their livelihoods.

However, IPS-TS 2006 results showed that about 60 per cent of surveyed households thought that the government's original buffer zone rule was a "good idea." Data at the Grama Niladari Division (GND) level agreed with this finding; almost all Grama Niladaris (GNs) (village level government officers) interviewed agreed that the government's original buffer zone policy was "good." Paradoxically, they were also happy with the relaxation of the buffer zone in 2006. Although there were delays in providing housing because of the buffer zone rule, most households saw the prospect of better housing because of this policy: IPS-TS 2005 results found that most houses that were destroyed were smaller than the minimum floor area of 500 square feet specified for new houses under the donor-driven programme; in other words, a majority of households would get superior replacement houses, at least in terms of floor area.<sup>8</sup> Moreover, while all new houses are to be built with permanent housing materials, a large share of destroyed houses had been made of temporary housing material.<sup>9</sup> Also, households that did not have legal ownership of land were given houses under the donor-driven programme.<sup>10</sup> These factors may have outweighed the costs incurred by many households due to delays in housing progress caused by the 2005 buffer zone rule.

But there was widespread popular opposition on many levels to the buffer zone policy. By end 2005, the government had largely abandoned the idea of enforcing the buffer zone restrictions. In particular, the scarcity of land with which to relocate affected households highlighted the impracticality of enforcing such a zone in the face of the need to ensure permanent housing within a reasonable period of time. A more relaxed buffer zone policy was announced in May 2006 along with a "Revised Tsunami Housing Policy."<sup>11</sup> It was essentially aimed at ensuring that all tsunami-affected people return to their houses or get new houses by the end of 2006. The policy document promised "a house for a house, regardless of land ownership." It defined two zones (not buffer zones)<sup>12</sup> with four housing options with the cost being shared by the government and donors (see Box 2).

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<sup>8</sup> About 53 per cent of the surveyed houses made unusable by the tsunami were less than 450 square feet, while only 10 per cent were bigger than 600 square feet.

<sup>9</sup> About 32 per cent of roofs of the surveyed houses were made of cadjan or metal sheets, while close to half of the surveyed houses had walls made of temporary material.

<sup>10</sup> About 13 per cent of surveyed households inside the buffer zone owned houses on government land, while a further 9 per cent owned houses built on other people's private land.

<sup>11</sup> The new boundaries were set according to the Coast Conservation Department (CCD) Coastal Management Plan of 1997.

<sup>12</sup> Zone 1 referred to any state reservation within tsunami-affected areas while Zone 2 is any area outside Zone 1.

**Box 2: Revised Tsunami Housing Policy**

- 1) Government land + donor-built house under the donor-driven housing programme primarily for all those who previously lived within the buffer zone.
- 2) Government land + government cash grant (SLRs.250,000) to construct a new house + regulated donor assistance provided to complete the houses (not less than SLRs.250,000 depending on costs to meet the minimum standard house) through co-financing agreement.
- 3) Government cash grant (SLRs.150,000 for three divisions in Ampara and SLRs.250,000 for Colombo) to purchase land + government cash grant (SLRs.250,000) to construct a house + regulated donor assistance provided to complete (not less than SLRs.250,000, depending on costs, to meet the minimum standard house) through co-financing agreement.
- 4) Housing reconstruction grant (SLRs.250,000 for fully damaged homes and SLRs.100,000 for partially damaged homes) + regulated donor assistance provided to complete only fully damaged houses as required for meeting the minimum standard house through co-financing agreement.

Source: RADA (2006).

The revised housing policy pushed the total housing needs to around 110,000 units. The key change was a decision to extend house eligibility to those without legal ownership of land outside the former buffer zone and to offer housing to extended family members living in the affected households.

Secondly, in contrast to the earlier policy, the government and donors were to jointly provide for a minimum of SLRs.500,000 (US\$5,000) cash support to a tsunami-affected family to build a house. The significant cost escalation of construction material and labour, already clearly visible by end 2005, undoubtedly forced a revision of the earlier estimates. Under the revised policy, the GOSL was to provide the cash grant, initially reimbursed by different development banks and bilateral donors.<sup>13</sup> The grant of SLRs.250,000 (US\$2,500) each from the government and donors was to be given in instalments; a first instalment of SLRs.50,000 (US\$500) by the government matched equally by the donor and thereafter followed accordingly. The beneficiary was to receive full title to the property in the resettlement area (while retaining legal ownership of property within the re-designated buffer zone).

Finally, under the donor-built reconstruction programme, standard building requirements were set down by the GOSL of a floor area of 500 square feet; the donor was to make available common infrastructure for housing clusters, and the government was to provide services up to the relocation site. The technical specifications were revised to ensure a more equitable basis. This was primarily a response to the initial experience where donors build houses of widely varying quality, with some houses costing only SLRs.400,000 and others being valued at over SLRs.1 million (US\$4,000 to over US\$10,000), causing friction amongst recipients.<sup>14</sup>

<sup>13</sup> Extended since to co-financing arrangements through local and foreign NGOs as well.

<sup>14</sup> *Sunday Times*, 14 May 2006. About 3 per cent of the households surveyed in the IPS-TS 2006 had shifted from one NGO-allocated list to another. The most common reasons for switching were: expectation of better assistance, to move closer to the sea, or because the first NGO had failed to deliver a house.

The new housing policy requirements are identified under a homeowner-driven programme and a relocation housing programme. Overall, revisions to the housing policy (involving a higher cash grant component and a significant increase in the number of housing units deemed necessary) meant that questions would be raised about the ability to meet the costs of reconstruction within the commitments made by donors. It also created much confusion amongst the beneficiary households. Only about a quarter of the households surveyed in the IPS-TS 2006 were clear about their housing entitlements. Close to 60 per cent indicated that they would like legal advice regarding their rights as a homeowner.

**Table 7: Housing Requirements**

	Original (2005)	Revised (2006)	Completed (end 2006)
<b>Homeowner-driven Programme</b>	<b>55,525</b>	<b>79,184</b>	<b>46,531</b>
Partially damaged	32,497	39,823	34,988
Fully damaged	23,028	39,361	11,543
<b>Relocation Housing Programme</b>	<b>43,000</b>	<b>29,830</b>	<b>14,488</b>

Source: GOSL, (2006).

As of November 2006, 46,531 partially or fully damaged houses had been rehabilitated, recording an 85 per cent completion rate. Nevertheless, a funding gap of US\$ 107 million has been identified to complete most of the fully damaged houses (GOSL, 2006). In contrast to the progress in the homeowner-driven rehabilitation, progress in relocating tsunami-affected families has been much slower at only 50 per cent of required units having been completed by November 2006. As the target in this scheme was reduced substantially, the government estimates that sufficient funds are available to successfully complete this programme (GOSL, 2006).

The lack of clarity regarding housing entitlements and distribution was apparent from the survey results. The IPS-TS 2005 and 2006 data give information on the location of households with respect to the 2005 buffer zone, and house and land tenure for 559 households. Of these, 268 were eligible for the donor-driven new housing and 157 were eligible for owner-driven housing reconstruction. A total of 134 households were not eligible for a new house either because they were not homeowners before the tsunami (70 per cent of 134) or because they were outside the 2005 buffer zone, and were homeowners without land tenure (30 per cent of 134).

The survey found considerable inequities in the distribution of new houses. Housing progress was worst for people who were actually eligible for donor-driven new housing. About 65 per cent of such households were still to be found in temporary housing as of mid-2006. At the same time, about 56 per cent of households who were not eligible for a new house had received a house. There appeared to be inconsistencies between official government policy on housing and actual practice. Some households eligible to relocate under the donor-driven housing programme had rebuilt (19 per cent), while others eligible to rebuild under the owner-driven housing programme had relocated (16 per cent). Some households had received houses outside both these programmes, and others who were not eligible to receive a house under either programme had also received houses (see Table 8).

**Table 8: Housing Situation as at July 2006  
(by eligibility under the 2005 housing programme)**

Eligibility	Rebuilt	Relocated	Donor Built on Old Site	Temporary Housing	NI <sup>a</sup>	Total
Donor-driven	52	25	11	175	5	268
	19.4	9.3	4.1	65.3	1.9	100.0
Owner-driven	76	25	22	26	8	157
	48.4	15.9	14.0	16.6	5.1	100.0
Not eligible <sup>b</sup>	34	17	24	59	0	134
	25.4	12.7	17.9	44.0	0.0	100.0
Total	162	67	57	260	13	559

Notes: <sup>a</sup>No information; <sup>b</sup>Households not owning a house before the tsunami (70% of 134) and households owning a house on encroached land (30% of 134) outside the buffer zone were not eligible for a new house under the 2005 housing policy.

Source: Authors' calculations based on IPS TS 2005 and IPS TS 2006 data.

There were coordination problems across various donors, especially those who provided houses without adhering to government plans. According to local-level government officials, the reluctance of local non-government agencies to share information on aid distribution and their beneficiaries exacerbated the problem of coordination and monitoring.

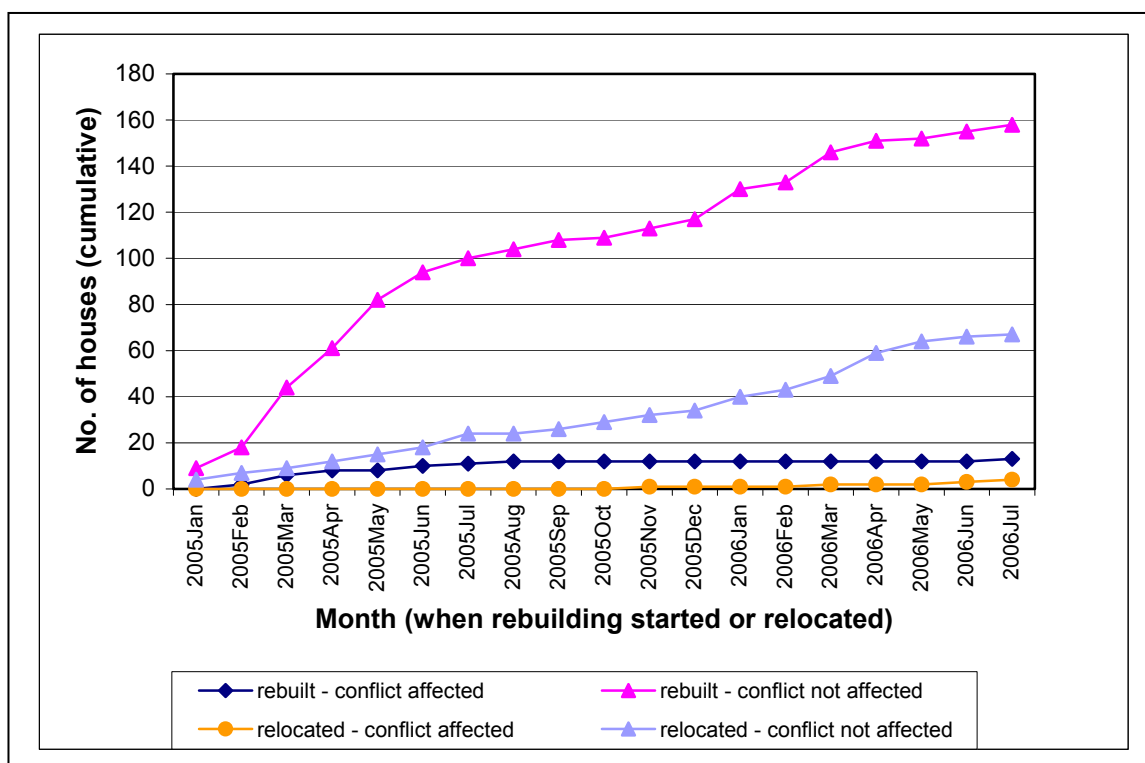
Table 9 confirms the significant regional variation in housing progress across the country. The uneven progress is, in part, due to the resurgence of conflict in the north and east of the country from end 2005 (Figure 1). The Eastern Province with the highest requirement of housing is lagging well behind. The Western Province was also behind the Southern Province, most likely due to greater difficulties in obtaining suitable land. The survey results were consistent with national data and showed that housing progress was best in the Southern Province for those outside the 2005 buffer zone. Less than 6 per cent of surveyed households in this region were in temporary housing. Housing progress was worst for those in the Eastern Province—for households both within and outside the 2005 buffer zone. Progress was especially poor for households affected by the conflict.

**Table 9: Status of Housing Progress by Region**  
(end November 2006)

District/Province	Homeowner-driven		Relocation	
	Requirement	Completed	Requirement	Completed
Galle	11,405	9,590	3,720	2,793
Matara	6,048	5,409	2,120	1,372
Hambantota	1,469	1,344	4,643	4,162
<b>Southern Province</b>	<b>18,922</b>	<b>16,343</b>	<b>10,483</b>	<b>8,327</b>
Colombo	60	53	1,387	107
Gampaha	253	234	436	218
Kalutara	5,290	4,537	2,862	1,687
<b>Western Province</b>	<b>5,603</b>	<b>4,824</b>	<b>4,685</b>	<b>2,012</b>
Ampara	21,347	10,298	3,721	871
Batticaloa	19,499	9,581	2,961	850
Trincomalee	3,635	3,378	2,872	884
<b>Eastern Province</b>	<b>44,481</b>	<b>23,257</b>	<b>9,554</b>	<b>2,605</b>
Jaffna	4,424	1,720	4,257	1,348
Mullaitivu	5,193	387	458	53
Killinochchi	611	0	393	143
<b>Northern Province</b>	<b>10,228</b>	<b>2,107</b>	<b>5,108</b>	<b>1,544</b>
<b>Total</b>	<b>79,184</b>	<b>46,531</b>	<b>29,830</b>	<b>14,488</b>

Source: GOSL (2006).

**Figure 1: Survey Results on Housing Progress by Effect of Conflict**



Source: Authors' calculations using IPS-TS 2006 data.

Key reasons cited for the overall slow progress in housing relocation have included a lack of commitment by nongovernment organizations (NGOs), impact of the conflict, lack of infrastructure in new locations, and poor communications strategies. In the case of donor housing, it has been pointed out that many donors that had large amounts of funds at their disposal and had pledged to build large numbers of housing units failed to meet even 50 per cent of their original targets (GOSL, 2006).

These findings are consistent with the survey results: lack of land and delays in obtaining donor assistance were cited as the main reasons for the slow progress in the donor-driven housing programme. The survey results also suggested that some people found that they were worse-off in terms of quality of housing and access to services (Table 10). There were claims that people's lifestyles were not taken into consideration when designing the new houses. For instance, the percentage of households using expensive sources of fuel for cooking such as gas and electricity increased from 10 per cent to 18 per cent, primarily because many of the new houses did not include a kitchen with a chimney to allow use of firewood for cooking.

**Table 10: Quality of Housing Before and After Tsunami for Relocated Households**

	No.	Better Now	Worse Now	No Difference
House design	69	42%	41%	14%
Construction materials used for housing	69	27%	49%	21%
Access to services (water, electricity, road)	69	14%	63%	20%
Primary school within 1 km	73	10%	62%	29%
Clinic within 1 km	73	1%	59%	40%

Source: Authors' calculations using IPS-TS 2005 and 2006 data.

The relatively smooth progress of the homeowner-driven housing programme vis-à-vis the relocation programme has encouraged the Reconstruction and Development Agency (RADA) to consider converting donor-driven housing projects to owner-driven programmes. Owner-driven housing programmes were reportedly more effective because families got the funds directly into their own hands.<sup>15</sup> Owner-driven housing projects not only progressed faster but also proved to be cheaper than donor-driven projects. The cost of a single donor-assisted housing unit was estimated to range between SLRs.0.4–1.6 million (US\$4,000–16,000) even without the additional costs of site preparation, land-filling, drainage, and infrastructure provision (GOSL, 2006).

Considering these factors, RADA urged the international NGOs (INGOs) to transfer their tsunami reconstruction funds to the Treasury so that the government could direct funds to the victims. Additional funding of around US\$50 million was needed to shift house construction previously under donor-driven programmes into owner-driven programmes (MFP, 2006). RADA argued that this would be the most practical way of resolving the logistical problems that INGOs faced in constructing houses themselves. Many donors had concerns about allowing the government to choose beneficiaries. To address those concerns and to ensure transparency, it was proposed that donors who opted to convert

<sup>15</sup> *Daily Mirror*, 28 January 2006.

to the owner-driven programme could be given a list of beneficiaries, so that they could verify their needs and make payments directly to those families. However, with the sole exception of the Red Cross (which had complied with the request to cooperate with the government and converted two-thirds of their pledges (US\$25 million)), INGOs showed no enthusiasm to transfer funds to the government.<sup>16</sup>

Escalating costs of building materials and skilled construction labour may also have contributed to slow progress in housing. All interviewed key informants reported that the cost of building materials and the wages of carpenters and masons had increased since the tsunami, with more than three-quarters stating that construction costs had increased by “a lot.”

### 5.1.3 Livelihoods

An estimated 150,000 people lost their main source of income because of the tsunami.<sup>17</sup> About 50 per cent of these were in the fisheries sector, with others distributed among agriculture (4–5 per cent), tourism, and small and micro enterprise-related sectors (GOSL, 2005a). In all surveyed districts, people received some livelihood support. Types of livelihood assistance have included grants in kind (income-generating assets such as fishing boats and equipment), cash grants, loans, training (vocational, business support, etc.), cash-for-work, and temporary employment.

According to official sources, around 75 per cent of the affected families had regained their main source of income by end 2005 (GOSL, 2005a). This is supported by the survey results where 71 per cent of interviewed households claimed they had regained their previous source of livelihood. Only 8 per cent of heads of households had changed their livelihood,<sup>18</sup> while 21 per cent were still unemployed.<sup>19</sup> Thus, within a year of the tsunami, most people were back in their previous occupations. However, this did not mean that people regained their previous level of income. According to our household-level survey, on average close to 60 per cent of households considered their real family income—in terms of their ability to cover basic needs such as food and health—to be lower than their pre-tsunami income.

There were regional variations in income recovery patterns. Compared to the Southern Province, a higher proportion of Eastern Province households felt that they were worse-off.<sup>20</sup> According to the survey data—in both the Southern and Eastern provinces—poor distribution of livelihood-related assets, the buffer zone rule, and damages to work places have affected livelihood recovery. In addition to these, inability to participate in employment training (due to security reasons) has also slowed down livelihood recovery in the Eastern Province.

<sup>16</sup> *Sunday Observer*, 27 August 2006.

<sup>17</sup> RADA estimates place those who have lost livelihoods at 200,000 with a further 125,000 jobs being lost indirectly (see [www.rada.gov.lk](http://www.rada.gov.lk)).

<sup>18</sup> About a half of the household heads that have changed their livelihoods come from one GND, in the Eastern Province.

<sup>19</sup> Further, the current housing situation does not appear to have any effect on livelihood recovery.

<sup>20</sup> Key informants in almost all surveyed districts in the Southern Province, and in around half of the surveyed districts in the Eastern Province, thought people are better-off now because of aid, training, and more employment opportunities. There were also considerable differences between clusters of villages.

The damage to tourism infrastructure was quite significant and affected tourism-related livelihoods. A total of 53 (out of 242) large hotels and a further 248 small hotels were damaged or destroyed. In terms of hotel rooms, about 3,500 out of a total of 13,000 rooms available in medium to large-scale hotels were out of service in February 2005. Approximately 210 small enterprises that rely on the tourism industry were also destroyed along the coastline. They were mostly enterprises engaged in informal sector activities, and 190 of them were not formally registered with the tourist board. Of the 53 large-scale hotels damaged, 41 were back in operation by end 2005.

Despite the gradual restoration of infrastructure damage to tourist facilities, recovery in livelihoods in the sector was slow. Sri Lanka saw the largest ever number of tourist arrivals in 2004 and although recorded "tourist" arrival numbers did not fall steeply in 2005, many of those counted as tourists were aid workers visiting the country rather than genuine tourists. Tourism earnings, in fact, dropped sharply in 2005 (see Table 3). This suggests that many potential tourists were discounting Sri Lanka as a desirable travel destination in the aftermath of the tsunami. Recovery in tourism was further constrained by an escalation in ethnic conflict-related incidents from the end of 2005 that deterred the return of tourists in numbers comparable to pre-tsunami levels. Thus, while damage to infrastructure was relevant, it was the negative psychological impact of the tsunami and the subsequent political conflicts that seem to have played a more significant role in hampering recovery in the tourist sector.

By contrast, recovery of fisheries-related livelihoods was swifter despite the fact that this was the most badly affected sector. Those engaged in fishing or related activities made up over one-third of the affected households. In total, over 100,000 people in the fisheries sector were displaced, 16,434 houses were damaged and 13,329 destroyed, and nearly 4,870 fishermen lost their lives with a further 136 reported missing (MFAR, 2006). In terms of equipment, as set out in Table 11 an estimated 75 per cent of the fishing fleet (32,000 boats) had been totally destroyed or severely damaged (around 23 per cent were made un-seaworthy and 54 per cent were destroyed), and one million fishing nets were lost. Apart from these, the basic infrastructure of the fishing industry, such as boatyards, cold rooms, ice plants, and fish markets, were damaged. Damage to fishery harbours and other infrastructure facilities, government services facilities, coast conservation structures, etc., was placed at US\$275 million, while repair and replacement costs for the damaged fleet were estimated at US\$60 million.

By end 2006, the fisheries harvest had been restored to 70 per cent of the pre-tsunami level with most of the affected fishers returning to their occupation (GOSL, 2006) The relatively rapid recovery of the fisheries sector can be attributed primarily to the relatively rapid progress in replacement of the fishing boats and equipment. The fisheries sector received more immediate assistance than other affected sectors and was able to replace most of its productive assets fairly quickly. A large proportion of destroyed boats had been replaced, and all damaged boats were repaired by end 2005.<sup>21</sup>

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<sup>21</sup> There is some debate about the exact numbers of boats damaged and repaired. For most boat types, the number of crafts repaired has exceeded the numbers reported as damaged. It has been suggested that boat owners in non-tsunami-affected areas may have transferred their boats to these areas to take advantage of the opportunity to get minor repairs done, that there may have been mis-categorisation of beach seine crafts as traditional crafts, and that boats classified as destroyed may have been repaired and put back to sea.

**Table 11: Fishing Boats Destroyed and Damaged**

Boat Type	2004 Fleet	Damaged		Destroyed	
		No.	Repaired	No.	Replaced
Multi-day	1,581	676	780	187	0
One day boats	1,493	783	904	276	29
FRP boats	11,559	3,211	4,258	4,480	4,321
Traditional crafts	15,934	2,435	3,479	11,158	8,636
Beach seine crafts	1,052	161	134	818	204
<b>Total</b>	<b>31,619</b>	<b>7,266</b>	<b>9,555</b>	<b>16,919</b>	<b>13,190</b>

Note: FRP=fiberglass reinforced plastic

Source: MFAR (2006).

However, there have been complaints about the poor quality of repairs. According to results of a survey carried out in December 2005, 8 per cent of the repaired boats were not being used due to dissatisfaction with the repairs.<sup>22</sup> Inadequate technical inputs and/or supervision, lack of boat-building knowledge and expertise on the part of NGOs (as well as the fishers), and the absence of proper contracts for after-sales services are blamed for poor-quality repairs, with boat-builders using low-quality material, reducing the thickness, etc., to meet deadlines and profit from the opportunity.

By end 2005, 78 per cent of the destroyed fishing fleet had been replaced (this figure had risen to 95 per cent by mid-2006)<sup>23</sup> with pledges for more than 6,000 boats still outstanding. But 19 per cent of the new boats provided were found not to be seaworthy. Lack of coordination in distribution efforts also led to conflicts and problems over the increasing numbers of boats, the quality of boats, etc. For many NGOs, the provision of small fishing boats was seen as an “attractive” tsunami aid programme that had high visibility but was easy to implement and not too expensive.

The result of this focus on providing small fishing boats, however, may be an oversupply of boats. Such an oversupply is likely to be unhealthy for the fisheries sector in the longer term due to the prospect of over-fishing. The oversupply can be attributed to several factors. There was no reliable data on the fishing fleet prior to the tsunami, and the damage assessments done by a large number of agencies had their weaknesses. Sometimes, people who were not familiar with the community of fishers were responsible for gathering data on previous boat ownership; this permitted many non-fishers to acquire boats. Misidentifications and overlaps occurred as a result of delays in issuing Entitlement Cards by MFAR. Also, the same beneficiary list was sometimes provided to more than one NGO to speed up the recovery process. There was a lack of coordination between the fisheries authorities and the NGOs, poor coordination between NGOs themselves, and competition amongst these agencies which led to errors and miscalculations (MFAR, 2006). Anecdotal evidence from district-level authorities indicated that reluctance to share information on the part of some NGOs made the task of coordinating even more difficult.

Many genuine beneficiaries did not receive new boats because allocations were not properly targeted. Based on extrapolations from the findings of a survey done by the authorities in December 2005, only 6,067 of the 13,190 (46 per cent) boats distributed

<sup>22</sup> Cited in MFAR (2006).

<sup>23</sup> RADA (2006).

went to “genuine” beneficiaries. Some small, local agencies had provided boats to “friends and relatives” and had bypassed the fishing authorities.<sup>24</sup>

Access to credit is a vital element for livelihood recovery. Most of the tsunami-affected businesses were informal, small-scale industries—an estimated 25,000 micro-enterprises were damaged in the disaster. In addition, 15,000 tsunami survivors were previously involved in self-employed and informal sector activities such as food processing, coir manufacture, carpentry, and tailoring. While over forty organizations were involved in a host of micro-finance programmes established to assist small- and medium-sized enterprises (SMEs), the primary sources of credit were two major government finance schemes.

Prior to the tsunami, the Central Bank of Sri Lanka had been implementing a micro-finance scheme (*Susahana*) through the two state-owned commercial banks. The *Susahana* loan is provided with no repayment required for the first year and interest at a fixed rate of 6 per cent thereafter. The National Development Trust Fund (NDTF) also offered similar terms through its partner organizations. Following the tsunami, lending escalated and by June 2006, 25,735 loans and grants of SLRs.4,769 million (US\$47 million) had been provided to micro-, small-, and medium-sized enterprises (RADA, 2006). The majority of these loans were disbursed in the south and west of the country. The *Susahana* scheme had reportedly disbursed US\$36 million to 8,000 borrowers in the tsunami-affected areas by September 2005. Of these loans, 75 per cent were in the south and west of the country. 60 per cent of the NDTF scheme was also disbursed in the south, with only 40 per cent going to the north and east of the country (GOSL, 2005a).

Unfortunately, the procedures and processes associated with loan approval and disbursement seemed weighted against those worst-affected by the tsunami, with the emphasis placed on ensuring high probability of repayment or loan recovery rather than on meeting the credit needs of those most in need. Despite claims to the contrary, and its stated intention to reach the micro-entrepreneurs, the *Susahana* lending scheme had been set up in a way that made it very difficult for small tsunami-affected micro-entrepreneurs to obtain access to the loans. The conditions for access were quite onerous. Guarantors with a permanent income above a certain threshold level were required before a loan was approved. Collateral was required, for which land within the buffer zone was not acceptable. Loans were only to be given to businesses registered before the tsunami, which ruled out many smaller, unregistered businesses. These conditions ruled out, in most cases, people hoping to take up new livelihoods in response to their changed post-tsunami circumstances, from causes such as, for example, the death of the main earner, disability, or new responsibilities for the care of family members.

In fact, it has been acknowledged that the many affected businesses in the buffer zone were hit especially hard because they were unable to access bank credit, and that banks have been reluctant to relax their collateral requirements (GOSL, 2005a). It was also found that very few new clients were reached by the subsidized schemes and a

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<sup>24</sup> The efficiency implications of the misallocation of these fishery assets may be corrected over time as those who were mistakenly given boats etc. may subsequently sell them to genuine fisher folks who can make use of them. But this would not be much consolation for people who had lost assets and lack the necessary finances to buy them, even at discount prices.

considerable number of small entrepreneurs were left with no access to credit. The survey results confirm these findings: Only a few households (16 per cent of the sample) even applied for credit. Many households did not apply for loans because they were not aware that they were eligible to receive them, or because they felt that their applications would be rejected. Most of those who applied did receive a loan, but they had to provide collateral and sometimes a guarantor in order to obtain it. The average size of the loan was fairly small at less than SLRs.100,000 (US\$1,000).

On a positive note, there is evidence to suggest that micro-credit providers improved cooperation and coordination in an attempt to try to maintain the micro credit culture that the post-tsunami supply of micro-credit funds at low interest rates was in danger of undermining.

In the immediate aftermath of the tsunami, a cash grant livelihood assistance programme was announced in January 2005, offering a monthly cash grant of SLRs.5,000 (US\$50) to each tsunami-affected household for a period of four months. Over 250,000 households received the first two instalments on time immediately following the introduction of the programme.<sup>25</sup> However, concerns were soon expressed in some quarters about the need for proper targeting. The Ministry of Finance Directives then directed local government officials to revise the lists of eligible beneficiaries according to a set of eligibility criteria. There were complaints from both affected families and even some government officials that the criteria were not very clear, or were not in the public domain. This created much confusion and payments halted at a time of acute need. The government circulars announcing the revised criteria were quite broad. This meant that local government officers had considerable room to exercise discretion, resulting in wide variations in interpretation, allegations of corruption, and delays and long back-logs of appeals. Interviews with relevant stakeholders, including both affected families and government officials, suggested that households having access to “regular income” were no longer eligible. It took several months to draw up new lists of those eligible to receive the grant, with the number of recipients eligible for the third payment declining by 25 per cent to 165,000 while the fourth monthly payment was still “on-going” a year after the tsunami (GOSL, 2005a).

In assessing the value and benefits of changes to this programme, it should be noted that even households with a “regular” post-tsunami income had suffered a major loss of wealth in terms of property and possessions, and were cash poor. There was a high probability that they would have to borrow from high interest, informal sector lenders to meet many pressing needs. The decision to take recipients with a regular income off the list after only two monthly payments generated perverse incentives, effectively penalizing not only those who had held on to previous jobs, but perhaps, even more importantly, those who had managed to obtain regular employment after the tsunami. If donor assistance was available for this programme—and it is hard to see why funds were not available if the May 2005 pledges were honoured—these cutbacks seem hard to justify. Moreover, since bank accounts had to be opened for the cash grant transfer, the system was extremely cost effective—many other tsunami livelihood projects had far

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<sup>25</sup> This had some other cash grant components too, including a grant for a family death. According to the IPS-TS 2005 data (collected in April/May 2005), all surveyed districts had received funds of SLRs.15,000 for deaths, SLRs.2500 for kitchen equipment, and a SLRs.5000 livelihood grant and food/cash coupon.

higher transactions costs with as much as 30 per cent spent on administrative overheads.

This experience with trying to shift the livelihoods grants programme to a targeting scheme only a couple of months after the disaster holds lessons of much wider applicability for post-disaster situations. By all accounts, the initial grants scheme was very effective in reaching most of the affected population. It provided cash at a time of great need, and even helped to link people with little prior engagement to the formal financial sector because they had to set up bank deposit accounts to receive the funds. Unfortunately, the scheme only provided two timely grants before the emphasis shifted to targeting. In theory, it seems obvious that grants should be distributed to those who are “truly needy,” and therefore that grants should be properly targeted. But, in practice, the costs of such narrow targeting must also be taken into account. In the immediate aftermath of a major disaster, particularly in a poor country, the vast majority of affected people are “truly needy.” Markets are dislocated, assets have been destroyed, and records are destroyed or missing. In such circumstances, the cost of trying to exclude a relatively small proportion of people from the small temporary grants scheme through targeting can far exceed any benefits.

In Sri Lanka’s case, grants were delayed for all recipients, including those in dire need; administrative resources were diverted away from the urgent tasks of recovery and reconstruction, which created room for petty officials to engage in corruption and aggravated community divisions and tensions. Any expected benefits from the rush to implement targeting, only two months after tsunami, must be contemplated in the light of the “success” with targeting achieved in Sri Lanka’s long-established national poverty alleviation programme (*Samurdhi*): the leakage in the *Samurdhi* programme is estimated to be 40 per cent!

#### **5.1.4 Trauma and Stress**

The survey found some evidence of mental and physical health problems related to the tsunami. About 11 per cent of the households knew someone who had committed suicide because of the tsunami. There were reports of more sleeping difficulties, and children experiencing nightmares that were linked to trauma associated with the tsunami. A large number of households—33 per cent of households in the sample—had been offered or given counselling for distress. The percentage of people who received counselling was higher in the Eastern Province, possibly because counselling was already taking place in those areas for sufferers of conflict-related mental health problems.

Twelve per cent of households had family members who had been injured in the tsunami or whose health had deteriorated afterwards: A large proportion of such households (77 per cent) claimed that this affected their income-earning capacity and/or day-to-day activities.

In many cases, the decline in school attendance after the tsunami has not been fully reversed and attendance was reported to be poor even at the end of 2006, with over 25 per cent of children still not attending school (GOSL, 2006). These findings are supported by the survey; nearly 30 per cent of households reported having children who had not yet restarted schooling after the tsunami. The schooling problem existed in areas other than just those affected by conflict, indicating that the problem cannot solely

be attributed to the conflict. Thirty-one per cent of the households reported that the performance of children who were attending school had fallen.

## 5.2 Assistance

There was a strong international public response to the appeal for recovery assistance. Multilateral and bilateral donors and NGOs pledged US\$3.4 billion for post-tsunami recovery activities at the first Sri Lanka Development Forum held in May 2005 (MFP, 2005; GOSL, 2006).<sup>26</sup> This comprised (concessional) loans amounting to US\$798 million and the balance in grants. NGOs pledged a total of US\$853 million on a grant basis. The International Monetary Fund pledged US\$268 million by way of both emergency relief and a debt moratorium. Bilateral donors extended the debt moratorium providing further relief of US\$263 million.

The government reported that around US\$2.2 billion (of the total pledges of US\$2.8 billion, which excluded debt relief) could be considered as firm commitments from the international community (GOSL, 2005a). In addition, an estimated US\$150 million was reportedly received as contributions from domestic sources, without taking into account relief disbursements (for which figures are not available). However, actual committed funds made available to the government appear to have fallen over time to US\$ 2 billion from the previous “firmly committed” figure of US\$2.2 billion (Table 12). At the end of the second year of reconstruction, total foreign grant expenditure relative to commitments was only 35 per cent and foreign loan expenditure was 40 per cent. While individual agencies varied in performance, the bilateral and multilateral agencies had spent on average 29 per cent and 32 per cent respectively of committed funds by end 2006. In addition, although the initial needs assessment was placed at US\$2.2 billion and a total of US\$2.9 billion was secured as committed funds, the funding gap for the reconstruction process as at end 2006 was estimated at US\$247 million (Table 13).

**Table 12: Sources of Foreign Assistance and Expenditures (US\$ million)**

	Pledges	Commitments	Expenditure
International NGOs	378	272	171
International organizations	444	319	76
United Nations	240	109	65
National NGOs	31	22	9
Private sector	16	16	7
Bilaterals	492	912	261
Multilaterals/IFIs	339	396	125
Total foreign grants	1,940	2,046	714
Total foreign loans	1,458	940	377
Government funding	1,462	944	381
Grand total	3,402	2,990	1,095

Note: IFI=international financial institution  
Source: GOSL (2006).

<sup>26</sup> The US\$3.4 billion includes debt relief/moratorium and IMF support.

This low rate of expenditure (absorption of available assistance) is not surprising and highlights the constraints that hinder rapid reconstruction. Sri Lanka's past performance in aid absorption has been poor: The rate of aid utilization in recent years has been only around 20–22 per cent, having improved from around 13–15 per cent towards the end of the 1990s. Many reasons have been cited for such low levels of aid utilization, including political interference with regard to planning, implementation and allocation of funds; staffing and related problems in project management; implementation delays (including infrastructure bottlenecks, complex and costly procurement procedures), and excessive conditionality imposed by donors. Another important factor has been the non-availability of adequate counterpart funds (local funds with appropriation).

**Table 13: Sector Allocation Overview (US\$ million)**

	Funding Gap	Commitments	Expenditure
Housing	107	486	162
Livelihood	20	416	186
Social service	85	393	137
Infrastructure	35	861	134
Other		833	476
Total	247	2,990	1,095

Source: GOSL (2006).

Despite the initial euphoria in the aftermath of the tsunami about the volume and adequacy of foreign assistance, it became clear over time that a substantial proportion of reconstruction would have to be domestically financed. In 2006, the government had committed US\$1.5 billion in domestic funds (over one-third of total reconstruction costs as initially estimated) for tsunami reconstruction. Thus, at the end of two years, two problems with the funding of the reconstruction effort could be identified: the inability of the country to utilise available foreign assistance in a timely manner, and a widening gap between the actual amount of foreign assistance received and reconstruction requirements.

### 5.3 Delivery and Coordination of Assistance

Coordination of the relief and reconstruction effort emerged as a key issue from the beginning of the relief effort, and it continued to be a major issue as the reconstruction and recovery phase started. In Sri Lanka, coordination was required across three groups: (a) among the various government agencies, (b) between the numerous donor agencies, and (c) with the LTTE which was in *de facto* control of a part of the country that was heavily affected by the tsunami. Sri Lanka's governance structure is such that provincial government agencies have considerable powers, and this meant that coordination was required not only between the various central government agencies, but also between the central government and local government agencies. The involvement of major bilateral and multilateral donor agencies naturally required that their activities be coordinated, both among themselves and with the government. Sri Lanka has long experience working with major donor agencies and several INGOs maintain long established operations in the country. There had been some welcome moves towards donor coordination even prior to the tsunami in the context of conflict-related donor reconstruction programmes. Thus, the World Bank, ADB, and JBIC had already established a partnership that enabled a needs assessment to be done immediately after the tsunami. However, coordination with donor agencies and NGOs

became a vastly more complicated issue due to the numbers and practices of the numerous international NGOs (not counting large numbers of individuals and small groups) who came in after the tsunami. Before long, some 180 NGOs were operating in the tsunami-affected regions of Sri Lanka, making coordination a difficult and complex task. In addition, establishing effective coordination with the LTTE raised difficult and sensitive political and constitutional issues.

As mentioned previously, the government initially set up a Centre for National Operations (CNO) and three task forces to address the coordination challenge. Subsequently, the Task Force for Rebuilding the Nation (TAFREN) became the lead agency charged with the task of overseeing the recovery and reconstruction phase.<sup>27</sup> While an overarching authority such as TAFREN was clearly necessary to coordinate post-disaster reconstruction, the structure and composition of TAFREN was such that it was not able to be fully effective in that role. TAFREN was dominated by private sector representatives, and lacked links to line ministries and clear lines of authority. This greatly hampered its ability to efficiently coordinate activities among government agencies. Reconstruction activities had been divided into sectors, such as housing and water and sanitation. This meant that coordination across several agencies, often falling under different ministries, was needed to implement even relatively minor reconstruction activities. For example, three different agencies had to be brought together to ensure that new housing units could get access to water, sanitation, and electricity supplies. Though TAFREN attempted to monitor the line agencies and to play a coordinating role as a “one-stop-shop,” its effectiveness was limited because its role and authority remained unclear.

In November 2005, a decision was taken to amalgamate TAFREN, TAFOR, and the Task Force for Logistics and Law and Order (TAFLOL) into the Reconstruction and Development Authority (RADA). RADA was given wide powers by an Act of Parliament. It was given authority over organizations working on post-tsunami reconstruction and development, and could monitor and control their activities as well as issue “licenses” that would provide legal authority for them to carry out specific activities. In theory, this would enable RADA to exercise efficient coordination. However, potential drawbacks to the vesting of such wide powers in a single, centralised body are that it could overly limit the powers of all other agencies and actors, ignore inputs and feedback from line ministries and local-level agents, reduce flexibility and scope for local initiatives and actions, and make the reconstruction effort too centrally-driven.

Field observations confirmed that lack of adequate coordination resulted in considerable mal-distribution of aid. This was clearly visible, for example, in the way that the distribution of new boats had been conducted, and—as described in a report by the Auditor General—in payment of housing assistance.<sup>28</sup> Large payments were made for houses with minor or no damage, NGOs provided houses to families who were not at all

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<sup>27</sup> After one month, with the conclusion of immediate relief operations TAFREN and TAFLOL were amalgamated to a single entity—the Task Force for Relief (TAFOR)—to implement all relief measures, and the operations of the CNO were scaled down. In February, the CNO was dissolved and officials returned to line ministries. TAFOR and TAFREN took over the responsibilities of the CNO. With the completion of transitional housing, TAFOR was expected to wind down operations and its responsibilities passed to the line ministries.

<sup>28</sup> This report on the tsunami rehabilitation covers the period 26 December 2004 to 30 June 2005. See GOSL (2005b).

affected by the tsunami, and government grants were given to people who had already received houses constructed by NGOs.

The lack of adequate coordination was not only due to weaknesses on the part of the government-established coordinating bodies. A major problem was that some NGOs were simply not willing to be “coordinated,” preferring to act alone pursuing their own agendas. INGOs, as well as some domestic NGOs (particularly those with good foreign links), had access to relatively large amounts of money. With their own funds secure, they saw few incentives to improve coordination. In fact, some were openly hostile to any government action that seemed to place “controls” on their independence.

Further, the presence of large numbers of donors/NGOs at times led to competitive behaviour. In several places deep mistrust developed between local NGOs (who have often been working in the local area for many years) and some INGOs and other foreign agencies who came to distribute tsunami assistance. Local NGOs claim to have been “crowded out” by some of the better financially endowed larger INGOs, who “poached” staff and resources. INGOs varied widely in experience, skills, and operating styles. Many “new” INGOs lacked experience and local knowledge, and in their haste to spend funds and disburse goods and equipment often disregarded local circumstances and community needs. Certainly some INGOs and agencies had valuable expertise in large-scale disaster relief (such as provision of transitional shelters and other relief measures), but domestic NGOs (and INGOs that have operated in Sri Lanka for a long period) usually have a much greater appreciation of local conditions and sensitivities. Greater interaction, engagement and coordination between them would have clearly benefited the overall relief and reconstruction effort. New mechanisms have since been put in place to improve coordination of donor activities at regional and local levels through regular meetings and consultations held by regional administrative officers. However, it is too early to judge their effectiveness.

The problems caused by some INGOS should not, however, be seen as typical of all INGOs. In fact, in many cases INGOs played a very positive role. About 44 per cent of the households surveyed felt that INGOs were more effective in delivering aid, while only 11 per cent felt that the local NGOs were more effective.

Coordination with the LTTE proved to be the most difficult and contentious issue. While discussions to establish a mechanism for aid-sharing began soon after the tsunami, a mutually acceptable arrangement for aid-sharing to enable assistance to flow into the LTTE-controlled areas proved elusive. Sections within the government and within the majority community were opposed to any deal that even appeared to provide *de facto* recognition of the LTTE as the administrative power in regions controlled by it. The LTTE, for its part, was unwilling to accept an arrangement that diluted its administrative and political power in areas under its control. After long, drawn-out negotiations, a MOU setting out an aid-sharing deal between the GOSL and the LTTE, the Post-Tsunami Operation Management Structure (P-TOMS), was signed in June 2005. The P-TOMS agreement envisaged the setting up of a Regional Fund to allow donors to channel tsunami funds directly to the Northern and Eastern Provinces. A multilateral agency (anticipated to be the World Bank) was to be appointed as the custodian.

However, this agreement promptly ran into political opposition. It was challenged in the courts through a fundamental rights petition and the Supreme Court ruled in July 2005

that certain elements were to be put on hold pending clarification,<sup>29</sup> though the overall mechanism was not unconstitutional. The situation was aggravated further by the fact that several major donors who had supported the idea of a joint mechanism for aid distribution between the GOSL and the LTTE declined to channel aid directly to the Regional Fund once the MOU was signed, claiming that the LTTE remains a “proscribed terrorist organization” in their countries. After the presidential election in November 2005, with the election of a new President who publicly opposed the agreement, P-TOMS became totally inoperative. The conflict between the GOSL and the LTTE intensified soon after. The renewed violence disrupted not only the lives of the tsunami-affected people in the area, but also led to a sharp increase in internally displaced persons, placing further pressure on aid agencies. There can be little doubt that these problems led to inequitable distribution of aid, with the most severely affected North and East missing out on their fair share.

While these political factors affected the distribution of aid across regions, there has been no strong evidence of widespread corruption or political influence in the distribution of aid within the provinces. Though some petty corruption appears to have affected the distribution of cash grants once targeting was introduced, the overall aid distribution appears to have been reasonably free of overt political interference and corrupt practices. According to the household survey respondents, very few households had paid bribes to government or NGO officials to receive aid, and very few were aware of instances where politicians had interfered directly.

#### 5.4 Cost Escalation

As mentioned, at the time of the May 2005 meeting of the Sri Lanka Development Forum, the aid promises of the international community seemed to more than cover all reconstruction financing needs. Unfortunately, there was a fundamental flaw in the estimates: They were based on costs and prices that prevailed immediately after the tsunami disaster, adjusted for some expected national-level inflation. These estimates have proven to be gross underestimates; clear evidence soon emerged that construction costs were rising rapidly over time. This was, of course, not surprising. The scale of construction that was envisaged was several times larger than that undertaken in a normal period, and naturally implied sharp increases in demand for construction labour and materials.<sup>30</sup>

Total construction costs for the planned houses for tsunami-affected families had already risen by 30–50 per cent by August 2005, according to data obtained from companies and organizations involved in house building and from field interviews (Table 14). By September 2006, costs had exceeded initial estimates by 60–80 per cent or more.

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<sup>29</sup> Specifically, these elements were the Regional Fund and the location of the regional committee in the rebel-held Kilinochchi city.

<sup>30</sup> There were varying estimates of the extra demand for house construction, but they all pointed to a massive increase in demand for scarce construction labour and materials. According to the Chamber of Construction Industry, as reported in the *Daily Mirror*, 21 February 2005, it was estimated that at least 100,000 additional workers would be required, including about 13,000 masons, 2,000 carpenters, 2,500 painters, and nearly 54,000 unskilled labourers.

**Table 14: Cost Escalation in Housing Construction**

Donor	Unit Area (sq. ft.)	Initial Estimate (SLRs.)	August 2005		September 2006	
			Estimate (SLRs.)	Comments	Estimate (SLRs.)	Comments
Red Cross <sup>a</sup>	600	625,000 (March)	1,000,000	Houses with all basic infrastructure facilities (electricity, water supply, sanitation for each house, roads, etc.).	1,250,000–1,300,000	Cost per housing unit with a tiled roof, basic infrastructure. Price escalation since last year is about 22% due to increase in prices of factors like fuel and labour.
CARE International	550	450,000 (March)	850,000 600,000 550,000–650,000	Jaffna Hambantota All other areas (houses with little basic infrastructure)	700,000–800,000	This is the average. However, the value differs from district to district.
Aitken Spence Co. Ltd. <sup>b</sup>	550	450,000 (March)	> 500,000	With basic infrastructure (with electricity but no water supply)	550,000 (Sep. 2005)	A basic housing unit
World Vision Lanka <sup>c</sup>	500	550,000 (March)	700,000	With basic infrastructure	750,000–800,000	With basic infrastructure
CARITAS Sri Lanka Sarvodaya Movement <sup>d</sup>	500	500,000 (May)	650,000	A basic house (no mention of infrastructure)	800,000	A basic housing unit only
	500	500,000 (May)	650,000	With only a few basic infrastructure facilities	600,000 700,000	South North and East The cost of a basic housing unit only
Forut Institute	550	500,000 (April)	550,000	Only for the house (not with basic infrastructure)	700,000–900,000 800,000	North With basic infrastructure With basic infrastructure

Notes: <sup>a</sup>Estimates said to be costlier because of higher specifications (e.g., use only imported timber); <sup>b</sup>Has currently completed its housing reconstruction estimate for September 2005; <sup>c</sup>Initial estimates based on 500 sq ft. New estimates based on 515–550 sq. ft.; <sup>d</sup>Initial estimates based on 500 sq ft. New estimates based on 540 sq. ft.

Source: IPS surveys.

Information from field interviews indicated that these increases are driven primarily by higher wages for skilled labourers (such as carpenters, painters, and masons), whose wages have doubled in some locations. This is confirmed by data from the construction industry body, the Institute for Construction Training and Development (ICTA) (Figure 2).<sup>31</sup>

**Figure 2: Price Indices for Labour Wages**

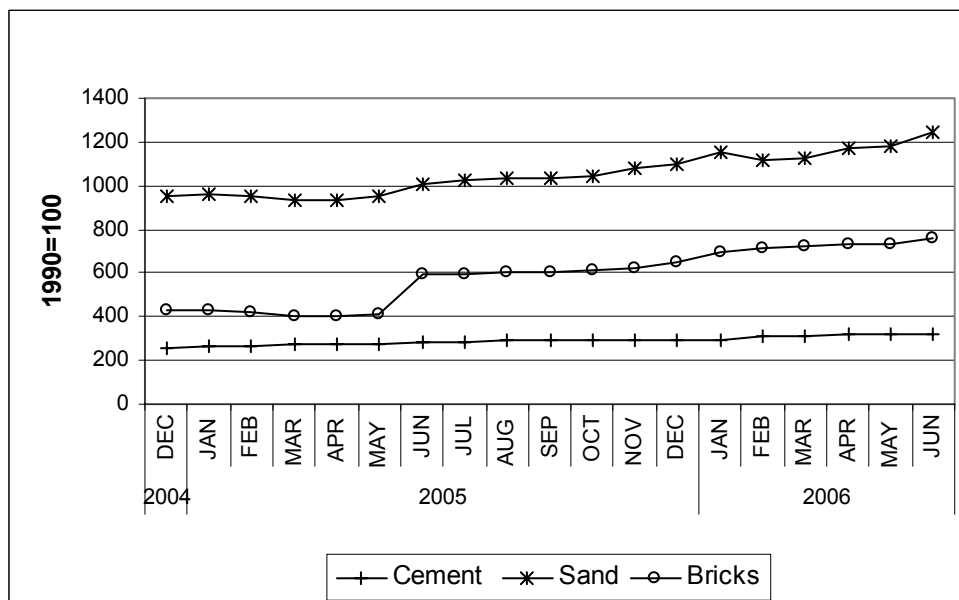


Source: Data from the Institute of Construction, Training and Development, June 2006.

Prices of particular building materials, such as cement, sand and bricks, saw a sharp increase (Figure 3). However, it should also be noted that price increases for importable materials were significantly lower than overall construction cost increases (Figure 4). These data are consistent with survey information: More than three-quarters of the surveyed key informants said that wages of carpenters and masons and prices of building materials had increased “a lot” since the tsunami. This has some important implications: Increased local demand can be met without major price increases when construction materials are importable, but price increases are unavoidable for domestically sourced (“non-tradeable”) materials and labour. The faster the reconstruction programme, the higher the price and cost escalation will be, with less “construction” actually occurring for a given amount of expenditure.

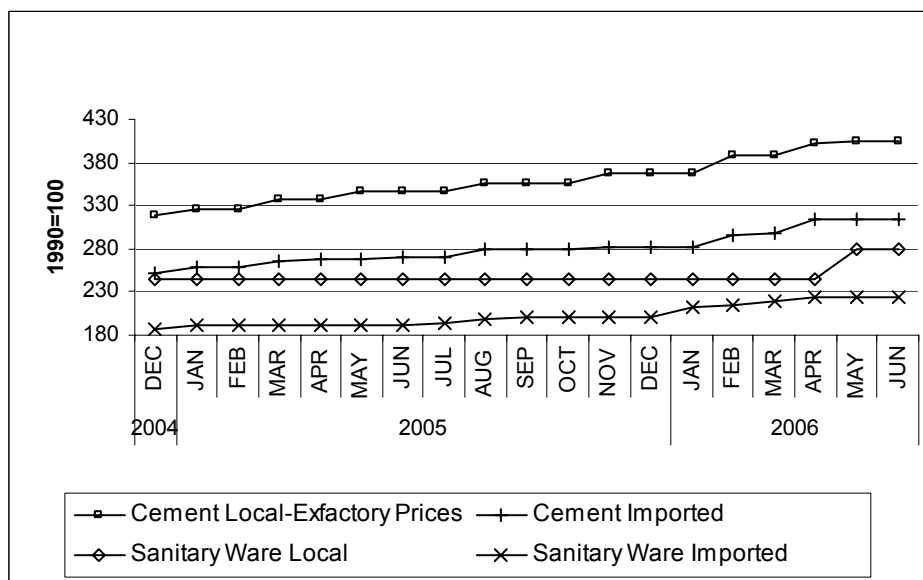
<sup>31</sup> Organizations involved in tsunami housing construction are required to use ICTA registered contractors.

**Figure 3: Prices of Building Raw Materials**



Source: Data from the Institute of Construction, Training and Development, June 2006.

**Figure 4: Imported and Local Price of Building Materials**



Source: Data from the Institute of Construction, Training and Development, June 2006.

**5.5 Broader Economic Impacts**

The typical pattern for economies struck by unanticipated natural disasters has been to experience a brief deceleration in growth, followed by a rebound as a result of the stimulus from reconstruction programmes. GDP growth dipped in the first quarter of 2005 but subsequently showed a strong resurgence. Predictably, the fisheries and

hotels and restaurants sub-sectors experienced a sharp contraction in output while the construction sub-sector experienced strong growth (Table 15). The recovery was better than initially anticipated, and was broad-based. There was continued expansion in industry and services, as well as a recovery in agriculture following improved weather conditions, and this good growth performance continued into 2006.

**Table 15: GDP Growth Rates (in percent)**

	2004	2005	2006
Agriculture	-0.3	1.9	4.7
Fishing	1.6	-42.2	51.7
Industry	5.2	8.3	7.2
Construction	6.6	8.9	8.0
Services	7.6	6.2	8.3
Hotels & restaurants	13.1	-27.5	6.3
GDP	5.4	6.0	7.4

Source: Central Bank of Sri Lanka, *Annual Report 2006*.

The tsunami reconstruction undoubtedly brightened prospects for Sri Lanka's short-term economic outlook. The total investment/GDP ratio increased by 1.5 percentage points in 2005, much of it driven by government investment. In fact, the investment/GDP ratio improved to 28.7 per cent in 2006. This was reflected in higher imports of investment goods and construction activities.

**Table 16: Post-Tsunami Fiscal Outlook**

(As % of GDP)	2004	2005	2006
Revenue	15.4	16.1	17.0
Expenditure	23.5	24.7	25.4
Current	19.2	18.7	19.5
Capital	4.3	6.0	5.9
Fiscal deficit	-8.2	-8.7	-8.4
Financing			
Foreign loans	1.8	2.0	1.5
Foreign grants	0.4	1.4	1.1
Domestic	5.8	5.2	5.8

Source: Central Bank of Sri Lanka, *Annual Report 2006*.

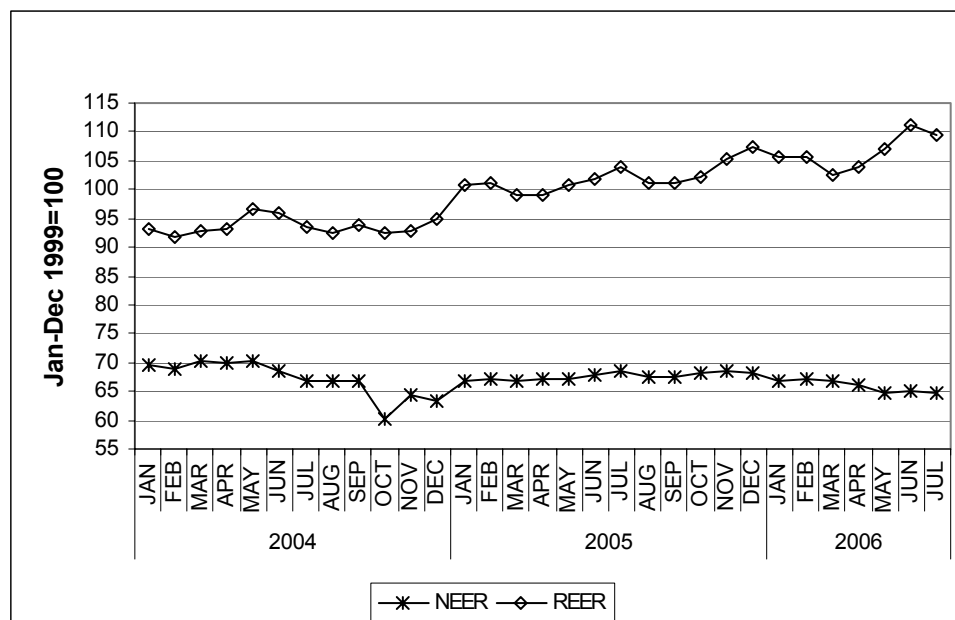
While the additional tsunami-related expenditure was budgeted to be met by foreign grants, financing needs increased owing to cost escalation and the increase in the numbers of housing units required. Despite added fiscal pressures, there was little effort to curtail spending in other areas, fuelling inflationary pressures from policies unrelated to tsunami reconstruction.<sup>32</sup> Fiscal profligacy in the face of higher spending on tsunami-related rehabilitation aggravated inflationary pressures in the economy. The initial response to rising inflationary pressure was slow, and interest rates remained unchanged allowing credit growth to expand at a rate of over 20 per cent. Broad money

<sup>32</sup> For example, adding workers to the government pay-roll saw payments on salaries and wages rising from 5.2 per cent of GDP in 2004 to 5.9 per cent of GDP in 2005; transfers and subsidies over time increased from 4 per cent of GDP in 2003 to 5.4 per cent of GDP in 2005.

growth in 2006 was 17.8 per cent, and inflation rose from 11.6 per cent in 2005 to 13.7 per cent in 2006.

The Sri Lankan electorate has traditionally been very sensitive to inflation. Elections were due in late 2005 and the government was keen to keep inflation in check. This generated political pressures to resist any exchange rate depreciation which could have intensified domestic inflation. There is some evidence to suggest that the tsunami-related capital inflows were used to prop up the nominal exchange rate in 2005, and this may have been a factor in the slow absorption of aid flows. There was also a significant increase in inward remittances from 6.7 per cent of GDP in 2004 to 7.7 per cent by 2006. While some of the increase may reflect assistance provided to affected family and friends, the increase could also reflect better earnings performance of the majority of migrants employed in the oil rich Middle Eastern countries. Sri Lanka managed to record an overall surplus of US\$500 million on the BOP in 2005 (compared with a deficit of US\$205 million in 2004) and official reserves showed a sharp improvement.

**Figure 5: Nominal and Real Effective Exchange Rate**



Notes: The nominal effective exchange rate (NEER) and real effective exchange rate (REER) are based on trade composition with 24 trading partners.

Source: Central Bank of Sri Lanka ([www.centralbanklanka.org](http://www.centralbanklanka.org))

The influx of increased foreign capital reversed the sharp devaluation of the rupee vis-à-vis the US dollar at end 2004, leading to a nominal appreciation of over 5.5 per cent in the week following the disaster.<sup>33</sup> The nominal effective exchange rate (NEER) appreciated by 7.7 per cent in 2005 (compared to a depreciation of 11 per cent in 2004).

<sup>33</sup> The currency depreciated to SLRs.105.47 per US dollar on 17 December 2004—the highest rate in the interbank market. It had appreciated to SLRs.98.11 by 12 January 2005. The appreciation of the rupee for the rest of the year was also partly influenced by the movement of major currencies as the US dollar appreciated against them.

The higher nominal appreciation in the context of relatively high domestic inflation led to a real effective exchange rate (REER) appreciation of 12.7 per cent (as against a depreciation of 1.1 per cent in 2004). To the extent that this real appreciation was a result of tsunami-related aid flows, it would have had the standard Dutch disease effects on Sri Lanka's exports.

Aid flows following a disaster are, by their nature, temporary. As the tsunami-related capital inflows eased over time, the government was compelled to seek other forms of external funds to finance the expanding fiscal deficit. In December 2005 Sri Lanka sought a sovereign credit rating as the first step to raising an estimated US\$0.5–1 billion in the international bond market. Sri Lanka was assigned a BB- (below investment grade) and a B+ by two rating agencies. But, with the escalation in domestic hostilities the credit outlook was downgraded from stable to negative in April 2006. In 2006, for example, the government raised US\$580 million by issuing 2–3-year maturity dollar bonds (Sri Lanka Development Bonds) at rates of 120–140 basis points above the London Inter-Bank Offer Rate (LIBOR) despite the inherent risks involved in recourse to foreign commercial borrowings.

Thus, the overall macroeconomic trends raised serious concerns about the sustainability of the country's post-tsunami burst of GDP growth once the temporary aid flows ceased.

## 5.6 Social Cohesion

The spontaneous solidarity that united communities immediately after the tsunami rekindled hopes that the ethnic divisions that had cost the country so dearly in recent years might finally be waning. However, the North and East have since seen an escalation in hostilities between the GOSL and the LTTE, and the country has been plunged back into large-scale conflict. We have already referred to the political problems that derailed the P-TOMS agreement on tsunami aid allocations to the LTTE-controlled areas and undermined the possibilities for a lasting peace. This is in sharp contrast to what happened in Aceh, Indonesia, where the tsunami created conditions for the cessation of a long-running secessionist war.

There is evidence that the post-tsunami relief and reconstruction activities may have contributed to increased social tensions among various groups in affected communities. Many poor households who were unaffected by the tsunami were unhappy because they were ineligible for tsunami aid. This was particularly important in the conflict-affected Eastern Province where large numbers of people have suffered from the two-decade-long conflict and have been internally displaced for long periods of time.

The manner in which tsunami-damaged physical assets were replaced in some instances undermined the social capital of an area by exacerbating existing tensions and rivalries. In some places, tensions developed between fishers and other groups because the latter felt that the fishing industry received greater attention. Similar tensions emerged in the housing sector. The substantial differences between different types of houses built by different organisations, and the different levels of grants given to different groups created perceptions of inequity.<sup>34</sup>

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<sup>34</sup> The government was forced to lay down specific standards for new houses because of large differences in size, quality, etc. among donor-built houses.

## 6. OVERALL ASSESSMENT AND CONCLUSIONS

For Sri Lanka, facing a major natural disaster and coping with the subsequent reconstruction and recovery needs has been a unique experience. In the circumstances, the initial relief effort can be considered a success. An unusually large amount of aid, from a very large number of organizations, arrived in a very short time. Also, a large proportion of aid flowed through individual, private, and nongovernment organisation hands instead of through the traditional donor agencies or the United Nations. This facilitated rapid relief and early initiation of reconstruction activities, but also raised issues of coordination and aid absorption, and posed some unique challenges. The problems and issues that emerged included:

- Problems related to the absorptive capacity of government and households;
- Very high transaction costs and major coordination problems caused by a large number of donor organizations;
- Rapid increases in demand for labour and raw materials leading to construction cost escalation;
- Excessive focus on the quantity of aid disbursement that undermined the effectiveness of aid (e.g., mal-distribution, poor quality fishing boats, etc.);
- Lack of adequate local capacity to provide the information necessary for effective coordination and monitoring of aid distribution;
- Lack of clear and transparent information-sharing mechanisms between various governmental and non-governmental agents; and
- Differences in levels of assistance provided to tsunami-affected households and conflict-affected households in the North and the East.

It must also be pointed out that many initial fears about a range of likely problems either proved to be not well founded or were resolved effectively. In particular, large-scale corruption did not become a major problem, perhaps because the reconstruction did not involve large-scale infrastructure projects. Cases of petty corruption were recorded, such as officials abusing discretionary powers (for example, determining eligibility for different types of housing aid and cash grants). In several such cases the government took disciplinary action. There were also fears that large-scale imports of food as aid would depress domestic producer prices and hurt farmers. But the government ensured that new food purchases by the World Food Programme were domestically sourced to help farmers recover and maintain rural incomes. However, the problems with tsunami aid allocation and distribution have aggravated regional disparities and perceptions of regional/ethnic bias in policy.

There is no doubt that, at the initial relief stage, what is most important is to ensure delivery of basic food, clothing, medicines, and shelter. But aid in kind may not be the most effective mode of assistance later, when markets and links with the rest of the economy have been re-established. Substantial amounts of aid in kind provided later were wasted because they did not meet the requirements or the preferences of the affected households. In contrast, cash grants allow households the flexibility to spend on goods and services they actually desire.

Another issue is whether assistance should be narrowly targeted to the “most needy” groups only, or provided to all affected people. The beneficiary lists drawn up by government agencies not only delayed distribution of grants, but also appeared to be an inefficient, corruption-prone process. In principle, systems can be created where the

most needy “self select,” and these can work fairly effectively in some circumstances. But it is not clear that the savings made justify the costs in delays, the incentives for corruption, and the likelihood that some truly needy groups miss out altogether.

A major challenge is to devise appropriate administrative mechanisms to ensure effective cooperation and coordination between central government and local agencies, and to ensure that central coordination does not end up stifling local initiatives. Decision-making in disaster situations requires a complex balance of roles between the central government and the locally-affected areas, and the central government must be responsive to the concerns and feedback from local agents. Sri Lanka initially tended to have an overly centralized system, and there were concerns that local governments were not given enough freedom to make decisions and implement them. Also, the central government seemed to have rushed to establish new institutions specifically to deal with tsunami-related aid distribution, ignoring or bypassing existing institutions, resulting in the reduced effectiveness of reconstruction efforts.

The aftermath of the tsunami disaster also raised issues of macroeconomic management that have relevance for any country affected by a major disaster. Sri Lanka was faced with the challenge of absorbing a large, but necessarily temporary, inflow of foreign funds. In itself this is a complex and difficult task. But the task was made even more difficult by the need to direct those funds efficiently to emergency relief, and then to rehabilitation and reconstruction of damaged assets and infrastructure. The initial assumption that foreign financing was more than adequate for reconstruction was quickly dispelled as the large-scale reconstruction programme quickly raised demand for construction inputs that produced steep increases in construction costs. In turn, this produced funding gaps that had to be filled either by the government—widening the already larger fiscal deficit—or by additional foreign assistance. Arguably, the institutional weaknesses and political factors that slowed absorption of foreign assistance may have helped to restrain such cost increases, thereby allowing a larger share of tsunami expenditures to be effective in asset rehabilitation rather than be captured by construction input owners. Sri Lanka’s experience highlights the need for factoring in such cost increases when assessing needs following major disasters, and the need for formulation of a phased programme of reconstruction which takes into account the supply side constraints on construction inputs.

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### **APPENDIX: SUMMARY OF METHODOLOGY FOR IPS TSUNAMI SURVEY 2005 AND 2006**

Eight districts that were most severely affected by the tsunami in the Northern, Eastern, and Southern provinces were selected for the survey. These consisted of: the Trincomalee, Batticaloa, and Ampara districts from the Eastern Province, the Jaffna and Mullaitivu districts from the Northern Province, and the Hambantota, Matara, and Galle districts from the Southern Province.

In these eight districts, Grama Niladhari Divisions (GNDs) were first identified where more than 50 per cent of houses were made unusable due to being completely or severely damaged using Department of Census and Statistics (DCS) data.

The 16 GNDs for the study were distributed across the eight districts based on the level of housing damage in each district (Table A.1). Within the districts, GNDs were chosen based on socio-economic data so as to select a representative set of GNDs considering ethnicity, religion, livelihoods, and the location with respect to the 2005 buffer zone (the “no-build” zone). Socio-economic data for this purpose were obtained from the 2001 Census by the DCS for the Southern districts. Since census data did not extend to the districts in the Eastern and the Northern provinces, socio-economic information for these provinces was obtained through key informants from those areas. Key informant information was also used to select GNDs with households both within and outside the 2005 buffer zone. (Information given by key informants in this regard was not entirely accurate, and, as a result, some GNDs that were mostly within the no-build zone remained in the sample).

**Table A.1: Distribution of GNDs across Selected Districts**

District	Number of Unusable Houses	No. of GNDs Selected for Survey
Jaffna	3,686	1
Mullaitivu	5,137	1
Trincomalee	4,643	2
Batticaloa	9,905	4
Ampara	10,566	4
Hambantota	1,290	1
Matara	2,401	1
Galle	6,169	2

Note: Information from Mullaitivu was not available for the selection process

A sample of 45 households from the list of *unusable houses* for each GND was randomly selected for the household survey, with 30 households outside the no-build zone and 15 within. However, in some GNDs there were less than 30 houses outside the buffer zone. In these instances, more households from within the buffer zone were interviewed to make up the sample. The households were selected using DCS tsunami census data where available. For the two GNDs where DCS data were not available, household lists obtained from Grama Niladharis (GNs) were used as a frame.

Due to delays in obtaining access, the survey could not cover the Jaffna and Mullaitivu districts of the Northern Province. Therefore, information is available only for 14 GNDs in the Southern and Eastern provinces. Information from the selected GNDs was collected

at several levels in April 2005. To obtain community-level perspectives on rebuilding, relocation, and land issues, focus groups were conducted in all GNDs. In addition, community-level information to ascertain community characteristics and information on rebuilding, relocation, and land issues was obtained through key informant interviews based on a structured questionnaire. In addition to these interviews, information on land supply in the GNDs was obtained from the relevant Divisional Secretary's Office, also based on a structured questionnaire. The household-level interviews were conducted using a structured household questionnaire. The questionnaires were drafted in English and translated to Sinhala and Tamil for use in different GNDs.

In July 2006, an attempt was made to resurvey all the 622 households that were interviewed for the April 2005 survey with the view to gaining updated information on the progress of the reconstruction effort. The survey was designed to address issues of permanent housing paucity, recovery in livelihoods, etc., to get a clearer picture of where Sri Lanka stood in the reconstruction process one and a half years after the tsunami disaster. In addition to the housing survey, three key informant interviews in each GND were conducted. When a household could not be located, randomly selected replacement houses were surveyed from the GND. The resulting database consisted of 595 households, of which 564 were from the original 622 households.