

EFFECT OF M 9.0 26/12 ON SRI LANKA: SOCIO-ECONOMIC IMPACT EVALUATION OF SRI LANKA'S TSUNAMI DISASTER AND CRITICAL REVIEW OF THE NEEDED COUNTERMEASURES.

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Abstract

Severe earthquake at the coastal areas of Sumatra island of Indonesia at the magnitude of 9.0 and the consequent Tsunami not only created the historic human and economic damage but also raised questions of hi-tech early warning systems and the risk communication in the region as well as in the country. Though it made severe impact in the Indian Ocean countries, in this paper we evaluate the situation of Sri Lanka which is the second worst affected country in the region. Accordingly more than 40,000 people died, more than 800,000 people have been affected and about 70% of the country's coastal area of the country has been damaged. Severe damage has also been caused to the internal infrastructure of the country affecting the speedy recovery and rehabilitation activities. This is further aggravated by the post-disaster epidemic of diseases. Though there is an influx of foreign aid, improper supply management considerably negates the efforts to bring back normalcy. Colossal loss to the economy in various forms also further hurdles the post disaster development efforts as development and disasters are horizontally and vertically related under the macro economic framework. Hence this paper critically evaluates the post tsunami scenario in Sri Lanka with special reference to the economic and social impact and also the necessary and sufficient countermeasures needed in the future to reduce such impacts through regional integration. In addition, future disaster management strategy to the country through the regional perspective is also discussed.

Preamble

So far natural disasters in Sri Lanka are mainly hydro-meteorological phenomenal events such as flood, landslides, cyclones, and droughts and these natural disasters have caused extensive damage to the people and property year after year, disrupting social and economic

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development endeavors, triggering tremendous damage people and their livelihood and to expose substantial economic losses to the economy. But the 2004 December 26th Tsunami disaster was something Sri Lanka has never experienced for more than 100 years. According to the available records, Sri Lanka first experienced Tsunami in 1883 after *Krakatoa* volcanic eruption (*Indonesia*) on 26th August (CRED, 2005). The scale at which 2004 Indian Ocean Tsunami struck the entire region is unimaginable and paradoxically, 2004 Tsunami was also on the same 26th day!!!.

On Sunday, December 26th morning, two hours after the first earthquake occurred, tsunamis triggered by massive earthquakes in the *Sumatra* and *Nicobar* regions, plunged Sri Lanka into crisis. These waves initially lashed the Eastern coast and subsequently hit many areas of the Southern and Western coasts of Sri Lanka, causing extensive damage to life and property. These Tsunami waves struck about 70 percent of the coastline of Sri Lanka (more than 1,200 km). The waves penetrated inland areas even up to 400-500 meters in many places, leaving behind few intact structures. It has even struck a heavily packed passenger train bound for southern coastal town *Galle* and killed more than 1,500 people. Thirteen districts along the coastal line, out of a total of 25 districts in the country, have been affected. This Tsunami disaster left more than 35,000 people dead, second highest dead toll in the region behind badly affected Indonesia, and another 8,000 missing. According to the Government figures, about one million people are affected, which is almost 5 percent of the total population. More than 120,000 houses were also damaged. The damage caused by this Tsunami is being estimated now and expected to be over 100Million US\$.

The strip of coastline hit by the waves was generally dominated by poor squatter households and fishing villages engaged in minor economic activity. Fishermen communities have been particularly devastated by the Tsunami. Agricultural production and markets have also been affected by the Tsunami. The worst devastations however happened in the poorer areas of Sri Lanka in the South and the conflict-affected North and East. The South-Western coastal areas, which are the main tourist destinations, account for roughly 40 percent of the affected people, mostly Sinhalese. The conflict affected zone in the Northern and Eastern part of the country comprises six of the affected 12 districts. Four of them – *Jaffna*, *Mullaitivu*, *Batticaloa* and *Ampara* - have been badly hit by the Tsunami, comprising more than 50 percent of the affected people. These conflict affected zones are predominantly inhabited by Tamils.

Post Tsunami survey results indicate that more than half of the affected people have lost their livelihoods. Two thirds of those who lost their income are fishermen; the second largest group is retail traders, followed by people engaged in agriculture and manufacturing. Almost all of them depend now mainly on welfare and charity. Whilst district authorities and local and international communities responded spontaneously, they were soon overwhelmed by the magnitude of the disaster. The Government immediately declared a state of national disaster and requested international assistance. The international community was quick to respond by pledging financial assistance and commissioned needs assessment missions. Given the magnitude of the catastrophe and the over-pouring support from a huge number of sources the need for effective coordination has become a major predicament.

Socio-Economic Situation of Sri Lanka when Tsunami Struck

It was obvious that the tsunami struck at a time when the Sri Lankan macro economy was already under pressure on several fronts, creating fears of a economic decline into the kind of crisis that was seen in 2001 when the economy contracted by 1.5 per cent. Some of the same problems that produced the 2001 crisis were re-emerging. The 2001 crisis was driven primarily by a rapidly deteriorating domestic policy and political environment in the context of accumulated macroeconomic imbalances, aggravated by lower exports due to depressed global economic conditions and lower agricultural output due to adverse weather. The situation was turned around then by a series of political and economic policy initiatives. The



international efforts and domestic initiatives which brought a ceasefire agreement (CFA) with the Liberation Tigers of Tamil Eelam (LTTE) was seen as a first step towards solving the country's long standing ethnic conflict. The prospect of peace and a substantive set of economic reforms – including the floating of the currency – succeeded to some extent in gaining donor support and renewing investor confidence. GDP growth resumed at an annual rate of 6 % in 2003, fiscal consolidation efforts saw the budget deficit reduced progressively to 8 % from 10.8 % in 2001 while inflation moderated to 6.3 per cent from 14.2 per cent in 2003.

There was considerable unease within the business and investor community about the direction of policy under the new government elected in April 2004. Economic growth began to slow from the second quarter of 2004 and ended the year with a growth rate of 5.4 per cent. Some policy weaknesses and the slow pace of reforms contributed to the lower 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 mid-year onwards. A ballooning oil import bill saw the current account deficit on the balance of payments (BOP) widening to over 3.3 % of GDP from 0.4 % 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 to the private sector in excess of 20 per cent, with an estimated 40 per cent of the increase for consumption spending; and a boom in the Colombo stock market unsupported by major indicators of economic fundamentals. The peace process 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 the rupee depreciation again gathered pace. On 17 December 2004 the currency fell to a historical low of Rs.105 against the US dollar. Thus, the tsunami came at a time of bleak economic news. If there was no effective policy response, a slide into crisis became a serious possibility. The tsunami diverted attention away from these imbalances but did not eliminate them. As we look at the post-tsunami recovery issues and the policy scenarios, it is important to emphasize that the successful post-tsunami recovery is inextricably tied to the resolution of these fundamental structural imbalances (Jayasuriya.S., Steele.P., Weerakoon.D).

Due to the peace process that halted the violence contributed to the productive livelihood of the people at various levels. New ventures and various other productive sectors re-emerged which provided the much needed support to the people. Inter community understanding and cohesiveness was at the highest level and contributed to the development.

Tsunami Impact: Socio-Economic Phenomenon

The Tsunami struck the country when the country started its way into development. The immediate damage and impact was not known but now a days it is estimated to be second highest in the region after Indonesia. Following tables and figures show the situation in detail.



Table 1

Province	District	Affected Families	Displaced Families	Displaced Persons			Deaths	Injured	Missing	Damaged Houses		No. of Camps
				In Welfare Centers	With Relatives and Friends	Total				Completely	Partially	
Northern	Jaffna	13,485	10,640	11,360	28,760	40,120	2,640	1,647	540	6,084	1,114	19**
	Killinochchi	2,295	318	305	1,298	1,603	560	670	1	1,250	4,250	2
	Mullaitivu	n.a.	6,007	11,993	10,564	22,557	3,000	2,590	552	3,400	600	23
Eastern	Trincomalee	30,102	27,746	19,515	62,084	81,599	1,078		337	5,974	10,394	42
	Batticaloa	63,717	12,494	26,889	35,957	62,846	2,840	2,375	1,033	15,939	5,665	48
	Ampara	38,624	n.a.	73,324	*	73,324	10,436	120	876	29,199		74
Southern	Hambantota	16,994	3,334	574	17,168	17,742	4,500	361	963	2,303	1,744	5
	Matara	20,675	2,904	3,202	8,996	12,198	1,342	6,652	613	2,362	5,659	29
	Galle	23,174	1,472	4,507	123,247	127,754	4,218	313	554	5,525	5,966	38
Western	Kalutara	6,905	6,905	3,261	24,452	27,713	256	400	155	2,780	3,116	16
	Colombo	9,647	5,290	5,812	25,885	31,697	79	64	12	3,398	2,210	28
	Gampaha	6,827	308	876	573	1,449	6	3	5	292	307	2
North Western	Puttalam	232	18	66		66	4	1	3	23	72	2

Source: National Disaster Management Center, 2005 Sri Lanka Department of Census and Statistics, Government of Sri Lanka, 2005.

Figure 1: Death Toll

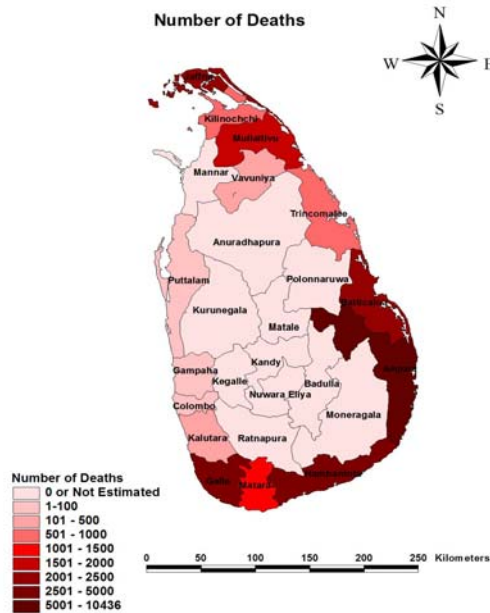
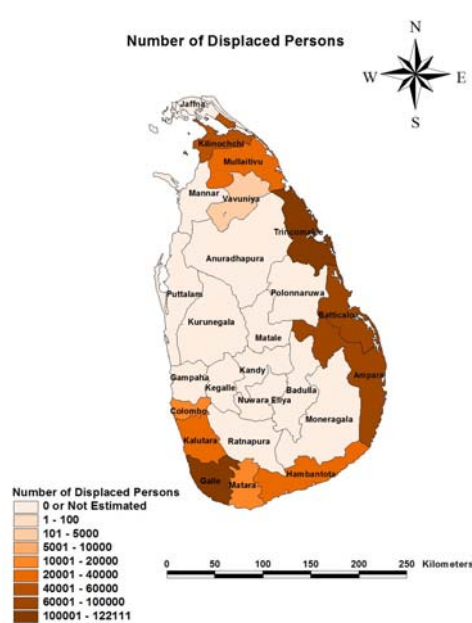


Figure 2: Displaced People



Source : National Disaster Management center, 2005, Sri Lanka

The death toll is now well above 40,000 people and majority of the victims were women and children. More than 800,000 thousand people were displaced. it can be said that in terms of death and missing numbers, Sri Lanka is second to the Indonesia and greater than other affected countries in the region such as India, Thailand and Maldives. Among thousands of damaged houses, majority were the poor fishing communities' houses. In addition to this, the economically important damage was the tourist resort hotels in the southern area of Sri Lanka. It can also be seen that more than 300 schools were completely damaged or sustained major damages. Many lifeline spots and public infrastructure facilities were also damaged.

Figure 3: Affected Families

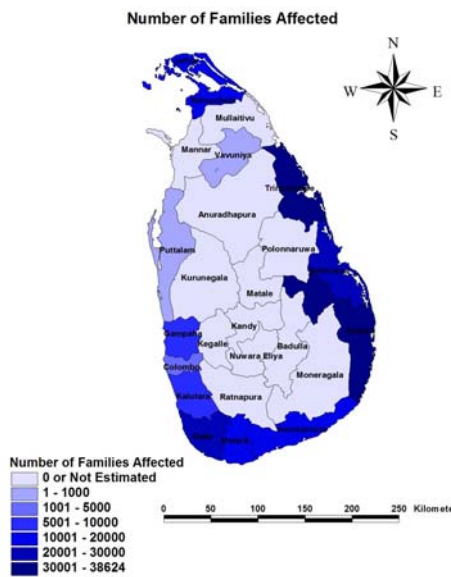
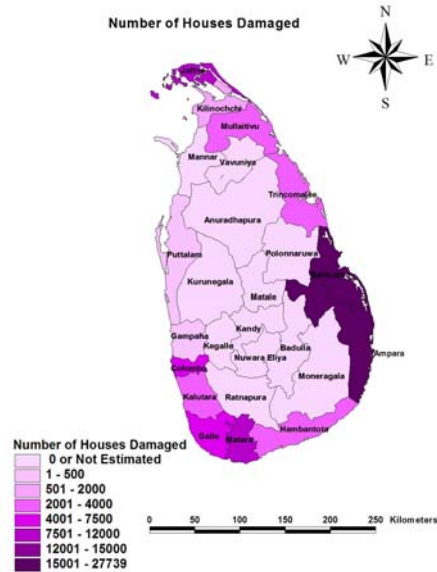


Figure 4: Damaged Houses



Source : National Disaster Management center, 2005, Sri Lanka

Though the damage and the geographic impact of the tsunami were uneven, the majority of the human damage was from the coastal belt from the conflict affected north and eastern areas. The severity of the tsunami disaster in the northern and eastern provinces compounded problems arising from the three decades long internal conflict. The majority of the internally displaced people live in these two provinces. The worst hit industry was the fisheries industry and the tourism industry. Further marginal damage was also experienced by the agriculture industry as the tsunami affected areas are predominantly fisheries and agriculture areas. Hence the damaged caused to these industries are severe in terms of the people's livelihood.

Tsunami Impact Evaluation

The ADB-JBIC-WB assessment 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 at US\$ 1.5-1.6 billion (7.5 per cent of GDP). The largest financing needs were in the housing sector. The destruction of private assets was substantial (\$ 700 million), in addition to public infrastructure and other assets. Loss of current output in the fisheries and tourism sectors – which were severely affected – were estimated at \$ 200 million and \$ 130 million, respectively. Key industrial, agricultural and metropolitan centers were relatively unaffected and the damage to capital assets was primarily to tourism and fisheries sectors, each of which contributes only around 1.5-2 per cent of GDP. These aggregate figure 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, 2005a). The government of Sri Lanka (GOSL) subsequently (May 2005) firmed up the country's total investment needs to be US\$ 2 billion (GOSL, 2005b) (Table 2). The differences between these estimates reflect the government's more ambitious longer-term plans while the donor assessment was largely geared to restoring the pre-tsunami situation.

Table 2: Damage Estimation and Needs Assessment on Reconstruction and Rebuilding. (US\$ Million)

Sector	ADB/JBIC/WB*		GOSL**
	Losses	Needs	
Housing	306-341	437-487	400
Roads	60	200	210
Water and Sanitation	42	117	190
Railways	15	130	77
Education	26	45	90
Health	60	84	100
Agriculture	3	4	10
Fishery	97	118	250
Tourism	250	130	58
Power	10	67-77	-
Environment	10	18	30
Social Welfare	-	30	20
Excluded Items	90	150	
Telecommunication (Fishing and rural)	-	-	60
Port Development	-	-	32
Industrial Development	-	-	34
Enterprise Development	-	-	55
Regulatory and Admin Infrastructure	-	-	38
Microfinance/SME credit	-	-	150
Total	970-1000	1500-1600	1769

Source: * ADB, JBIC, World Bank (2005) and ** Govt. of Sri Lanka (2005)

Impact and Response

The immediate impact on the economy was measured by the disaster impact on the GDP and it is estimated to be fairly limited, about 1 to 2%. This is bit surprising figure if we consider the extent of the human losses and damage to other facilities. The reason could be that a smaller part of the active economic engine is damaged. But according to the 2005 economic figures it looks so small but in the long term when the economy gets benefit from the current resources the damage will be much more as the cumulative loss to the future economy will be incurred from the current assets which were damaged. Hence the Government and the donor agencies should plan their reconstruction and rehabilitation plan based on this. In other words, it can be said that the overall impact on the national income over time will depend on how quickly asset replacement or the reconstruction will occur.

The household spending has also changed since tsunami. The savings are also affected and the consumption decreased. But the families affected are now receiving certain support from the government and the much more supplementary support came from abroad. Though this would have mitigated the domestic spending for a short term the long term impact will definitely arise from the future economic imbalances which would arise from prolong delay in reconstruction. A larger disaster like tsunami of course destroys the consumer durables and assets thus creating a blockade for the spending and savings which would lower the future income flows. This will ultimately affect the economic performance in the long run and the societal set up at least in the sort run. Further community support in reconstruction process is invaluable and that is the vital element for the sustainable recovery too.

Since the international response was quick and huge, the affected people saw some bright future and that raised their working spirits too. The promised relief assistance by the international agencies and governments in terms of aid flow and debt relief raised the hope of quicker recovery and early resumption of active economic growth. Now it is very much imperative to the government and other recovery partners to use these responses in a

coordinated and responsible manner for quicker recovery. Aid coordination with the international agencies and NGOs are of paramount importance. The promised external assistance by bilateral donors, multilateral agencies, NGO/Private Sectors is almost 2230 Million US Dollars and this is much above to the government requested or estimated damage assessment of 1769 Million US Dollars. Hence now it would a huge task for the authorities to effectively manage the funds and accelerate the recovery and growth. Hence a proper coordination and relief distribution in terms of sustainable recovery is the most needed strategy now.

Needed Disaster Countermeasures and Sustainable Recovery

Since not only Sri Lanka, but also the Indian Ocean region experienced such a massive disaster, it is now imperative to establish necessary and sufficient countermeasures in the countries, which include establishment of early warning system for various natural disasters including tsunami awareness centers in the Indian Ocean rim, enhancement of national and regional emergency information dissemination and supply management systems, building Infrastructures for disaster prevention and mitigation, and promotion of school education and community awareness on disaster reduction. These are most needed activities at the moment to prevent the occurrence of such large scale damage by disaster in Sri Lanka and other vulnerable countries in the region.

It is sad to say that the progress in recovery is very slow and almost 5 to 10 % of the damaged houses are rebuilt. Hence the authorities must accelerate the recovery efforts with available and promised funds rather than lobbying for further funds. Further coordination among the domestic and external agencies is found to be a serious problem. This has to be rectified to ensure the equal opportunities for the affected people and this should assure their return to the normal economic run as quick as possible.

As we have seen in this paper when tsunami hit the country had serious macroeconomic imbalances. This is further aggravated due to the absence of policy alternatives and mismanagement. The authorities should not be overwhelmed by the short term recoveries in the currency pressure due to the economic phenomenon that would follow a major disaster and the huge subsequent assistance. Hence pragmatic macroeconomic policies should be drawn to divert the ad-hoc manner of the recovery stimulated growth in the proper path that leads to the sustainable development.

The most important aspect is to pursue the ongoing Cease Fire Agreement and Cessation of Hostilities in the conflict and disaster affected areas of Sri Lanka. The future growth of the economy in the long run after the disaster depends much on the peaceful and development conducive situation of the country. If another conflict erupts then that will destroy the already affected nation beyond recoverable terms. Hence proper domestic coordination with the authorities in the war affected areas is much needed (SriGowri Sanker, M. S., 2006).

In addition school education about disaster prevention and mitigation, community based disaster mitigation activities, proper early warning system and methods to disseminate these early warning s effectively to the public, public awareness programmes, information dissemination and coordination among stakeholders are much needed as disaster countermeasures in Sri Lanka in the view of preventing further disaster damages (ADRC, 2005).

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