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Invited Paper

Lessons from Natural Disasters, Tsunami-Affected Small and Medium-Sized Enterprises (SMEs) in Sri Lanka

S. W. S. B. Dasanayaka, Gayan Wedawatta and G. D. Sardana

Abstract

The main objective of this paper is to identify some of the key issues encountered by tsunami-affected small and medium-sized enterprises (SMEs) in the process of rehabilitation and re-establishment in Sri Lanka. The second objective is to assess how far these affected industries have received various benefits and supports from bodies such as government agencies, private sector firms, donors and NGOs to help them get back into business. The final objective is to recommend policies and strategies to develop the tsunami-affected SMEs in a self-sustaining manner and within a certain time period. The main database of firms for this research has been obtained from the Industrial Development Board, which conducted a survey covering 4,389 tsunami-affected micro- and SMEs. In addition to this, information from various state organizations and NGOs-based sources has been used. This paper identifies the main issues related to tsunami-affected SMEs ranging from basic infrastructure provision up to finance, marketing, machinery, technology, training, product identification and development and so forth. In fact, it is shown that there are no significant differences between issues faced by SMEs in general and tsunami-affected SMEs, apart of course from the effects of a sudden disaster (the tidal wave). Consequently, these issues can be generalized as issues relevant to SMEs in Sri Lanka as a whole. However, under the flood and rain of local and foreign assistance, there have been more pledges and promises than actual deliveries and, so, tsunami-affected SMEs have received comparatively little support and assistance in recovering and no records can be found as to where the colossal amount of foreign assistance received has actually gone. Finally, this paper recommends various types of business incubator centres and entrepreneurial enhancing skill programmes for the revamping of tsunami-affected SMEs in addition to the normal disaster risk management plan.

Keywords: entrepreneurship, rehabilitation, small and medium-sized enterprises (SMEs), tsunami, technological innovation.

Prof. S. W. S. B. Dasanayaka is a faculty member of the Dept. of Management of Technology, Faculty of Engineering, University of Moratuwa, Moratuwa, Sri Lanka. Email: sarathd@mot.mrt.ac.lk

Dr. Gayan Wedawatta is a faculty member of Engineering Systems and Management, School of Engineering and Applied Science, Aston Triangle, Birmingham, UK. Email: g.wedawatta@aston.ac.uk

Prof. G.D. Sardana is Professor of Operations Management, Birla Institute of Management Technology, Greater Noida, India. Email: gdsardana@gmail.com

1. Background

Sri Lanka was one of the main countries to be affected by the force of the tidal waves and flooding caused by the worst earthquake in the last 40 years. The tsunami tidal wave which struck Sri Lanka on 26th December 2004 devastated many of the enterprises of a thriving industrial sector and other commercial sectors along the coastal areas of the country.

The micro-, small and medium-sized enterprises (SMEs) sector plays an important role in the national economy through the generation of employment, contribution to the growth of national GDP, creation of innovations and stimulation of other economic activities in Sri Lanka. This sector is said to be the backbone of Sri Lanka as a developing nation. Consequently, the development of this sector is of paramount importance for Sri Lanka irrespective of the level of development of individual SMEs. This is even more important to Sri Lanka as a developing country, where poverty and unemployment are persistent problems.

2. Tsunami-Affected Enterprises in Sri Lanka

There were approximately 6,000 units involved in providing services and manufacturing products that were located in the coastal areas around the island as a whole which were affected by the tsunami disaster of 26th December, 2004. Presently, the government, non-governmental organizations (NGOs), private and other public sector organizations have been conducting multidisciplinary functions to rebuild the nation and usher in prosperity for everybody affected by the disaster. Those multidisciplinary functions mainly focus on the enhancement of social, educational and living standards, such as basic utilities, as well as information for the people who lived in the affected coastal areas. The affected areas are the Districts of Ampara, Batticaloa, Colombo, Galle, Gampaha, Hambantota, Jaffna, Kalutara, Matara, Mulative and Trincomalee. To extend the multidisciplinary functions focused on up to now, there is an urgent need to revamp the enterprises affected in the affected areas island-wide not only for enhancement of their living standards but also for regeneration of their income to contribute to the survival and growth of the nation as a whole.

3. Research Issues and Objectives

The tsunami tidal wave on 24th December 2004 totally affected the enterprises located in the coastal areas island-wide, while destroying the infrastructure, utilities, fixed assets, killing and injuring their skilled employees and crippling their income. A huge amount of tools, equipment and machinery were destroyed beyond repair. Even now, most entrepreneurs are spending miserable lives with the knowledge of all they have lost and have to depend on government subsidies almost entirely. Their principal request is to rehabilitate and re-establish their enterprises immediately. Consequently, there is a need to relieve the damage and to revamp the affected micro- and SMEs as soon as possible, as well as the smaller number of large companies. This research study examined the ways and means to address these issues with effective national cooperation and solidarity.

The following issues prompted the research study and survey:

- Knowing the extent of the damage caused was essential to planning the revamping of affected enterprises;
- No proper records were available on the damaged industries;
- It was necessary to know which different industries existed in these areas, what product sectors they operated in and their employment levels;
- There is a real need to strengthen entrepreneurial and technological capability levels;
- There is a need to rebuild infrastructure and utilities so as to be able to re-establish and relocate enterprises.

To address the above research issues, this study was designed to evaluate the damage caused by the tsunami and the concomitant requirements to rehabilitate and re-establish the tsunami-affected SMEs in Sri Lanka. In particular, a sample of 4,389 SMEs was obtained for the survey, which was conducted with the following objectives:

- To identify key issues in the tsunami-affected SMEs in Sri Lanka which are currently in the process of rehabilitation or re-establishment;

To assess how far these affected industries are receiving various benefits and supports from various bodies such as government agencies, private sector firms, donors and NGOs with a view to getting them back in business;

- To recommend policies and strategies to develop these firms so that they can form a self-sustaining industrial sector within a short period.

4. Situation Analysis

There are various organizations involved in revamping the tsunami-affected micro- and SMEs in Sri Lanka. They include the United Nations Development Programme (UNDP), Technonet Asia, The Federation of Chambers of Commerce and Industry of Sri Lanka (FCCISL), Japan International Cooperation Agency (JICA), the Industrial Development Board of Ceylon (IDB) and the Ministry of Rural Industries and Self-Employment Promotion, who are all among the key players in the present context.

As a short-term plan, the IDB under the Ministry of Rural Industries and Self-Employment Promotion launched its rehabilitation and re-establishment programme for tsunami-affected firms in Sri Lanka by providing capital goods like tools, equipment, machinery and some raw materials at an average rate of 15,000 rupees (approximately US\$115) for each affected micro-enterprise, which represented a total of 3,000 units island-wide. In addition to that, they have provided counseling and consulting services, business management & entrepreneurship development facilities, technical training and skill development facilities and appropriate technology to restart those enterprises. Furthermore, the IDB signed several agreements, including memoranda of agreement (MoA) and memoranda of understanding (MoU) with the UNDP, Technonet Asia and JICA to be able to proceed in the same way in order to revamp the remaining SMEs, especially by providing tools, equipment and machinery worth from 15,000 to 50,000 rupees (approximately US\$115-384) to each one and with other facilities focusing on business development services and capacity-building and other services.

At the present time, some of the main programmes conducted to support the rehabilitation and re-establishment of tsunami-affected micro- and SMEs in Sri Lanka are as follows:

- Micro-Enterprise Development (MED) Project initiated by UNDP/IDB;
- Compressed earth brick-making enterprises for tsunami-affected areas project initiated by UNDP/IDB and community based organisations;
- UNDP Fast Track Programme for tsunami-affected industries initiated by the UNDP/Technonet Asia/IDB;
- Back to Business Programme for tsunami-affected enterprises initiated by FCCISL;

- The Project for the Rehabilitation and Re-establishment of Tsunami Affected Micro Industries in Sri Lanka initiated by JICA/IDB;
- Credit Facility under Tsunami Special Emergency Credit Programme initiated by the National Development Trust Fund (NDTF) and the Susahana Loan Scheme initiated through public and private banks.

5. Enterprise Survey and Limitations

The survey of the tsunami-affected enterprises conducted by the IDB covered a total of 4,389 enterprises during the period from 11th–24th January, 2005 in the districts of Ampara, Batticaloa, Colombo, Galle, Gampaha, Hambantota, Jaffna, Kalutara, Matara, Mullativu and Trincomalee. The survey identified the affected areas, affected entrepreneurs and their enterprises and the extent of the damage caused, as well as what would be required to support the rehabilitation and re-establishment of the affected enterprises and businesses.

The objectives for conducting the questionnaire survey of the enterprises affected by the tsunami tidal wave disaster were as follows:

- To estimate the damage caused;
- To provide proper technology, training, skills development and assistance to those affected;
- To relocate enterprises;
- To re-establish enterprises;
- To ensure the proper distribution of the funds and materials for the rehabilitation and re-establishment programme;
- To ensure that relief measures were properly directed to the affected enterprises by identifying their needs and requirements.

The survey was limited to the enterprises engaged in the manufacturing of products and provision of services in the coastal areas affected by the tsunami, in accordance with the information collected and analysed through discussions and interviews with the industrialists and entrepreneurs in the rehabilitation camps, as well as neighbours and the independent observations made of enterprises visited during the survey process. A questionnaire for the survey was designed so as to be able to collect information and estimate damage and requirement in order to revamp the affected enterprises. The questionnaire contains six areas covering issues from the general situation to specific

requirements of individual enterprises. The areas are:

- Basic information;
- Details of enterprise;
- Gross investment and credit facility;
- Assessment of damage;
- Re-starting the enterprise and its minimum requirements;
- Services to be re-established in parallel with enterprise rehabilitation.

Table 1
Affected Enterprises by Size and Location

Province	District	Micro	Small	Medium	Large	Total
Western	Colombo	149	182	2	6	339
	Kalutara	90	197	11	4	302
	Gampaha	6	15	2	4	27
Eastern	Ampara	422	121	3	3	549
	Batticaloa	191	112	0	0	303
	Trincomalee	145	131	5	4	285
Southern	Galle	537	347	21	24	929
	Matara	516	328	12	5	861
	Hambantota	321	178	13	2	514
Northern	Jaffna	40	32	4	0	76
	Mulative	176	27	1	0	204
Total		2,593	1,670	74	52	4,389

Source: Compiled by Authors from Various Sources

The data collected from the questionnaire survey was stratified according to suitable enterprise classification, location and size of enterprise. There are different criteria used in different organizations to classify the size of an enterprise in Sri Lanka. Having considered various classifications adopted by different organizations, the officials of the IDB agreed to classify the size of the enterprises based on total investment according to the schedule in Table 2 below.

Table 2
Size of Enterprise

Size of Enterprise	Total Investment (Rupees) ¹
Micro	Less than 100,000
Small	From 100,000 to 4,000,000
Medium	From 4,000,000 to 10,000,000
Large	More than 10,000,000

Source: Compiled by Authors from Various Sources

The situation in the various districts prior to the arrival of the tsunami is depicted in Table 3 below.

It is evident that the largest districts in this context are in Galle and Matara. However, all the number of enterprises in the capital city of Colombo is less than the two leading districts, they appear to be better resourced based on the total level of investment and credit obtained. It is clear that there is considerable variability between the different districts.

In terms of the type of activity undertaken, most employment is provided by the textiles and apparel sector and the coir based products sector. These sectors also have the largest number of firms overall. However, in terms of investment and credit, these are dwarfed by the fabricated metal products and trading, business and services sectors (see Table 4 below).

Table 3
Previous Industry Situation (Pre-Tsunami disaster) by District

District	No. of Firms	Male	Female	Total Employees	Total Investment (Rs.)	Total Credit Facility Obtained (Rs.)
Ampara	549	967	436	1,4003	132,368,575	933,241
Batticaloa	303	398	291	689	35,824,000	256,500
Colombo	339	783	132	915	251,106,600	209,284,550
Galle	929	1,846	3,025	4,871	106,280,958	143,055,940
Gampaha	27	351	523	874	97,260,012	8,700,000
Hambantota	514	645	915	1,550	241,207,160	51,718,947
Jaffna	76	231	62	293	47,001,650	527,500
Kalutara	302	705	266	971	262,023,810	18,252,300
Matara	861	1,448	1,813	3,261	355,305,860	28,754,350
Mulative	204	260	189	449	19,309,500	30,000
Trincomalee	285	694	253	947	664,049,760	39,676,400
Total	4,389	8,328	7,905	16,233	3,168,266,507	501,189,728

Source: Compiled by Authors from Various Sources

Further details of the geographical impact of the disaster are provided in Table 5

¹ Approximately 131 rupees = 1US\$.

below. This shows the differential level of impact in the different districts involved. In some, Batticaloa and Colombo, there were no fatalities recorded by the firms interviewed but in Galle alone there were 44 people lost and another 38 in Matara. Table 3 above has shown that there is a slight majority of male employees overall but it is notable here that more than twice as many women as men are recorded as dead or missing.

Table 4

Previous Industry Situation (Pre-Tsunami disaster) by Product Sub-Sector

Product Subsector	No. of Firms	Male	Female	Total Employees	Total Investment (Rs.)	Total Credit Facility Obtained (Rs.)
Food, Beverages and Tobacco Products	544	1,695	747	2,442	654,798,300	108,686,740
Textiles and Apparel	962	898	3,049	3,947	350,541,745	45,846,171
Leather Products	72	238	104	342	88,200,532	20,692,000
Wood and Wooden Products	502	1,693	88	1,781	384,358,150	222,456,900
Coir Based Products	921	311	2,705	3,016	111,518,098	2,425,980
Chemical Based Products and Pharmaceuticals	21	74	41	115	26,599,000	1,621,000
Rubber and Plastic Products	24	177	161	338	23,550,000	6,968,600
Non-Metallic Mineral Products	128	284	68	352	66,814,250	4,488,000
Fabricated Metal Products	319	1,181	63	1,244	897,133,748	65,372,600
Agriculture and Ornamental Fisheries	47	149	10	159	28,410,000	429,500
Paper and Paper Products	17	59	33	92	13,350,500	250,000
Handicrafts	106	62	192	854	17,182,004	807,723
Gems and Jewellery	164	169	4	173	29,902,500	1,602,450
Trading, Business and Services	528	1,282	626	1,908	447,870,030	17,215,264
Manufactured Products Not Elsewhere Specified	34	56	14	70	27,977,650	2,326,800
Total	4,389	8,328	7,905	16,233	3,168,206,507	501,189,728

Source: Compiled by Authors from Various Sources

Table 5
Tsunami Affected Employees by District

District	No. of Firms	Male Emp. Dead or Missing	Female Emp. Dead or Missing	Total	Male Emp. Injured	Female Emp. Injured	Total
Ampara	549	6	4	10	8	14	22
Batticaloa	303	0	0	0	0	0	0
Colombo	339	0	0	0	1	4	5
Galle	929	9	35	44	13	15	28
Gampaha	27	0	1	1	0	0	0
Hambantota	514	7	20	27	5	14	19
Jaffna	76	1	3	4	5	1	6
Kalutara	302	0	1	1	0	3	3
Matara	861	8	30	38	1	8	9
Mulative	204	10	7	17	12	10	22
Trincomalee	285	9	13	22	15	11	26
Total	4,389	50	114	164	60	80	140

Source: Compiled by Authors from Various Sources

There is also some variations in the number of casualties based on firm activity since the numbers of firms in different categories varies considerably and there is some clustering of firms in some areas where they have better access to supplies and raw materials and also to nearby markets. In terms of the overall losses caused by the tsunami, firms tended to declare the most badly-affected area to be in tools, equipment and machinery, although there were also significant losses in raw materials and semi-finished and finished goods. Geographical factors are also important here too.

When it comes to losses and damage by sector, there are variations based on the number of firms involved and their location, as well as the nature of the business activities involved, since some sectors require more and more expensive tools and equipment than others and some have greater requirements for keeping stock that might include finished or semi-finished goods (see Table 7 below).

Table 6
Total Damages and Losses by Tsunami-Affected Firms by District

District	Tools, Equipment and Machinery	Raw Materials	Semi-Finished and Finished Goods	Vehicles	Other
Ampara	28,696,600	16,058,150	17,549,500	2,197,000	140,000
Batticaloa	15,691,500	4,551,200	1,332,200	124,000	364,000
Colombo	28,841,750	18,349,750	12,137,000	3,414,000	1,700,000
Galle	217,182,080	143,290,008	93,160,355	29,477,080	21,221,700
Gampaha	2,964,000	3,137,950	1,009,150	2,860,000	239,500
Hambantota	55,291,660	45,765,150	17,190,150	7,288,000	4,143,300
Jaffna	10,028,100	11,567,500	6,105,000	3,309,000	1,004,950
Kalutara	28,815,100	37,801,800	17,776,750	10,785,500	4,793,000
Matara	105,897,550	58,449,235	27,222,870	8,132,000	1,603,600
Mulative	10,214,500	3,413,500	2,244,000	1,509,500	1,117,000
Trincomalee	61,906,500	45,192,500	144,460,900	3,002,000	358,000
Total	565,529,340	387,576,743	340,187,875	72,098,080	36,685,050

Source: Compiled by Authors from Various Sources

Table 7
Total Damage and Loss by Tsunami-Affected industries by Product Sub-Sector

Product Subsector	Tools, Equipment and Machinery	Raw Materials	Semi-Finished and Finished Goods	Vehicles	Other
Food, Beverages and Tobacco Products	115,587,550	58,257,350	31,823,970	14,553,000	6,320,950
Textiles and Apparel	73,176,950	62,928,138	42,621,975	9,110,000	3,676,000
Leather Products	13,824,200	7,390,500	17,799,800	575,000	6,088,200
Wood and Wooden Products	55,138,750	79,295,900	23,722,650	10,054,500	1,813,000
Coir Based Products	15,276,730	10,432,725	2,877,080	463,580	877,600
Chemical Based Products and Pharmaceuticals	1,889,000	4,820,000	7,097,000	1,510,000	825,000
Rubber and Plastic Products	5,417,000	2,691,500	3,030,000	50,000	5,000
Non-Metallic Mineral Products	8,621,000	4,942,200	3,858,800	4,357,000	240,000
Fabricated Metal Products	111,065,710	71,520,800	164,646,950	18,244,500	7,522,500
Agriculture and Ornamental Fisheries	16,634,500	889,000	1,936,500	1,225,000	170,000
Paper and Paper Products	1,267,500	2,876,500	2,530,500	125,000	150,000
Handicrafts	6,191,650	2,737,050	13,140,150	4,189,000	168,800

Table 7 (Continued)

Product Subsector	Tools, Equipment and Machinery	Raw Materials	Semi-Finished and Finished Goods	Vehicles	Other
Gems and Jewellery	10,002,500	4,002,000	1,657,000	135,000	270,000
Trading, Business and Services	129,480,550	72,621,680	22,252,600	7,484,500	8,537,000
Manufactured Products Not Elsewhere Specified	1,955,750	2,171,400	1,192,900	22,000	21,000
Total	565,529,340	387,576,743	340,187,875	72,098,080	36,685,050

Source: Compiled by Authors from Various Sources

The next table (Table 8 below) deals with the total area of land affected by the tsunami as reported by the firms included in this sample. Again, it is evident that there is considerable variation from one district to another and this again shows how quite small differences can have quite significant impacts on results when it comes to disasters.

Table 8

Total Area of Damage of Tsunami-Affected Firms by District

District	Industrial/Building Area (Sq. Ft.)	Land Area (Sq. Ft.)
Ampara	549,281	10,800
Batticaloa	118,622	0
Colombo	68,104	19,294
Galle	617,887	42,865
Gampaha	924	0
Hambantota	254,459	94,820
Jaffna	34,612	0
Kalutara	2,619,259	5,842
Matara	472,457	1,588
Mulative	290,965	0
Trincomalee	287,949	143,372
Total	5,314,519	318,581

Source: Compiled by Authors from Various Sources

Naturally, there are similar variations in amount of building and land area affected based on the activities undertaken, since these require different configurations of space when it comes to production and other operations. This may be seen in Table 9 below.

Some activities, of course, do not require much or sometimes any land, while the intensity of activities may have a strong impact on the amount of space required. The gems and jewellery sector, for example, requires very little space

for storage or equipment because of the precision nature of the work involved. By contrast, food, beverages and tobacco products require considerable amounts of land for various agricultural processes and for processing.

Table 9

Total Area of Damage of Tsunami-Affected Firms by Product Sub-Sector

Product Subsector	Industrial/Building Area (Sq. Ft.)	Land Area (Sq. Ft.)
Food, Beverages and Tobacco Products	1,010,444	143,224
Textiles and Apparel	472,437	15,752
Leather Products	235,396	0
Wood and Wooden Products	410,348	18,916
Coir Based Products	197,224	61,760
Chemical Based Products and Pharmaceuticals	7,155	400
Rubber and Plastic Products	15,416	0
Non-Metallic Mineral Products	1,281,545	33,040
Fabricated Metal Products	391,621	3,224
Agriculture and Ornamental Fisheries	38,405	1,088
Paper and Paper Products	6,070	0
Handicrafts	77,701	24,000
Gems and Jewellery	48,171	0
Trading, Business and Services	313,832	17,177
Manufactured Products Not Elsewhere Specified	808,748	0
Total	5,134,519	318,581

Source: Compiled by Authors from Various Sources

These results provide a baseline of information concerning which types of business have been affected by the tsunami and what kinds of impacts they have faced. Since each firm is different, then the assistance that each will require will also be different and so there will need to be some sensitivity in the field and flexibility as to what is provided.

6. Methodology Implemented

This research study is based on the questionnaire survey described previously. The sampling method was designed to identify the damage suffered by and the requirements of tsunami-affected enterprises in order to assist their recovery, rehabilitation and re-establishment. As a result, the following activities were conducted to assist the research:

- Search of existing literature and websites to obtain secondary data and information;
- Visits took place to affected firms and other institutions;
- Interviews and discussions were held with relevant stakeholders involved with the rehabilitation and re-establishment work necessitated by the disaster;
- Participation in meetings and seminars conducted for the rehabilitation work also took place.

This methodology was designed to maximize interaction with relevant stakeholders and to triangulate the data obtained for a greater level of confidence in the results.

7. Analysis of Findings

As a result of the research, the following key issues and survey findings were obtained. The first was an estimate of the costs of rehabilitation and the purposes of the funds required.

Since the disaster affected different regions to different degrees and there is a connection between location and type of industry, then it is clear that there will be different requirements from each district. The largest amount of funds is required for tools, equipment and machinery, followed by working capital and infrastructure. The district most affected was Galle, which had heavy losses both to infrastructure and to tools, equipment and machinery. The next most affected district is Trincomalee, which has a very strong need for working capital. As Table 11 below shows, the greatest need for working capital is in the fabricated metal parts sector.

Based on the findings of the affected enterprise survey, there are various implications that can be drawn:

There is a great need for technology, training & skill development;

- There is also a need for tools, equipment & machinery;
- Businesses are also badly affected by the damage to utilities and infrastructure;
- Both fixed capital and working capital are in short supply and firms need help in this regard;
- There is a need for community development in coastal areas;

Table 10
Minimum Requirements to Rehabilitate & Re-establish Industries by District (Rs.)

District	Infrastructure	Tools, Equipment and Machinery	Working Capital	Consultancy	Others	Total
Ampara	10,804,000	18,109,800	3,287,600	210,000	0	32,411,400
Batticaloa	2,095,500	9,545,000	1,805,500	67,500	40,000	13,553,500
Colombo	10,574,250	17,735,500	12,774,050	120,000	302,500	41,506,300
Galle	19,900,783	198,275,683	82,995,913	4,483,000	6,193,500	490,955,929
Gampaha	72,000	2,133,000	1,815,300	0	500	4,020,800
Hambantota	16,529,500	42,277,110	15,611,000	503,800	1,619,900	76,541,310
Jaffna	8,748,000	9,465,800	19,114,000	50,000	818,500	38,196,300
Kalutara	28,537,640	25,229,840	14,717,040	871,190	731,340	70,087,050
Matara	27,512,700	76,614,700	27,293,850	416,700	1,798,200	133,636,150
Mulative	3,406,000	9,629,000	2,440,500	110,000	1,264,500	16,850,000
Trincomalee	16,511,700	45,155,000	180,576,500	60,000	936,000	243,239,200
Total	323,799,123	454,170,433	362,431,253	6,892,190	13,704,940	1,160,997,939

Source: Compiled by Authors from Various Sources

Table 11

Minimum Requirements to Rehabilitate & Re-establish Enterprises by Product Sub Sector (Rs.)

Product Subsector	Infrastructure	Tools, Equipment and Machinery	Working Capital	Consultancy	Others	Total
Food, Beverages and Tobacco Products	99,064,667	97,478,717	37,510,267	1,713,000	2,033,500	237,800,151
Textiles and Apparel	56,973,366	52,662,766	26,140,916	462,700	1,678,200	137,917,948
Leather Products	11,203,200	29,621,150	13,861,950	444,750	154,900	55,285,950
Wood and Wooden Products	32,069,400	45,645,400	23,067,500	464,900	1,105,900	102,353,100
Coir Based Products	8,344,940	10,753,440	6,952,240	392,740	143,840	26,587,200
Chemical Based Products and Pharmaceuticals	8,322,500	4,102,000	4,619,600	170,000	20,000	17,059,100
Rubber and Plastic Products	1,886,000	8,180,000	1,589,000	58,000	5,000	11,718,000
Non Metallic Mineral Products¹	7,534,500	7,605,500	4,319,500	235,500	2,092,000	21,787,000
Fabricated Metal Products	34,205,700	85,859,110	186,402,000	1,038,500	2,104,500	309,609,810
Agriculture and Ornamental Fishery	2,140,000	6,369,500	1,684,500	35,000	0	10,229,000
Paper and Paper Products	1,475,000	1,640,000	1,395,000	55,000	0	4,565,000
Handicrafts	2,495,100	5,036,100	1,936,100	24,100	159,100	9,650,500
Gems and Jewellery	2,034,000	6,835,000	1,485,000	0	25,000	10,379,000
Trading, Business and Services	55,525,750	91,230,250	50,126,180	1,782,000	4,182,000	202,846,180
Manufactured Products Not Elsewhere Specified	525,000	1,326,500	1,341,500	16,000	1,000	3,210,000
Total	323,799,123	454,170,433	362,431,253	6,892,190	13,704,940	1,160,997,939

Source: Compiled by Authors from Various Sources

- There is also a need to ensure the proper distribution of funds and materials to the affected firms.

Consequently, there is a need to establish national solidarity based on the above multidisciplinary functions which should be fulfilled in order to assist and grant immediate relief to industries in all affected areas island-wide in the relocation of their businesses and industries.

8. Model and Plan of Recovery, Rehabilitation and Re-Establishment of Tsunami-Affected SMEs in Sri Lanka

The Model and Plan of Recovery, Rehabilitation and Re-establishment of Tsunami affected SMEs in Sri Lanka (Figure 1) indicates the necessity of integrating the national development programmes and other multidisciplinary functions in order to recover, rehabilitate and re-establish tsunami-affected firms in Sri Lanka. In addition to the above basic aspects, the following key functions should also be taken in to account:

- Establishment of an apex body to oversee the task force that will help to rebuild the SMEs;
- Establishment of coordinating committees in each divisional secretariat region to assist and implement rehabilitation and re-establishment programmes as required;
- Make the stakeholders and beneficiaries aware of the steps that are being taken towards rehabilitation and offer them proper guidance and consultancy.

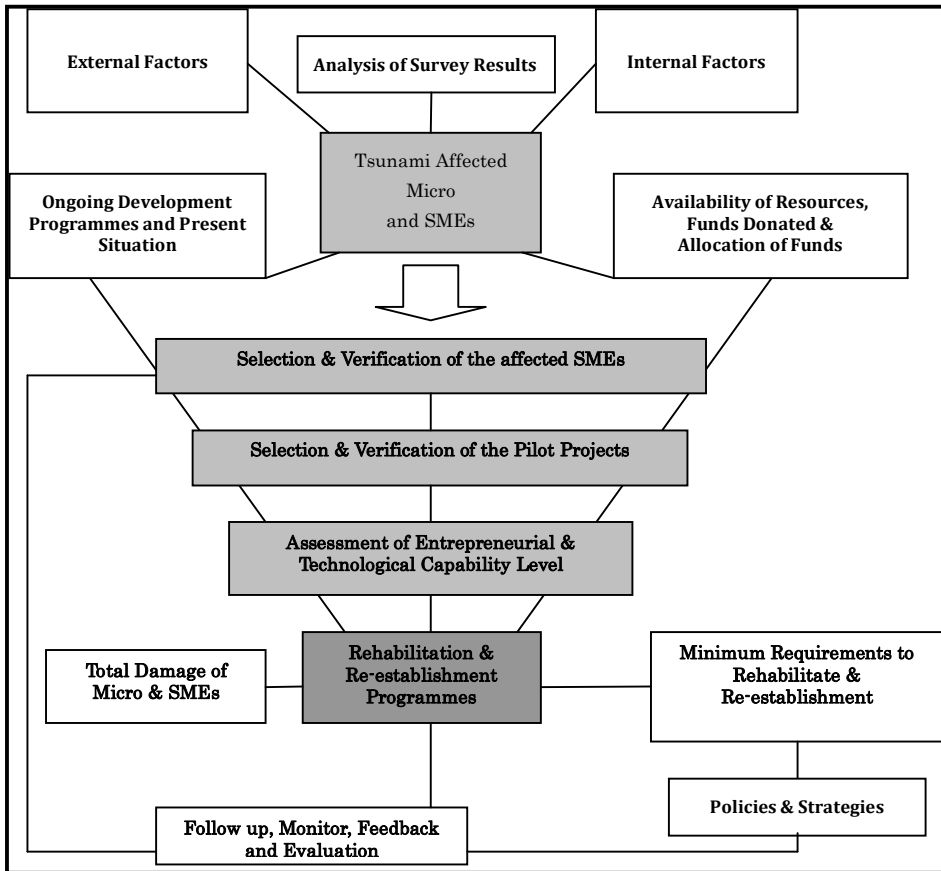


Figure 1 Model and Plan of Recovery, Rehabilitation and Re-Establishment of Tsunami-Affected SMEs in Sri Lanka

It is important that these activities take place in a spirit of transparency and accountability, to make sure that the funds that have been provided are used properly and that all grants can be properly checked and progress monitored.

9. Policies and Strategies

Recognizing that the rehabilitation and re-establishment of tsunami-affected SMEs is a complex process, the government has acted as an initiator, promoter and supporter of the processes involved. It has attempted to place these efforts in the context of economic redevelopment of affected areas as a whole. In doing so, it has been hampered by the lack of a pre-disaster phase in which relevant agencies might have focused on anticipating the events that might occur and, hence, develop a structured response and a model framework for recovery. There is, in other words, a need for advisory and capacity building support on policy design.

The policy aims to achieve the following key objectives: identification and classification of industry sub sectors; utilization of technological & investment facility; skills, practices and infrastructure; SME-large enterprise partnership, creating new SMEs; SMEs support including clusters. The policy has placed special focus on entrepreneurial and enterprise development as the prominent services domain.

9.1 Strategy

One of the primary challenges of revamping micro & SMEs is the lack of assets and materials with which to work. The projects that are being conducted should be done so through a holistic, integrated approach to address immediate needs, as well as short and medium-term needs in a way that is sustainable. These policies should be integrated with plans that will be enacted to achieve goals over the longer term as well.

The strategy focuses on the following areas:

- Immediate relief for entrepreneurs and industrialists affected by the tsunami;
- Capitalize on the opportunity to strengthen the capacity and skills of entrepreneurs and industrialists;
- Initiate incubator process and centralize incubator office set up;
- Common technical and product set up and requirements;
- Promotion initiative, information and database, consultant networking;
- Disaster management & mitigation.

While the first task of these projects is rehabilitation re-establishment of firms through replacing damaged or lost equipment, tools and machinery, the disaster may also be viewed as an opportunity to pursue thoroughgoing industrial development activities. For example, by the end of the project, up to one thousand entrepreneurs will be trained, counseled and prepared for better operational management and marketing abilities. This should enhance the income of the entrepreneurs and the families of employees affected by the tsunami disaster.

10. The Proposed National Enterprise Development Policy for the Tsunami-Affected Micro and SMEs in Sri Lanka

The government of Sri Lanka should identify the micro and SME sector and relevant enterprise development service sector as an essential component in national economic development and be committed to providing essential facilities and support on both a quantitative and a qualitative level.

essential facility and support to Tsunami affected micro, small and medium enterprises both in enterprise development service providers and public industrial sector, through a network of state and private industrial organizations. The relevant ministries are responsible for establishment and enactment of essential and relevant legislation and also for providing technical and managerial guidelines for rehabilitation and re-establishment of affected enterprises in compliance with accepted industrial and environmental standards.

The proposed policy for the enterprise development services; shall

- Be within the overall economic policy;
- Cover all industry-related enterprises in both state and private sectors; (including organizations to be established for public enterprise development services);
- Have sound legislative support to monitor and regulate the activities pertaining to rehabilitation and re-establishment of Tsunami affected enterprises;
- Encourage achievement and maintenance of industrial & environmental standards, accepted nationally and internationally;
- Provide a framework for equitable, sustainable, cost effective, accessible, reliable and valid enterprise development, rehabilitation and re-establishment support for the Tsunami affected Micro & SMEs;
- Promote entrepreneurial & technological skills & development and training facility.

11. Conclusion and Recommendation

In accordance with the issues addressed and the above survey findings the following long-term solutions can be recommended:

- Setting up of Incubation Centres and Industrial Parks/Estates;
- Transfer Appropriate Technology & Technology Upgrading;
- Providing Industrial Management & Entrepreneurship Development Facility;
- Conducting Technical Training & Skill Development Programmes;
- Providing Market Development & Market Linking Facility to gain the lost markets;
- Providing Counseling & Consultancy Services to enhance mentality of the victimized industrialists by the unexpected incident;
- Procurement of Tools, Equipment and Machinery in order to distribute capital goods among the affected industries.

In addition to the above, Project Implementation, Performance Monitoring and Follow up Activities will be carried out for a two year period.

The survey study recommends the following policies to be planned and strategies to be implemented in the context of recovery, rehabilitation and re-establishment of Tsunami affected SMEs Sri Lanka:

- Identify and recommend Tsunami affected sectors and sub sectors with potential for value addition, employment creation, and export for promotion and support;
- Establish a revolving loan fund;
- Strengthen the public sector performance and governance by enhancing their capability levels;
- Imposing a buffer Zone with the development of infrastructure and utility for SMEs;
- Establish a Task Force to Rehabilitation and reconstruction of Tsunami affected SMEs in Sri Lanka;
- Be aware of and strengthen of public sector about disaster management and its issues.

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