

Preliminary Demand Analysis
For Goods & Services Required by
Tsunami Affected Countries

31 March 2005

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Table of Content

1. Executive Summary	3
2. Introduction	4
3. Project Objectives	5
4. Project Impact	5
4.1. Deliverables	5
4.2. Spin-offs	5
5. Method	6
6. Demand for different goods & services by Country	7
6.1. Maldives	7
6.1.1. Estimated Damage and Financing Needs	7
6.1.2. Estimated Reconstruction Costs	7
6.2. Sri Lanka	9
6.2.1. Damages and Needs by Region	10
6.3. Indonesia	12
6.3.1. The Preliminary Damage and Loss Assessment	12
6.4. India	15
7. Demand Matrices	16
7.1. Demand patterns	16
7.2. Summary Table	18
7.3. Maldives Demand Matrix	27
7.4. Sri Lanka Demand Matrix	43
7.5. Indonesia Demand Matrix	65
7.6. India Demand Matrix	93
8. Funding	102
8.1. Flash Appeal	102
8.2. Australian relief packages	107
8.3. Canada	109
8.4. Denmark	110
8.5. Germany	112
8.6. Norway	113
9. Next Steps	116

1. Executive Summary

The Tsunami of 26 December 2004, referred to as the worst natural disaster in living memory, will require an unprecedented level of procurement carried out by UN agencies, donor development agencies, national governments and NGO's. The potential demand for goods, services and civil works generated by the recovery and reconstruction efforts will place enormous strain upon the known supply sources, with the possibility of over-burdening these.

Within UNDP's role of supporting the overall procurement effort and facilitating its coordination, UNDP has initiated a strategic procurement project encompassing an analysis of the demand and conversely the regional supply potential with the ultimate objective providing useful information that may guide co-operation and collaboration over tsunami procurement..

This preliminary demand analysis constitutes the first deliverable of this project, one that aims to consolidate and provide an overview of the loss and damage assessments and reconstruction requirements as expressed by the various entities involved in the recovery and reconstruction phases. This information was gathered using resources in the field, as well as employing literature reviews of the damage assessments and other report from International Financial Institutions (IFI's), the UN agencies, and donor development agencies and national governments. This analysis is deemed preliminary as the full scale of recovery and reconstruction measures have not been assessed completely at this point in time, but this analysis provides an overview of requirements that are currently identified.

The preliminary demand analysis has identified requirements for products and services for; Sri Lanka (US\$ 2.2B), the Maldives (US\$0.15B), Indonesia (US\$3.2B) and India (US\$0.7b) totalling a value of US\$ 6.2B. Initial estimates of recovery and reconstruction costs in the immediate aftermath of the disaster were put at US\$ 7 billion¹. As more details of recovery and reconstruction projects arise, it can well be expected that this figure will rise.

The analysis identifies individual project requirements where these have been defined by implementing entities as well as assessments of losses and damages. These have been categorised by country, region, sector and where possible specific project references and implementation time frames. This manner of compilation and presentation of this information is designed to allow for the identification of demand patterns, and the subsequent formulation of procurement strategies. The data presented in the report will be used to identify supply markets for further analysis. Building an in-depth knowledge of these markets will enable²;

- More effective competition to supply the reconstruction effort
- Improve procurement outcomes because approaches to the market can be optimised

¹ World Bank Website at

<http://www.worldbank.org.in/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/INDIAEXTN/0,,contentMDK:20336602~menuPK:295606~pagePK:141137~piPK:141127~theSitePK:295584,00.html>

² Regional Supply Market Analysis and Development Focusing on Post Tsunami Reconstruction Procurement, 15.01.2005

- More efficient and likely speedier procurement processes especially where these are supported by long term agreements and pre-qualified supplier arrangements; and,
- More effective supplier performance monitoring and management.

Sharing this knowledge with all UN agencies and other organisations involved in reconstruction related procurement will:

- Improve the use and coordination of scarce resources; and,
- Where it facilitates procurement from within the region and especially from the affected countries, enhance regional economic development

Tsunami affected countries covered in this analysis include; The Maldives, Sri Lanka, Indonesia and India. The document presents a brief discussion outlining specific situations affecting each of the countries, prior to mapping the anticipated goods/ services and works requirements in the specifically designed demand matrices.

A brief overview of the response to the UN Flash Appeal is presented in section 8 of the documents well as details of bi-lateral assistance are highlighted where this information was readily available.

2. Introduction

The United Nations Development Programme has initiated a project designed to assist the procurement of goods and services required by the Tsunami affected countries for recovery and reconstruction. It is specifically aimed at supporting UN organisations, donor agencies, NGOs and affected national governments operating in these countries. UNDP's Inter-Agency Procurement Service Office (IAPSO) will carry out this project from UNDP's Bangkok Regional Service Centre.

From a procurement perspective the central issue to be addressed in the post-tsunami recovery and reconstruction is that all agencies involved in the effort are procuring goods, works and services from essentially the same markets. This intensive effort has the potential to provide much needed opportunity and investment into these supply markets, while also harbouring the threat of exhausting, overheating and potentially distorting the markets especially at the local and regional levels.

While the initial sources of supply in the relief phase have often been sourced from outside the region, the fullest economic and social benefits will be achieved through local and regional sourcing for the recovery and reconstruction phases. To facilitate effective and collaborative sourcing strategies, as well as to assist key implementing agencies in obtaining reliable and accurate supply market data, this project will seek identify demand patterns and to analyse supply market capacity in order to recommend procurement strategies.

This document presents a preliminary analysis of the demand for goods and services related to the recovery and reconstruction phase. This preliminary demand analysis is a working document that attempts to ascertain recovery requirements for goods and

services by analysing available damage assessments. Due to the limited information presently available, this document will function as a stimulus for further analysis.

3. Project Objectives

- Effectively support the post tsunami procurement effort of UNDP country offices in the region
- Facilitate cooperation between procuring entities focussed on post-tsunami recovery and reconstruction
- Identify the demand over time for goods, works and services from these entities
- Identify supply markets within the region that will meet this demand
- Analyse the key supply markets within the region to develop optimal procurement strategies
- Implement regional procurement strategies (including long-term agreements and supplier pre-qualification) in co-operation with all interested procuring entities
- Provide effective, efficient and accessible e-procurement tools to support implementation and management of these strategies

4. Project Impact

4.1. Deliverables

- A demand profile of goods, works and services required throughout the process
- Communication of the demand profile to all interested parties
- Communication of existing cooperative procurement arrangements of UN family organisations
- Workshop to identify opportunities for collaboration and co-operation
- Analyses of prioritised supply markets
- Communication of the supply market analyse to procuring entities
- Development and implementation of local and regional procurement strategies including long-term supplier agreements and supplier pre-qualification
- E-procurement tools for use by interested procuring entities including e-catalogues, e-tendering and on-line supplier pre-qualification and performance management to support regional procurement strategies where appropriate
- A best practice guide to post-crisis reconstruction procurement drawing upon the lessons learned

4.2. Spin-offs

- Improving the use and coordination of scarce resources
- More effective competition to supply the recovery and reconstruction effort
- Improve procurement outcomes through optimising approaches to the market
- More efficient and likely swifter procurement processes especially where supported by long-term agreements and pre-qualified supplier arrangements
- Facilitating procurement from within the region and especially from the affected countries, thus enhancing regional economic development
- More effective supplier performance monitoring and management

5. Method

The preliminary demand analysis was conducted using the presently available needs assessments carried out by a number of agencies and government entities, including; the World Bank, Asian Development Bank, Various UN Agencies, Non Governmental Organisations and Donor organisations. This analysis is deemed preliminary given the amount of data currently available. As more information regarding specific requirements and implementation time frames for goods and services becomes available, it will be incorporated into the demand matrices presented in this document. When a critical mass of data has been accumulated a complete and detailed demand analysis will be finalised.

The demand matrices were designed to provide an clear and succinct overview of the goods and services requirements recovery and reconstruction phase. Each entry in the matrices designates either an existing project or a damage assessment. In each case, information regarding country, implementing agency(s), the aim of the project or needs assessment, equipment and services requirements, prospective budgets and time lines are given.

The summary table on page 18 provide a quick scan of the equipment and service requirements per country.

Two main approaches were utilised to identify the preliminary goods and services requirements and to populate the demand matrices;

- (i) Where specific data on current or impending projects was available (such project documents or briefs), this was extracted and extrapolated into the demand matrices.
- (ii) Data presented in damage assessments give an overall picture of the type of equipment and/or services that were lost or damaged. This data is presented in the demand matrices under the assumption that the equipment and/or services will be replaced, however this has not as yet been attributed to a specific project or implementing agency. This data is presented in the matrices by sector.

The demand matrices presented in this paper should be considered as dynamic, the information provided will be updated on a continuous basis as further information becomes available. The demand matrices and the subsequent summary tables form the basis for all interested procuring entities to identify opportunities for collaboration and cooperation. Once these opportunities are identified, an analysis of priority markets will be undertaken. Focus will be on the local and regional supplier base in order to develop effective procurement strategies. E-procurement tools to support these strategies will be made available.

6. Demand for different goods & services by Country

The section is design to give a broad overview of the damage assessments per country. The countries that have been included in this preliminary demand analysis are;

- Maldives
- Sri Lanka
- Indonesia
- India

The data for the overviews presented in this section is primarily drawn from the World Bank, Asian Development Bank and UN Damage Assessment Reports for each the above countries.

6.1. Maldives

The joint World Bank, Asian Development Bank and UN report on the Maldives, titled "Tsunami: Impact and Recovery; Joint Needs Assessment WB-ADB-UN", dated 8 February 2005³, is used to provide overall data on Loss & Need Assessment due to its extensiveness. It covers the entire country and all sectors. Details on specific needs for the various sectors can be found in the Maldives Demand Matrix on page 15.

6.1.1. Estimated Damage and Financing Needs

Total damages are estimated to be about \$470 million, close to 62% of GDP (see Table 1). About \$298 million of this are direct damages, and the rest are indirect losses. Although the cost of damages appear high, the direct damages amount to about 8% of the replacement cost of the entire national capital stock, estimated at around \$3.8 billion at 2004 prices. Compared to the other tsunami affected countries, Maldives has higher per capita income and greater capital stock in relation to their affected population. Moreover, there has been heavy investment in high-end tourist resorts. The tourism sector has the largest direct damages, with losses of \$100 million (of which half is insured), followed by the housing sector with losses close to \$65 million⁴.

The indirect damage estimates need to be treated with caution, particularly when it comes to tourism and livelihood. The largest indirect losses occurred in the tourism sector which has seen a sharp drop in tourist arrivals (as of end-January 2005, 7600 tourists are in Maldives as compared to 17,000 at the same time one year ago)⁵.

6.1.2. Estimated Reconstruction Costs

Overall Needs. Reconstruction costs for some sectors may be higher than total losses due to the need to rebuild to higher standards to reduce vulnerability (e.g. housing) and because current construction or environmental standards are higher than when original facilities were built (e.g. sanitation), or because modern equipment or supplies are of higher quality and provide improved services (e.g. health, education). Some of the indirect losses cannot be recovered: production losses from fishing, agriculture, and

³ Tsunami: Impact and Recovery; Joint Needs Assessment, World Bank-Asian Development Bank-UN System, 8 February 2005

⁴ Ibid, Paragraph 25, page 9

⁵ Ibid, Paragraph 26, page 9

tourism cancellations cannot be restored. The financing needs have been divided into short-term and long-term needs. The short-term needs reflect investments needed urgently within the next six months; the long-term needs cover the period from six months to three years. The overall financing needs for the next three years is expected to be \$406 million; of this, \$120 million would be needed within the next six months (that is, first half of 2005)⁶.

Public Finance Needs. The needs for public financing are lower than the overall financing needs because parts of the reconstruction cost will be absorbed by the private sector (insurance, households, and businesses). Estimated needs for public finance include the costs of restoring basic services, infrastructure, and housing, as well as the cost of certain mitigation measures made urgent by the tsunami. In addition, the tsunami has led to a government revenue shortfall that needs to be financed. Most recent estimates put this at \$60 million. Total public financing needs are expected to be about \$304 million; of this, housing is the largest component. More detailed sector-specific estimates are provided below, following the discussion of cross-cutting issues (macroeconomic impact, social and livelihood impact, environmental issues, and disaster risk management)⁷.

Table 1: Estimated Losses and Financing Needs
(in US\$ million)

Sector	Losses			Cost of reconstruction (2)			Public financing needs (4)
	Direct losses	Indirect losses (1)	Total losses	Needs for next six months	Medium terms needs (3)	Total costs	
Education	15.5		15.5	8.4	12.7	21.1	21.1
Health	5.6		5.6	4.9	7.3	12.2	12.2
Housing	64.8		64.8	22.2	51.8	74.0	74.0
Water and sanitation	13.1		13.1	18.4	27.2	45.6	45.6
Tourism	100.0	130.0	230.0	10.0	90.0	100.0	0
Fisheries	13.2	11.9	25.1	5.8	8.3	14.1	14.1
Agriculture	10.8	0.3	11.1	4.8	6.3	11.1	11.1
Transport	20.3		20.3	2.0	25.0	27.0	24.9
Power	4.6		4.6	1.9	2.8	4.6	4.6
Livelihoods		30.0	30.0	17.4		17.4	17.4
Environment				3.7	6.1	9.8	9.8
Disaster risk management				0.7	3.7	4.4	4.4
Other costs for new host islands (5)				5.0	10.0	15.0	15.0
Administration etc. (5)	50.0		50.0	15.0	35.0	50.0	50.0
Total	297.9	172.2	470.1	120.1	286.2	406.3	304.2
Losses / costs as percent of GDP (2004 est.)			62%			54%	40%
Estimated revenue loss (5)							60.0
Total financing gap including revenue loss							364.2
Total financing gap including revenue loss as percent of GDP							48%

Notes:

(1) Indirect loss estimates particularly in tourism and livelihoods are not robust.

(2) Reconstruction costs in some sectors are higher than damages because (a) some partially damaged houses will need to be fully rebuilt because the original islands are not livable anymore; and (b) new environmental standards apply to new facilities.

(3) Medium term covers the period from 6 to 36 months.

(4) Public financing needs differ from reconstruction costs because certain losses may be covered by insurance and financial resources available to owners.

(5) Preliminary estimates.

Source: These estimates were arrived at jointly by the Mission and the Government.

⁶ Ibid, Paragraph 27, page 11

⁷ Ibid, Paragraph 28, page 11

6.2. Sri Lanka

The World Bank report on Sri Lanka, titled "Preliminary Damage and Needs Assessment"⁸ and dated January 10-28 2005, was used as a basis for the needs assessment due to its extensiveness. It covers the entire country and all sectors. Details on specific needs for the various sectors can be found in the demand matrix for Sri Lanka. Besides data from the WB report, the demand matrix also includes data from more specific reports that originate from OCHA, UN-HABITAT and WHO, specific references to these reports are given in the matrix.

Overall damage is estimated to be around \$1 billion (4.5 percent of GDP).

However, many of these assets were concentrated in the private sector. The largest share of output losses appear in the fisheries and tourism sectors due to lost income and production. Many coastal fishermen and small scale farmers' livelihoods were impacted by the tsunami, causing greater vulnerability to poverty. In addition, many people working in the informal sector who service the fisheries and tourism sectors and communities also lost their livelihoods temporarily; thus many may fall further into poverty in what were already poor areas. Losses to livelihoods are not listed separately in the table below in order to avoid double counting, as these losses have been incorporated into the fisheries, tourism, and agriculture sectors. It is also important to take into consideration that output losses are more difficult to estimate than asset losses, as figures depend upon extrapolation from existing data⁹.

Overall incremental financing needs are estimated to amount to be around \$1.5 to 1.6 billion.

This is in addition to the \$2-300 million that the Government of Sri Lanka estimates that it has already spent, and excludes further relief expenditures. In the short term, the majority of resources are required for housing, transportation infrastructure, and livelihood restoration for fishermen, small farmers, small and micro enterprises, and others. The recovery needs run parallel to the level of damage sustained by each sector, with some variation depending upon the recovery strategy and its intent to replace damaged assets with those of equal value, as in the cases of housing and health, or with upgrades to services and infrastructure, as in the cases of power, water supply and sanitation, and transportation (especially railways). In aggregate, this is very close to the current estimate of the Task Force for Rebuilding the Nation (TAFREN) (although with more significant differences at the sector level), and consistent with preliminary estimates released by Liberation Tigers of Tamil Eelam (LTTE). These estimates can be expected to converge over the coming weeks of further joint analysis¹⁰.

The following table shows the losses and needs per sector.

⁸ Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment, prepared by Asian Development Bank, Japan Bank for International Cooperation and World Bank, Colombo, Sri Lanka, 10-28 January 2005

⁹ Ibid, Paragraph 8, page 2

¹⁰ Ibid, Paragraph 9, page 3

Table 2: Preliminary Estimates of Losses and Financing Needs (\$ Millions)¹¹

Sector	Losses		Financing Needs		
	Asset Loss	Output Loss****	Short Term	Medium Term	Total Needs
Housing	306-341	-	50	387-437	437-487
Roads	60	-	25	175	200
Water and Sanitation	42	-	64	53	117
Railways	15	-	40	90	130
Education	26	-	13	32	45
Health	60	-	17	67	84
Agriculture*	3	-	2	2	4
Fisheries*	97	200	69	49	118
Tourism*	250	130	130	-	130
Power	10	-	27	40-50	67-77
Environment	10	-	6	12	18
Social Welfare**	-	-	30	-	30
Excluded Items plus Contingency ***	90	-	30	120	150
Total (\$ Millions, rounded)	970-1,000	330	500	1,000-1,100	1,500-1,600
Percent of GDP	4.4-4.6	1.5			7.0-7.3

*Includes estimates from *livelihoods damage assessment* of fishermen, small farmers, and small businesses in tourism totaling \$140 million.

**Targeted assistance to vulnerable groups.

*** Includes items mentioned at the end of paragraph 4 and is estimated at about 10% of the total.

****Refers to 2005 and 2006.

Source: Government of Sri Lanka and staff estimates.

6.2.1. Damages and Needs by Region

A detailed breakdown by region and district of the estimated financing needs, including all sectors, is provided in the following Table 3.

¹¹ Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment, prepared by Asian Development Bank, Japan Bank for International Cooperation and World Bank, Colombo, Sri Lanka, 10-28 January 2005

Table 3: Sri Lanka Tsunami Financing Needs by Province, District and Sector¹²

(\$ Millions)

Province/ District	Education	Health	Housing*	Power *	Water & Sanitation**	Fisheries ***	Tourism ****	Roads	Railways	Total	% of total	Province/ District
North East	30.2	56.2	317.6	27.6	87.6	62.6	7.2	132.3	53.1	774.4	58.3	North East
Batticaloa	7.85	17.84	66.78	7.77	18.3	8.23	0	30.76	17.4	174.93	13.2	Batticaloa
Amparai	13.38	16.63	101.2	15.14	32.67	6.85	1.6	22.27	0	209.74	15.8	Amparai
Trincomalee	5.46	14.89	35.82	3.55	9.07	19.77	5.6	31.82	35.7	161.68	12.2	Trincomalee
Mullaitivu	1.37	6.49	46.33	0	11.24	13.99	0	19.09	0	98.51	7.4	Mullaitivu
Kilinochchi	0	0.09	18.21	0	3.62	1.01	0	11.93	0	34.86	2.6	Kilinochchi
Jaffna	2.11	0.24	49.25	1.14	12.74	12.6	0	16.44	0	94.52	7.1	Jaffna
Mannar	0	0	0	0	0	0.13	0	0	0	0.13	0.0	Mannar
South	12.3	31.1	75.9	37.6	18.0	42.8	76.6	46.9	46.1	387.3	29.1	South
Hambantota	1.27	0.32	10.13	11.39	2.83	10.73	11.2	25.19	0	73.06	5.5	Hambantota
Matara	3.76	3.24	36.44	5.83	8.66	15.92	8	11.14	10.5	103.49	7.8	Matara
Galle	7.25	27.52	29.32	20.37	6.53	16.14	57.4	10.61	35.6	210.74	15.9	Galle
West	2.5	0.7	42.9	1.6	8.3	12.5	46.3	21.7	30.8	167.3	12.6	West
Kalutara	1.71	0.4	16.34	0.94	3.32	8.73	46.3	18.56	17.3	113.6	8.5	Kalutara
Colombo	0	0.32	25.1	0.6	4.6	0.32	0	3.18	13.5	47.58	3.6	Colombo
Gampaha	0.76	0	1.49	0.03	0.38	3.41	0	0	0	6.07	0.5	Gampaha
North West	0	0	0.14	0	0.03	0.18	0	0	0	0.35	0.03	North West
Puttalam	0	0	0.14	0	0.03	0.18	0	0	0	0.35	0.03	Puttalam
Provinces Total	45	88	437	67	114	118	130	201	130	1,329.3	100.0	Provinces Total

NOTE: Does not include environment and agriculture needs due to unavailability of district specific data. Total needs for environment is US\$18 million and for agriculture US\$4 million.

* Low estimate

** Total damage cost, including indirect loss

*** Including boats, fisheries harbors and buildings

**** Including large hotels, guest houses, small hotels and hotel related assets such as souvenir shops, vehicles, etc.

¹² Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment, prepared by Asian Development Bank, Japan Bank for International Cooperation and World Bank, Colombo, Sri Lanka, 10-28 January 2005

6.3. Indonesia

The World Bank report on Indonesia, titled "Preliminary Damage and Loss Assessment"¹³, and dated January 19-20 2005, is used to provide overall data on Loss & Need Assessment due to its extensiveness. It covers the entire country and all sectors. Details on specific needs for the various sectors can be found in the demand matrix for Indonesia and have been drawn from UN and UNDP Flash Appeal documents. All references are mentioned in the matrix.

Indonesia's leaders have expressed their vision for a National Recovery and Reconstruction Strategy. A successful reconstruction strategy will result in five primary outcomes¹⁴.

- **First**, it will restore people's lives – clean water to drink, health clinics and the roads to get there, roofs over heads and a source of income to support families.
- **Second**, it will restore the economy – jobs for people, markets for people to sell and buy daily necessities, banks that lend to small-scale enterprises, shops for families to buy materials to rebuild their homes.
- **Third**, it will restore the system of local governance – local governments that represent people's aspirations and ensure provision of basic services, like roads, water, markets, education and health services.
- **Fourth**, it will rebuild local governance and government.
- **Fifth**, the strategy will implement a province-wide regional development plan.

The common thread in all those is people and returning their lives and livelihoods.

6.3.1. The Preliminary Damage and Loss Assessment¹⁵

The total estimate of damages and losses from this catastrophe in Indonesia is Rp. 41.4 trillion, or \$4.45 billion. Of the total, 66% constitutes damages, while 34% constitutes losses in the terms of income flows lost to the economy. The damage provides both an idea of the destruction of assets in the country as well as a baseline for defining the program of reconstruction. The amount of losses will directly impinge on the future economic performance of the country.

¹³ Indonesia: Preliminary Damage and Loss Assessment", prepared by Bappenas (National Development Planning Agency) and the international Donor Community, 19-20 January 2005

¹⁴ Page 94-97

¹⁵ Ibid, Executive Summary, pages iii,iv,v

Table 4. Summary of Damages and Losses

	Total Impact			Property	
	Damage	Losses	Total	Private	Public
Social Sectors	1674.9	65.8	1740.7	1440.6	300.1
Housing	1398.3	38.8	1437.1	1408.4	28.7
Education	110.8	17.6	128.4	9	119.4
Health	82.5	9.4	91.9	23.2	68.6
Culture and religion	83.4		83.4		83.4
Infrastructure	636	240.8	876.8	325.9	550.8
Transport	390.5	145.4	535.9	165.8	370.1
Communications	18.9	2.9	21.8	8.6	13.2
Energy	67.8	0.1	67.9	1.1	66.9
Water and Sanitation	26.6	3.2	29.8	18.3	11.4
Flood control, irrigation and sea protection works	132.1	89.1	221.2	132.1	89.1
Productive Sectors	351.9	830.2	1182.1	1132	50.1
Agriculture and Livestock	83.9	140.9	224.8	194.7	29.9
Fisheries	101.5	409.4	510.9	508.5	2.5
Enterprises	166.6	280	446.6	428.9	17.7
Cross sectoral	257.6	394.4	652	562.9	89.1
Environment	154.5		154.5	548.9	
Governance and administration	89.1		89.1		89.1
Bank and Finance	14		14	14	
Total Impact	2920.4	1531.2	4451.6	3461.4	990.1

The disaster primarily impacted private, not public, assets and revenues.

Some 78% of total damages and losses accrued to the private sector, including households, whereas about 22% of damages and losses were borne by the public sector. This has important implications and poses particular challenges for the reconstruction strategy.

The damage and loss profile indicates that the priorities for reconstruction must lie in ways to rebuild the livelihoods and social fabric of the devastated communities.

- **Housing and shelter.** Reconstruction of homes needs to be the first step in rehabilitating livelihoods in the disaster-struck area as almost half of the total damage is due to the loss of housing. Repairing and constructing homes will be less costly when carried out at the community level and will also generate income at the local level. Local housing programs need to be based on public and participatory planning.
- **Generating enterprise, commerce, and income creation.** A local economic revival strategy should also focus on local entrepreneurship and the promotion of micro/small enterprises, enhancing their capacity to respond to emerging market opportunities and encouraging new initiatives. During the rehabilitation phase many people will turn to micro-enterprise activities to generate an income. These re-emerging entrepreneurs will need to access to ideas, micro-finance, and know-how. Strategies that reach large numbers of people using mass-media and community-based approaches are often effective in disseminating this type of information.
- **Rebuilding rural livelihoods: agriculture and fisheries.** The livelihoods of people in the agricultural sector and fisheries have been hardest hit. The loss of income in agriculture and fisheries make up more than one-third of total losses due to the disaster. In order to minimize losses in the flow of income, it is important to resuscitate these sectors as quickly as possible, possibly through extended micro-credit and grant programs.

- **Providing public services.** In many areas, local administrations no longer function. They should be re-launched as quickly as possible, through standard procedures for village elections. Village councils (BPDs) should be elected early, in order to aid in local reconstruction and to help prevent local capture of development aid.
- **Assisting the newly vulnerable.** The aid and reconstruction effort has to pay particular attention to the newly created vulnerable populations, such as single-mothers and orphans. It is estimated that 75% of children who have a surviving mother do not live in extended families. These single mothers lack any support mechanism especially as the communal networks and social capital around them have also disappeared. On a striking note, the number of children who are estimated to have lost both parents is as high as 7,700 and going forward the aid effort needs to focus particular attention on the needs of these orphans
- **Rebuilding communities.** The reconstruction not only of houses and markets but also of social structures and communities provides an opportunity for Acehese to participate in their own governance and society building. Revival of the social fabric after the disaster requires empowering pesantren¹⁶ leaders to take an active part in rebuilding communities.

Developing a reconstruction strategy needs vision, the focus and involvement of the communities affected, strong implementation arrangements and monitoring systems.

In devising a strategy to guide the reconstruction process, decision makers should build on the damage assessment by: (i) developing a reconstruction strategy through a consultative process; (ii) rapidly mobilizing of reconstruction funds and activities; (iii) focusing on the needs of the local population; (iv) establishing the highest fiduciary standards and efficient system managing the funds, and (v) updating and monitoring needs and results. Community consultation is imperative to devising the plan for reconstructing Aceh and North Sumatra. Implementing that plan and coordinating all elements of what will be an extremely complex undertaking is just as crucial. Rebuilding the devastated provinces will involve all levels of government from national to village as well as domestic and international organizations, bilateral and multilateral institutions, donors and community groups. Coordinating all these organizations within the overall recovery and reconstruction process, while promoting the interests of the local communities, is a major task. Bappenas is well placed for the role of coordinating the recovery and reconstruction activities but whoever assumes the role will only be first among equals. All stakeholders will have valuable contributions in planning the strategy, financing that recovery and ensuring the money and reconstruction are transparent, accountable and directed at those who need it.

¹⁶ *Pesantren*: Islamic residential learning center; teaches the Quran, the Arabic language, the sharia, and Muslim traditions and history

6.4. India

The demand analysis for India has largely been based upon the Asian Development Bank, United Nations and World Bank joint demand and needs assessment of the socioeconomic and environmental impact of the December 26, 2004 tsunami in the states of Andhra Pradesh, Kerala and Tamil Nadu and the Union Territory (UT) of Pondicherry¹⁷. This report does not include the union territory of the Andaman and Nicobar Islands in the evaluation. The table below shows a summary of the preliminary assessment of damage and losses,

Table 5. Preliminary Summary of Damage and Losses (\$ million)¹⁸

	Damage and losses			Effects on Livelihoods
	Damage	Losses	Total	
Andhra Pradesh	29.7	15.0	44.7	21.2
Kerala	61.7	39.1	100.8	36.3
Tamil Nadu	437.8	377.2	815.0	358.3
Pondicherry	45.3	6.5	51.8	5.9
TOTAL (by sectors)	574.5	448.3	1,022.8	421.7
Housing	193.1	35.4	228.5	
Health and education	10.7	12.9	23.6	
Agriculture and livestock	15.1	22.4	37.5	26.0
Fisheries	229.6	338.2	567.8	338.2
Livelihoods (Microenterprises and other)	20.0	37.5	57.5	57.5
Rural and municipal infrastructure	28.0	1.6	29.6	
Transportation	35.2	0.3	35.5	
Coastal protection	42.8	0	42.8	
Relief a/		200.7	200.7	

a/ Relief provided by the local, state and national governments (not included in Total (by sectors)).

Source: JAM estimates on the basis of information made available by the governments and direct observation.

Overall damages are estimated to be \$574.5 million, and losses are estimated to be \$448.3 million. Whilst the largest proportion of the damages are concentrated in fisheries, housing and infrastructure, material private asset damages related to coastal fisheries, agriculture and micro enterprise livelihoods have been incorporated into the respective sectors. Losses related to livelihoods in these sectors are of particular significance because they accentuate the pre existing vulnerability to poverty of these coastal fisheries communities, agriculture and micro-enterprises.¹⁹

Table 6 reflects the short term needs (within one year) and medium term needs (up to three years). This table does not include longer term reconstruction needs which are significant in areas such as housing, rural and municipal infrastructure, transportation, and coastal protection; these can only be undertaken reliably after further detailed studies.

¹⁷ India Post Tsunami Recovery Program – Preliminary Damage and Needs Assessment, prepared by Asian Development Bank, United Nations and World Bank, New Delhi, India, March 8, 2005

¹⁸ Ibid, Page i,

¹⁹ Ibid, Page iii

Table 6. Preliminary Post Tsunami Reconstruction Needs (\$ Million)²⁰

	Reconstruction needs		
	Short term reconstruction	Medium term reconstruction	Total
Andhra Pradesh	26.0	46.6	72.6
Kerala	83.8	73.9	157.7
Tamil Nadu	248.6	619.7	868.3
Pondicherry	41.6	72.8	114.4
TOTAL (by sectors)	400.0	813.0	1,213.0
Housing	160.0	329.0	489.0
Health and education	11.9	5.5	17.4
Agriculture and livestock	10.4	11.3	21.7
Fisheries	54.5	229.6	284.1
Livelihoods (Microenterprises and other)	70.6	108.1	178.7
Rural and municipal infrastructure	23.5	74.0	97.5
Transportation	41.5	27.7	69.2
Coastal protection	19.5	18.6	38.1
Hazard risk management	8.1	9.2	17.3

Source: JAM estimates on the basis of states' statements and memoranda.

Overall rehabilitation and reconstruction needs are estimated at \$1.2 billion, requiring financing over the short and medium term. The estimates take into account that damaged assets need to be replaced with new ones, not only of equal value, but with upgrades to services and infrastructure in order to reduce the previous inherent vulnerability.

7. Demand Matrices

The following demand matrices provide an overview of projects of the recovery and reconstruction phases of the Tsunami affected region. At present information on current and anticipated projects is still relatively scarce, thus the data presented in the following matrices does not reflect all projects in the various pipelines. The following matrices should be seen as a first step toward the final demand analysis, they also present the type of information that will be available and from which the analysis will be conducted.

The data that is shown in the demand matrices below has been gathered from a variety of reports currently available from the Agencies and entities involved with the recovery and reconstruction of the Tsunami affected countries, as such gives an indication of the type of data that will be collected by UNDP/IAPSO.

The current demand matrices cover the Maldives, Sri Lanka, Indonesia and India as project information for these countries is available, albeit limited. Projects in other countries affected by the Tsunami will be entered in the matrices as this information becomes available.

7.1. Demand patterns

The following demand matrices are designed to facilitate the identification of;

- (i) the type of goods and services required by whom and where and which time frame
- (ii) patterns of demand or rather areas where there are overlaps in demand for identical or similar goods or services as well as in terms of time

²⁰ Ibid, page iii

frames across the countries and regions involved in the Tsunami recovery and reconstruction phases.

Due to the preliminary stage of this demand analysis it is not as yet feasible to draw conclusions in regards to demand patterns from which recommendations in terms of procurement strategies can be developed. When the project data has been consolidated in the above matrices, one is able to extract and categorise specific goods, works and works required by country and region. Demand patterns can then be identified to indicate the overall consolidated needs for specific services in the desired region.

Once the desired requirements are consolidated, this will allow for more effective strategic planning and procurement approaches in order to satisfy the requirements. Furthermore, this will enable opportunities for collaborative procurement approaches as well as volume leveraging within the analysed supply markets as well as the establishment of long-term arrangements with larger suppliers in the region.

As can be seen from the demand matrices, even at this early stage, a clearer picture is evolving in terms of the types of goods and services that will be required by the recovery and reconstruction effort. This information is already of value to suppliers eager to supply the agencies in this effort.

7.2. Summary Table

The following summary tables provide an overview of the goods and services identified in the demand matrices. The summary table is designed to allow a quick scan of the types of goods and services required for the recovery and reconstruction phases of the Tsunami affected countries, to provide an indicative budgeted amount for the accumulated cost for a particular item or service, as well as to provide the corresponding page numbers where further information in the demand matrices can be found.

Category	Goods, Services & Works	Sri Lanka			Maldives			Indonesia			India			Total US Million
		SRL	Matrix Page No.	US\$ Million	MLD	Matrix Page No.	US\$ Million	INS	Matrix Page No.	US\$ Million	IND	Matrix Page No.	US\$ Million	
Goods	Agriculture													
	Basic Agriculture. Equip. & Tools				MLD	39	1.0	INS	88	29.8				30.8
	Facilities & Infrastructure	SRL	49	1.5										1.5
	Livestock							INS	88	13.5	IND		7.68276	21.2
	Seeds & Tree Saplings				MLD	39	1.0							1.0
	Airport													
	Civil Aviation Nav aids				MLD	32	1.0							1.0
	Construction													
	Aggregate				MLD	38								
	Cement				MLD	38								
	Gen. construction material	SRL			MLD	38	12.0	INS	67	10	IND	93		22.0
	Sand				MLD	38								
	Steel				MLD	38								
	Timber				MLD	38								
	Tin Sheeting				MLD	38								
Tools				MLD	38									
Construction Equipment	SRL						INS	65	5.5				5.5	
Back Hoes	SRL						INS	65						
Bulldozers	SRL						INS	65						

Category	Goods, Services & Works	Sri Lanka			Maldives			Indonesia			India			Total US Million
		SRL	Matrix Page No.	US\$ Million	MLD	Matrix Page No.	US\$ Million	INS	Matrix Page No.	US\$ Million	IND	Matrix Page No.	US\$ Million	
	Dump Trucks	SRL						INS	65					
	Loaders	SRL						INS	65					
	Vehicles	SRL												
	Early Warning System													
	Info. & Comms system	SRL	56											
	Strengthening existing system	SRL	56											
	Electrical Power													
	Accessories				MLD	33	0.05							0.0
	Cables				MLD	33	0.6							0.6
	Distribution boxes				MLD	33	0.2	INS	84	34.5358				34.8
	Generators				MLD	33	0.6	INS	84	4.49072				5.0
	Meters & Consumer Panels				MLD	33	0.4							0.4
	Other Facilities							INS	84	14.4345				14.4
	Streetlights				MLD	33	0.1							0.1
	Switchboards				MLD	33	0.5							0.5
	Tools				MLD	33	0.1							0.1
	Emergency Shelter							INS	67	0.7				0.7
	Tents	SRL	67	0.7				INS	79	0.19246				0.9
	Fisheries													
	Anchorage	SRL	54	18.1										18.1
	Boat Sheds				MLD	31	0.1							0.1
	Gear	SRL			MLD	31	2.6	INS	89	13.5				16.1
	Production Equipment	SRL	54	4.5	MLD	31	1.3							5.8
	Vessels / Boat	SRL	54	107.4	MLD	31	7.9	INS	89	118.1	IND	97	229.5	462.9
	Fuel Storage (Petroleum)													
	Fuel Stock							INS	84	3.54981				3.5
	Fuel Tanks				MLD	33	0.5	INS	84	9.33429				9.9
	Harbours													
	Electrical Equipment/Lighting				MLD	32								
	Entrance Markers				MLD	32,37	0.6							0.6
	Handling Gear				MLD	32								
	Jetties / Docks	SRL			MLD	32								
	Light Beacons				MLD	32								
	Reef Markers				MLD									

Category	Goods, Services & Works	Sri Lanka			Maldives			Indonesia			India			Total US Million
		SRL	Matrix Page No.	US\$ Million	MLD	Matrix Page No.	US\$ Million	INS	Matrix Page No.	US\$ Million	IND	Matrix Page No.	US\$ Million	
	Housing													
	Furniture							INS	77	225.392				225.4
	Land Transport													
	Vehicles and related infrastructure							INS	82	314.778				314.8
	Medical													
	Ambulances	SRL	46											
	Fogging devices	SRL	46											
	Furniture				MLD		0.8							0.8
	Insecticides	SRL	46											
	Lab. Equipment	SRL						INS	73					
	Medical Equipment	SRL			MLD	28	3.1	INS	73		IND	94		3.1
	Medicines / Drugs/ Consumables	SRL	46	1.8	MLD	28	1.2				IND	94		3.0
	Reproductive				MLD									
	Safe-delivery kits				MLD									
	Vaccines				MLD									
	Office Facilities													
	Computers & Printers	SRL			MLD									
	Equipment							INS	92	11.8				11.8
	Furniture	SRL			MLD									
	Public													
	Composting bins				MLD	29								
	Glass Crushers				MLD	29								
	Shredders				MLD	29								
	Wheeled bins				MLD	29								
	Railways	SRL	52	15.0										15.0
	Automated Signal Systems	SRL	52											
	Culverts	SRL	52											
	Power Sets	SRL	52											
	Rail	SRL	52											
	Reconstruction	SRL	52											
	Sleepers	SRL	52											
	Track-bed bridges	SRL	52											
	School Equipment													
	School Facilities	SRL			MLD	27	12.0							12.0

Category	Goods, Services & Works	Sri Lanka			Maldives			Indonesia			India			Total US Million
		SRL	Matrix Page No.	US\$ Million	MLD	Matrix Page No.	US\$ Million	INS	Matrix Page No.	US\$ Million	IND	Matrix Page No.	US\$ Million	
	Student Supplies	SRL			MLD	27	2.1	INS	79	0.05346				2.1
	Telecommunication													
	Equipment							INS	86	20.7108				20.7
	Water Supply & Sanitation													
	Crew Cabs	SRL			MLD									
	Desalination Systems				MLD	29								
	De-sludging system				MLD	29								
	Disinfectants & water Chlorination tablets	SRL	51		MLD	29								
	Electric Gears	SRL	51											
	Gully Emptiers	SRL	51											
	Polythene Pipes	SRL	51											
	Rainwater Tanks				MLD	29								
	Sanitary Latrines				MLD	29								
	Sanitation systems				MLD	29,30	23.2				IND	93	12.75	36.0
	Sewage disposal browsers	SRL	51		MLD									
	Sewer system				MLD	30								
	sludge pumps	SRL	51		MLD									
	Toilets & Septic Tanks	SRL	51,58	0.1	MLD	27,30								0.1
	Water Browsers	SRL	51		MLD									
	Water disinfection kits				MLD									
	Water Meters	SRL	51		MLD									
	Water Pumps	SRL	51		MLD									
	Water Purification Kits	SRL	51		MLD									
	Water quality testing kits	SRL	51		MLD									
	Water storage facilities	SRL	51		MLD	27								
	Water Supply	SRL	51,58	0.2	MLD	29,30	12.0							12.2
	Water Supply and Sanitation Units	SRL	51	50.0				INS	79,87	69.2915	IND	93,98		119.3
	Airports													
	Repairs				MLD	32	2.0	INS	83	4.91841				6.9

Civil Works

Category	Goods, Services & Works	Sri Lanka			Maldives			Indonesia			India			Total US Million
		SRL	Matrix Page No.	US\$ Million	MLD	Matrix Page No.	US\$ Million	INS	Matrix Page No.	US\$ Million	IND	Matrix Page No.	US\$ Million	
	Debris / Waste Removal/Clean Up													
	Debris Removal	SRL	43,58,59	21.6	MLD			INS	67,77,79,79	14.4504			36.0	
	Well & Drain Cleaning	SRL	4158	3.1									3.1	
	Electrical Installations													
	Inst. Of Generators				MLD	33	0.0						0.0	
	Inst. Of Cables				MLD	33	0.4						0.4	
	Inst. Of Distribution Boxes				MLD	33	0.0						0.0	
	Construction of Power houses				MLD	33	0.9						0.9	
	Inst. Of Street lights				MLD	33	0.0						0.0	
	Upgrading existing facilities	SRL												
	Governance/Municipality Infrastructure													
	Rebuilding /Repairs							INS	92	33.1	IND	98	18.72	51.8
	Temp. toilets at campsites	SRL	57	3.0									3.0	
	Harbours (Ports & Fishing)													
	Rebuilding /Repairs	SRL	54,64	1512.7	MLD	32,37	20.5	INS	83,89	67.7928	IND	99	66.46	1,667.4
	Debris Removal	SRL	54		MLD									
	Dredging	SRL	54	5.0	MLD	32	2.1						7.1	
	Island Accessibility				MLD	37	0.8						0.8	
	Storage Facilities				MLD									
	Hospitals/Health Centres													
	Rebuilding /Repairs	SRL	46	56.6	MLD	28	4.0	INS	80	80.0543	IND	94	15.74	156.4
	Housing													
	Rebuilding/Repairs	SRL	58,60,61	15.9	MLD			INS	77	1429.01	IND	93	228.5	1,673.4
	Public/Municipality Infrastructure													
	Rehabilitation of Community Infrastructure	SRL	58	0.2									0.2	
	Roads													
	Abutment slope protection	SRL	53											
	Assessment & repairs of bridge hydraulic capacity	SRL	53											
	Drainage and culvert repairs and enlargement	SRL	53											
	Embankment Stabilisation	SRL	53											

Category	Goods, Services & Works	Sri Lanka			Maldives			Indonesia			India			Total US Million
		SRL	Matrix Page No.	US\$ Million	MLD	Matrix Page No.	US\$ Million	INS	Matrix Page No.	US\$ Million	IND	Matrix Page No.	US\$ Million	
	Reinstatement of damaged pavements	SRL	53											
	Replacement of road furniture	SRL	53											
	Replacement of temp. bridges w. permanent	SRL	53											
	Structural repairs to damaged bridges	SRL	53											
	Widening & Elevation of embankments & carriageways	SRL	53											
	Reconstruction/Repairs							INS	82	221.11		93,98,99		221.1
	Short Term Repair	SRL	53	21.0										21.0
	Medium Term Maintenance	SRL	53	157.0										157.0
	Bridge Reconstruction	SRL	53							13.35				13.4
	Road Furniture	SRL	53											
	Drainage equipment	SRL	53							2.83		98		2.8
	Railways													
	Long-Term Reconstruction Services	SRL		71.0										71.0
	Religion (Places of Worship)													
	Rebuilding /Repairs							INS	81	83.0203				83.0
	Schools / Universities													
	Rebuilding/Repairs	SRL	45	37.0	MLD	27	1.9	INS	78	110.178				149.1
	Tertiary Infrastructure							INS	77	184.654				184.7
	Services / Consultancy													
	Agriculture													
	Agricultural Management				MLD									
	Bio Diversity				MLD									
	Saline Soils Treatment	SRL	49		MLD	39	0.4							0.4
	Soil Remediation Consultancy	SRL	49	0.0	MLD						IND	95	12.5011	12.5
	Re-establish Livelihoods	SRL	49	2.1	MLD									2.1
	Training & Capacity	SRL	49	0.2										0.2
	Construction													
	Assessments and Consultancies													
	Resource Mapping & Technical Know-How	SRL			MLD									
	Shelter Needs & Implementation Capacity dev. Needs				MLD									

Category	Goods, Services & Works	Sri Lanka			Maldives			Indonesia			India			Total US Million
		SRL	Matrix Page No.	US\$ Million	MLD	Matrix Page No.	US\$ Million	INS	Matrix Page No.	US\$ Million	IND	Matrix Page No.	US\$ Million	
	Sustainable Construction Design & Buildings				MLD									
	Training of local masons & small contractors				MLD									
	Training , capacity building for local planning & execution				MLD	37,38	1.6							1.6
	Damaged buildings in National Parks	SRL	44	1.3	MLD									1.3
	Skills Training	SRL										4.7		4.7
	Technical Assistance	SRL					1.2					2		3.2
	Education													
	Teacher Replacement & Training							INS	79	5.14295				5.1
	Prof. Guidance & Teacher Training				MLD	27	0.1							0.1
	Environment													
	Air Pollution Control System				MLD	36	0.8							0.8
	Biodiversity Survey & Recovery Plans				MLD	35	0.9							0.9
	Climate Change				MLD									
	Coastal Protection Measures									IND	100	42.8		42.8
	Coastal Zone Management				MLD	36	1.5							1.5
	Disaster Waste Management				MLD	35	1.5							1.5
	Energy Conservation & Renewable Energy				MLD	36	0.4							0.4
	Environmental Assessment of Marine Eco-Systems	SRL	43	1.5	MLD	31,35	1.5							3.0
	Environmental Assess. Rehab & Reconstruction	SRL	43	0.2	MLD	35	0.3							0.5
	Environmental Awareness Building				MLD	29,36	2.5							2.5
	Environmental Governance				MLD	35	1.2							1.2
	Impact on Protected & Env. Sensitive Areas	SRL	43	0.8										0.8
	Hazardous Substances Control Programme				MLD	36	0.5							0.5
	National Oil Spill Response Plan				MLD	36	0.5							0.5
	Reefs impact Assessment				MLD	35	1.3							1.3
	Sustainable Waste Management	SRL	44	6.0	MLD									6.0
	Fisheries													
	Damage Assessment									IND	97	54.1		54.1
	Training Skill Development	SRL	54	0.5										0.5
	Technical Assistance	SRL	54	5.0										5.0
	Health	SRL	62	12.5										12.5
	Basic Health Care	SRL	46	1.3	MLD					IND	94			1.3

Category	Goods, Services & Works	Sri Lanka			Maldives			Indonesia			India			Total US Million
		SRL	Matrix Page No.	US\$ Million	MLD	Matrix Page No.	US\$ Million	INS	Matrix Page No.	US\$ Million	IND	Matrix Page No.	US\$ Million	
	Disease Surveillance, verification & response	SRL	46	0.9	MLD	42	1.0							1.9
	Environmental Treats on Human Health				MLD									
	EWS on life-threatening diseases	SRL	62		MLD									
	Hazardous Substances				MLD									
	Health Assessments	SRL	62		MLD	40	0.4	INS	69	2	IND	94		2.4
	Health Sector Coordination	SRL	62		MLD	40	0.4							0.4
	Health Care Waste Management	SRL	44	3.0										3.0
	Health Planning Needs	SRL	62		MLD									
	Medical Supply Chain Optimization	SRL	46,62	4.5	MLD	41	3.0							7.5
	Psycho-social Support	SRL												
	Project Management				MLD	42	0.5							0.5
	Re-establishing preventative health care	SRL	46	4.5										4.5
	Public Health Campaigns/Programs				MLD	40	0.5	INS		12.3838				12.9
	Strengthening Health Institutions & Delivery Systems	SRL	46	11.3	MLD			INS	74	3				14.3
	Health Emergency Unit							INS	70	3.5				3.5
	Child & Maternal Health Services							INS	72	5				5.0
	Restoration of Health Services							INS	73	10				10.0
	Mental Health Programme & Counselling							INS	75,79	5.08498				5.1
	Water Supply & Sanitation System							INS	76	3				3.0
	Medical Machinery Installation				MLD		0.2							0.2
Livelihood														
	SME Micro Credits							INS	66	10				10.0
	Skills Training/Capacity Building				MLD	39	0.2	INS	66	4				4.2
	Technical Assistance				MLD	39	0.5	INS	66	2				2.5
Misc. Services /Consultancies														
	Vocational Training and Skills Development	SRL												
	Early Warning Systems Training	SRL												
	Knowledge Sharing	SRL												
Public Sector														
	Community-based livelihoods activities				MLD									
	Disposal Facilities				MLD									
	Human Capacity Building & Training	SRL			MLD									
	Local Government Support				MLD									

Demand Matrix – Maldives

17.03.2005

7.3. Maldives Demand Matrix

Country	Project Name			
Maldives				
Agencies	Source Document			
WB, ADB, UN system	Republic of the Maldives – Tsunami: Impact and Recovery; Joint Needs Assessment http://siteresources.worldbank.org/INTMALDIVES/Resources/mv-na-full-02-14-05.pdf			
	Sector			
	Education			
Project Activities	Specific Needs	Budget (US\$)		Time Frame
Rebuilding and equipping of schools	Goods <ul style="list-style-type: none"> • water storage facilities • toilets • septic tanks • textbooks & stationery • uniforms • blackboards • library books • computers and printers 	Schools Facilities 11,972,000 Student Supplies 2,081,000 Professional Guidance & Teacher Requirements 76,200 Construction 1,880,000 Transport 391,000 Logistics 1,173,000 Contingency 3,514,000 Total 21,087,200	More data required	

Demand Matrix – Maldives

17.03.2005

Country	Project Name																								
Maldives																									
Agencies	Source Document																								
WB, ADB, UN system	Republic of the Maldives – Tsunami: Impact and Recovery; Joint Needs Assessment http://siteresources.worldbank.org/INTMALDIVES/Resources/mv-na-full-02-14-05.pdf																								
	Sector																								
	Health																								
Project Activities	Specific Needs	Budget	Time Frame																						
<ul style="list-style-type: none"> • Improving water and sanitation services • Rehabilitation of cold chain equipment for immunization program • Supply of vaccines • Supply of essential medicines and medical equipment (including logistics) • TA support to disease surveillance (including laboratory), environmental health, and food safety • TA to support reconstruction and rehabilitation of health systems • Mental health (Psychosocial support) • Supply of reproductive health and family planning commodities • Inputs for providing care to pregnant women such as safe delivery kits • Rehabilitation of health facilities 	<p>Goods</p> <ul style="list-style-type: none"> • Vaccines • Medicines • Medical equipment • Safe-delivery kits • Reproductive <p>Services</p> <ul style="list-style-type: none"> • Technical assistance to support reconstruction • Rehabilitation of health facilities 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Activity</th> <th style="text-align: right;">Budget (US\$)</th> </tr> </thead> <tbody> <tr> <td>Structural & Building</td> <td style="text-align: right;">4,000,000</td> </tr> <tr> <td>Services Damages</td> <td></td> </tr> <tr> <td>Equipments & machineries</td> <td style="text-align: right;">3,100,000</td> </tr> <tr> <td>Medical Consumables</td> <td style="text-align: right;">1,200,000</td> </tr> <tr> <td>Furniture</td> <td style="text-align: right;">800,000</td> </tr> <tr> <td>Transport</td> <td style="text-align: right;">100,000</td> </tr> <tr> <td>Duty</td> <td style="text-align: right;">1,100,000</td> </tr> <tr> <td>Handling</td> <td style="text-align: right;">100,000</td> </tr> <tr> <td>Site visits & machinery installation</td> <td style="text-align: right;">200,000</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">10,600,000</td> </tr> </tbody> </table>	Activity	Budget (US\$)	Structural & Building	4,000,000	Services Damages		Equipments & machineries	3,100,000	Medical Consumables	1,200,000	Furniture	800,000	Transport	100,000	Duty	1,100,000	Handling	100,000	Site visits & machinery installation	200,000	Total	10,600,000	More data required
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Demand Matrix – Maldives

17.03.2005

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Agencies	Source Document																				
WB, ADB, UN system	Republic of the Maldives – Tsunami: Impact and Recovery; Joint Needs Assessment http://siteresources.worldbank.org/INTMALDIVES/Resources/mv-na-full-02-14-05.pdf																				
	Sector																				
	Water Supply, Sanitation and Solid Waste Management																				
Project Activities	Specific Needs	Budget	Time Frame																		
<ul style="list-style-type: none"> • rehabilitation of associated roof rainwater harvesting piping and gutters, • supply disinfectants and water chlorination tablets, • impermeable lining for the construction of temporary sludge drying beds; • solid waste management: storage and processing equipment 	Goods <ul style="list-style-type: none"> • 46 mobile desalination systems (46 units) • 7650 rainwater tanks (1000 for and 6650 for households tanks) • 1800 temporary sanitary latrines • 34 septic tank de-sludging systems • disinfectants and water chlorination tablets • communal and household wheeled bins • 48 sets of shredders, glass crushers and composting bins 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="text-align: right;">US \$</th> </tr> </thead> <tbody> <tr> <td>Subcomponent</td> <td></td> </tr> <tr> <td>Water supply</td> <td style="text-align: right;">10,300,000</td> </tr> <tr> <td>Sanitation</td> <td style="text-align: right;">3,260,000</td> </tr> <tr> <td>Solid Waste Management</td> <td style="text-align: right;">2,640,000</td> </tr> <tr> <td>Environmental Awareness and Education</td> <td style="text-align: right;">500,000</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">16,690,000</td> </tr> <tr> <td>Contingency (10%)</td> <td style="text-align: right;">1,670,000</td> </tr> <tr> <td>Grand Total</td> <td style="text-align: right;">18,360,000</td> </tr> </tbody> </table>		US \$	Subcomponent		Water supply	10,300,000	Sanitation	3,260,000	Solid Waste Management	2,640,000	Environmental Awareness and Education	500,000	Total	16,690,000	Contingency (10%)	1,670,000	Grand Total	18,360,000	Immediate and Short Term Needs (3–6 months)
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Demand Matrix – Maldives

17.03.2005

<ul style="list-style-type: none"> • Rehabilitation and replacement of damaged sanitation infrastructure • Construction of permanent septic and hygienic sludge drying beds • Construction, repair or replacing of sewerage network systems • septage treatment facilities and upgrading to full sewerage systems • Preparation of a sanitation and water strategy. 	<p>Goods</p> <ul style="list-style-type: none"> • 5000 toilets and 7600 septic tanks • 69 sludge drying beds • 21 sewer systems <p>Services</p> <ul style="list-style-type: none"> • Rehabilitation of sanitation & sewerage systems • Preparation of a sanitation and water strategy 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Subcomponent</th> <th style="text-align: right;">US \$</th> </tr> </thead> <tbody> <tr> <td>Water supply</td> <td style="text-align: right;">1,660,000</td> </tr> <tr> <td>Sanitation</td> <td style="text-align: right;">19,950,000</td> </tr> <tr> <td>Solid Waste Management</td> <td style="text-align: right;">1,470,000</td> </tr> <tr> <td>Environmental Monitoring and Environmental Awareness Programs</td> <td style="text-align: right;">1,600,000</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">24,730,000</td> </tr> <tr> <td>Contingency (10%)</td> <td style="text-align: right;">2,470,000</td> </tr> <tr> <td>Grand Total</td> <td style="text-align: right;">27,210,000</td> </tr> </tbody> </table>	Subcomponent	US \$	Water supply	1,660,000	Sanitation	19,950,000	Solid Waste Management	1,470,000	Environmental Monitoring and Environmental Awareness Programs	1,600,000	Total	24,730,000	Contingency (10%)	2,470,000	Grand Total	27,210,000	<p>Medium-Term to Long-Term Assistance (Up to 2-3 years)</p>
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	Sector																				
	Fisheries																				
Project Activities	Specific Needs	Budget	Time Frame																		
<ul style="list-style-type: none"> • Replacement & reparation of damages to fishing vessels (inclusive of engine, gear, etc.) • Replace fishing gear/engines etc. in partially damaged boats • Replace damaged equipment and facilities for Maldivian fish production • Replace damaged /destroyed boat sheds • Repair mariculture station and FAD Centre • Assess and monitor impact on reefs and marine resources 	Goods <ul style="list-style-type: none"> • Fishing vessels • Fishing gear • Fish production equipment • Boat sheds 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Activities</th> <th style="text-align: right;">US \$</th> </tr> </thead> <tbody> <tr> <td>Replace damaged fishing vessels (inclusive of engine, gear, etc.)</td> <td style="text-align: right;">7,850,000</td> </tr> <tr> <td>Replace fishing gear/engines etc. in partially damaged boats</td> <td style="text-align: right;">2,570,000</td> </tr> <tr> <td>Replace damaged equipment and facilities for Maldivian fish production</td> <td style="text-align: right;">1,290,000</td> </tr> <tr> <td>Replace damaged /destroyed boat sheds</td> <td style="text-align: right;">50,000</td> </tr> <tr> <td>Repair mariculture station and FAD Centre</td> <td style="text-align: right;">70,000</td> </tr> <tr> <td>Assess and monitor impact on reefs and marine resources</td> <td style="text-align: right;">700,000</td> </tr> <tr> <td>Micro credit arrangements</td> <td style="text-align: right;">1,560,000</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">14,090,000</td> </tr> </tbody> </table>	Activities	US \$	Replace damaged fishing vessels (inclusive of engine, gear, etc.)	7,850,000	Replace fishing gear/engines etc. in partially damaged boats	2,570,000	Replace damaged equipment and facilities for Maldivian fish production	1,290,000	Replace damaged /destroyed boat sheds	50,000	Repair mariculture station and FAD Centre	70,000	Assess and monitor impact on reefs and marine resources	700,000	Micro credit arrangements	1,560,000	Total	14,090,000	More data required
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Demand Matrix – Maldives

17.03.2005

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	Sector																								
	Transport & Communications																								
Project Activities	Specific Needs	Budget	Time Frame																						
Repair, replacement or construction of; <ul style="list-style-type: none"> • Harbours • Dredging • Maritime Navaid • Male Commercial Harbour • Male Int'l Airport <ul style="list-style-type: none"> ○ Runway, Shoulders ○ Taxiways, drainage ○ Sea walls ○ Navaid/Communications systems ○ Others (Buildings, etc) 	Goods <ul style="list-style-type: none"> • 36 Jetties (1,600 metres length) • 25 12-Mile Light Beacons • 65 2-Mile Reef Markers • 120 Entrance Markers • Navaid/Communications systems • Electrical Equipment/Lighting & Accessories • Handling Gear, Office Furniture Services <ul style="list-style-type: none"> • Repair of 4,200m quay walls & 15,000m sea walls • Dredging of 520,000 m3 • At Male Int'l Airport, repair of: <ul style="list-style-type: none"> ○ Runway, Shoulders ○ Taxiways, drainage ○ Sea walls 	Activities <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="text-align: right;">Total (US\$)</th> </tr> </thead> <tbody> <tr> <td>Maritime Navaid</td> <td style="text-align: right;">500,000</td> </tr> <tr> <td>Hiring Landing Craft</td> <td style="text-align: right;">500,000</td> </tr> <tr> <td>Jetty Repair</td> <td style="text-align: right;">200,000</td> </tr> <tr> <td>Quay Walls/Sea Walls Repair</td> <td style="text-align: right;">15,800,000</td> </tr> <tr> <td>Dredging</td> <td style="text-align: right;">2,050,000</td> </tr> <tr> <td>Causeway Repair</td> <td style="text-align: right;">1,700,000</td> </tr> <tr> <td>Male Commercial Harbor¹⁾</td> <td style="text-align: right;">270,000</td> </tr> <tr> <td>Male International Airport¹⁾</td> <td style="text-align: right;">2,000,000</td> </tr> <tr> <td>Civ.Av.Navaid (Satelite.based)</td> <td style="text-align: right;">1,000,000</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">23,030,000</td> </tr> </tbody> </table>		Total (US\$)	Maritime Navaid	500,000	Hiring Landing Craft	500,000	Jetty Repair	200,000	Quay Walls/Sea Walls Repair	15,800,000	Dredging	2,050,000	Causeway Repair	1,700,000	Male Commercial Harbor ¹⁾	270,000	Male International Airport ¹⁾	2,000,000	Civ.Av.Navaid (Satelite.based)	1,000,000	Total	23,030,000	Except for the navaid, none of the damages reported are of a nature that needs to be remedied on an immediate basis given the needs of the other sectors, but the facilities should be restored within the next 1-2 years
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Agencies	Source Document
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	Sector
	Electrical Power

Project Activities	Specific Needs	Budget				Time Frame	
		Description	Phase 1	Phase 2	Total		
Repair and/or replacement of: <ul style="list-style-type: none"> • 24 Power House • 104 Generator • 652 Streetlights • 34 Switchboards • 121 Cables • 632 Distribution boxes 	Equipment <ul style="list-style-type: none"> • Generators • Switchboard • Cables • Distribution boxes • Streetlights • Tools • Accessories • Fuel tanks • Meters and consumer panel Works <ul style="list-style-type: none"> • Transport of equipment • Installation of generators • Installation of cables • Installation of distr. Boxes • Installation of streetlights • Construction of powerhouse 	Equipment				Short Term (6 months) – Phase 1 To restore the power supply system on a more permanent basis within the shortest possible time, repairing the damaged generators, replacing the damaged cables and distribution boxes, are considered a priority Medium Term (1.5 – 2 years) – Phase 2 To bring back the system to the pre-disaster level, more time, resources and detailed survey will be needed.	
		Generators			555,440		555,440
		Switchboard	478,130		478,130		
		Cables	597,660		597,660		
		Distribution boxes	224,660		224,660		
		Streetlights		138,550	138,550		
		Tools	-	80,860	80,860		
		Accessories	41,120	6,930	48,050		
		Fuel tanks	-	539,060	539,060		
		Meters and consumer panel	-	380,940	380,940		
		Subtotal (1)	1,341,570	1,701,780	3,043,350		
		Works					
		Transport of equipment	134160	116170	250,330		
		Installation of generators	0	45310	45,310		
		Installation of cables	351460	0	351,460		
Installation of distr. Boxes	34560	0	34,560				
Installation of streetlights	0	25470	25,470				

Demand Matrix – Maldives

17.03.2005

	Construction of powerhouse	0	898440	898,440	
	Subtotal (2)	520,180	1,085,390	1,605,570	
	Total	1,861,750	2,787,170	4,648,920	

Demand Matrix – Maldives

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Project Activities	Specific Needs	Budget	Time Frame																												
Immediate Priorities <ul style="list-style-type: none"> • Disaster Waste Management • Assessment of Environmental Threats to Human Health • Coral Reef Impact Assessment Programme • Biodiversity Survey and Recovery Plans • Strategic environmental assessment of overall rehabilitation and reconstruction program • Strengthening Environmental Governance at the National, Atoll and Island Levels 	Services Professional Consultancy Services covering expertise outlined under 'Project Activities'	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left;">Project Proposal</th> <th style="text-align: center;">IMME-DIATE</th> <th style="text-align: center;">MEDIUM-TERM</th> <th style="text-align: center;">Total</th> </tr> </thead> <tbody> <tr> <td>Disaster Waste Management</td> <td style="text-align: center;">1.5</td> <td></td> <td style="text-align: center;">1.5</td> </tr> <tr> <td>Assessment of environmental threats to health</td> <td style="text-align: center;">0.75</td> <td></td> <td style="text-align: center;">0.75</td> </tr> <tr> <td>Coral Reef Impact Assessment</td> <td style="text-align: center;">0.5</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">1.25</td> </tr> <tr> <td>Biodiversity Survey and recovery plans</td> <td style="text-align: center;">0.3</td> <td style="text-align: center;">0.6</td> <td style="text-align: center;">0.9</td> </tr> <tr> <td>Environmental Assessment of reconstruction Programme</td> <td style="text-align: center;">0.2</td> <td style="text-align: center;">0.1</td> <td style="text-align: center;">0.3</td> </tr> <tr> <td>Strengthening environmental governance</td> <td style="text-align: center;">0.45</td> <td style="text-align: center;">0.7</td> <td style="text-align: center;">1.15</td> </tr> </tbody> </table>	Project Proposal	IMME-DIATE	MEDIUM-TERM	Total	Disaster Waste Management	1.5		1.5	Assessment of environmental threats to health	0.75		0.75	Coral Reef Impact Assessment	0.5	0.75	1.25	Biodiversity Survey and recovery plans	0.3	0.6	0.9	Environmental Assessment of reconstruction Programme	0.2	0.1	0.3	Strengthening environmental governance	0.45	0.7	1.15	Immediate Priorities (0 – 6 months) Medium Term (7 – 36 months)
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Demand Matrix – Maldives

17.03.2005

Medium-Term Priorities	Services	Project Proposal	MEDIUM-TERM	Total	Immediate Priorities (0 – 6 months)
<ul style="list-style-type: none"> • Development of a Sustainable Waste Management System • Sewage and Wastewater Management System • Climate Change Programme • Coastal Zone Management • Disposal Facilities for Clinical Wastes • Hazardous Substances Control Programme • Development of Ambient Air Pollution Control Regime • Development of Integrated Transport System • Environmental Land-Use Planning • Sustainable Construction Design and Building Codes • National Environmental Contingency Plan • Environmental Management of Diesel Generators • Energy Conservation and Promotion of Renewable Energy • Environmental Awareness Building 	Professional Consultancy Services covering expertise outlined under 'Project Activities'	Coastal Zone Management Hazardous Substances Control Programme Air Pollution Control System National Oil Spill Response Plan Energy Conservation and Promotion of Renewable Energy Environmental Awareness Building Total	1.5 0.45 0.75 0.45 0.45 0.35 6.1	1.5 0.45 0.75 0.45 0.35 9.8 million	Medium Term (7 – 36 months)

Demand Matrix – Maldives

17.03.2005

Country	Project Name																		
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UNDP Flash Appeal Project Direct Execution by UNDP	Earthquake-Tsunami 2005 UNDP Flash Appeal Projects – Maldives																		
	Sector																		
	Restoration of Critical Infra-structure																		
Project Activities	Specific Needs	Budget	Time Frame																
<ul style="list-style-type: none"> • Repair jetties, harbours and other coastal infrastructure • Dredge access channels, basin dredging, cleaning up debris • Repairing of storage facilities, facilities related to fishing (fish landing yards, fish smoking kitchens, community space for drying fish) • Repair damaged navigational aid facilities, mile reef markers, mile light beacons • Provision of TA for capacity building of relevant government 	<p>Goods and services for repair / reconstruction of:</p> <ul style="list-style-type: none"> • 36 Jetties @ US\$ 10,000 each • 1,000 m of Quay wall @ US\$ 950/m • 1,500 m of Sea Walls @ US\$ 895/m • 10 Boat repair yards (haruge') @ US\$ 10,000 each • 10 Fish drying yards @US\$9,500 each • Fish smoking facilities • 10 Warehouses • Dredging 100,000 cubic meter of sand in identified sea channels and harbours @US\$ 3.00 cu. m 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Project Activities</th> <th style="text-align: right;">US \$</th> </tr> </thead> <tbody> <tr> <td>Rehabilitate jetties, harbour and costal infrastructure</td> <td style="text-align: right;">2,520,000</td> </tr> <tr> <td>Reconstruct island accessibility, repair fisheries facilities</td> <td style="text-align: right;">817,000</td> </tr> <tr> <td>Renovation of navigational facilities</td> <td style="text-align: right;">63,000</td> </tr> <tr> <td>Training, capacity building for local planning & execution</td> <td style="text-align: right;">100,000</td> </tr> <tr> <td>Technical Assistance</td> <td style="text-align: right;">400,000</td> </tr> <tr> <td>Monitoring, Reporting and Miscellaneous</td> <td style="text-align: right;">100,000</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">4,000,000</td> </tr> </tbody> </table>	Project Activities	US \$	Rehabilitate jetties, harbour and costal infrastructure	2,520,000	Reconstruct island accessibility, repair fisheries facilities	817,000	Renovation of navigational facilities	63,000	Training, capacity building for local planning & execution	100,000	Technical Assistance	400,000	Monitoring, Reporting and Miscellaneous	100,000	Total	4,000,000	<p>6 months, until June 2005, activities undertaken during this period are likely to go beyond the period of the Appeal, and will dovetail with the reconstruction phase.</p>
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UN-HABITAT / UNDP Flash Appeal Projects National Execution – Disaster Management Centre	Earthquake-Tsunami 2005 UNDP Flash Appeal Projects – Maldives																		
	Sector	Shelter Provision																	
Project Activities	Specific Needs	Budget	Time Frame																
<ul style="list-style-type: none"> • Repair the most severely damaged houses and assist rebuilding the totally destroyed houses; • Initiate a public awareness campaign on structural mitigation measures; • Provide training for local masons and small contractors; • Provide disaster mitigation technical support inputs to the Governments “Safe Islands” Programme • Undertake in-depth assessment of shelter needs and capacities to implement the Programme. • Establish a structure for capacity development as discussed with the Ministry of Planning; • Undertake resource mapping to determine the availability of skilled and unskilled labour, as well as the availability of technical know-how and building materials in affected communities; 	<p>Goods</p> <ul style="list-style-type: none"> • cement, • aggregate, • sand, • steel, • timber, • tin sheet <p>Services</p> <ul style="list-style-type: none"> • Local Labour • Transportation services • Construction related consultancy services 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left;">Project Activities</th> <th style="text-align: right;">US \$</th> </tr> </thead> <tbody> <tr> <td>Construction materials (cement, aggregate, sand, steel, timber, tin sheet)</td> <td style="text-align: right;">12,000,000</td> </tr> <tr> <td>Recruit Local Labour</td> <td style="text-align: right;">1,400,000</td> </tr> <tr> <td>Transportation of construction materials</td> <td style="text-align: right;">3,500,000</td> </tr> <tr> <td>Capacity Development</td> <td style="text-align: right;">1,500,000</td> </tr> <tr> <td>Technical Assistance</td> <td style="text-align: right;">500,000</td> </tr> <tr> <td>Monitoring, Reporting and Miscellaneous</td> <td style="text-align: right;">200,000</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">19,100,000</td> </tr> </tbody> </table>	Project Activities	US \$	Construction materials (cement, aggregate, sand, steel, timber, tin sheet)	12,000,000	Recruit Local Labour	1,400,000	Transportation of construction materials	3,500,000	Capacity Development	1,500,000	Technical Assistance	500,000	Monitoring, Reporting and Miscellaneous	200,000	Total	19,100,000	<p style="text-align: center;">6 months, until June 2005.</p> <p style="text-align: center;">Activities undertaken during this period are likely to go beyond the period of the Appeal, and will dovetail with the reconstruction phase.</p>
Project Activities	US \$																		
Construction materials (cement, aggregate, sand, steel, timber, tin sheet)	12,000,000																		
Recruit Local Labour	1,400,000																		
Transportation of construction materials	3,500,000																		
Capacity Development	1,500,000																		
Technical Assistance	500,000																		
Monitoring, Reporting and Miscellaneous	200,000																		
Total	19,100,000																		

Demand Matrix – Maldives

17.03.2005

Country	Project Name																		
Maldives																			
Agencies	Source Document																		
UNDP Flash Appeal Project Direct Execution by UNDP	Earthquake-Tsunami 2005 UNDP Flash Appeal Projects – Maldives																		
	Sector	Restoration of Livelihoods																	
Project Activities	Specific Needs	Budget	Time Frame																
<ul style="list-style-type: none"> • Provide SME Micro Credits • Provide agricultural inputs; seeds, fruit and other tree saplings, basic agricultural equipment and tools • Technical assistance to treat saline soils • Implement interim food and cash-for-work community-based livelihoods activities • Repair and rebuild public and private livelihoods infrastructure and support reconstruction of public facilities • Clean up and dispose of debris 	<p>Goods</p> <ul style="list-style-type: none"> • Seeds and Tree saplings • Basic agricultural equipment and tools <p>Services</p> <ul style="list-style-type: none"> • Soil remediation consultancy • Debris removal • Technical assistance to treat saline soils • Infrastructure and public facilities repair 	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Project Activities</td> <td style="text-align: right;">US \$</td> </tr> <tr> <td>Micro-credit for repair and replacement of equipment</td> <td style="text-align: right;">1,000,000</td> </tr> <tr> <td>Cash-for-work interim community employment</td> <td style="text-align: right;">1,000,000</td> </tr> <tr> <td>Agricultural inputs and technical support services</td> <td style="text-align: right;">400,000</td> </tr> <tr> <td>Training, capacity building for local planning, execution</td> <td style="text-align: right;">200,00</td> </tr> <tr> <td>Technical Assistance</td> <td style="text-align: right;">500,000</td> </tr> <tr> <td>Monitoring, Reporting and Miscellaneous</td> <td style="text-align: right;">200,000</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">3,300,000</td> </tr> </table>	Project Activities	US \$	Micro-credit for repair and replacement of equipment	1,000,000	Cash-for-work interim community employment	1,000,000	Agricultural inputs and technical support services	400,000	Training, capacity building for local planning, execution	200,00	Technical Assistance	500,000	Monitoring, Reporting and Miscellaneous	200,000	Total	3,300,000	<p>6 months, until June 2005</p> <p>Activities undertaken during this period are likely to go beyond the period of the Appeal, and will dovetail with the reconstruction phase.</p>
Project Activities	US \$																		
Micro-credit for repair and replacement of equipment	1,000,000																		
Cash-for-work interim community employment	1,000,000																		
Agricultural inputs and technical support services	400,000																		
Training, capacity building for local planning, execution	200,00																		
Technical Assistance	500,000																		
Monitoring, Reporting and Miscellaneous	200,000																		
Total	3,300,000																		

Demand Matrix – Maldives

17.03.2005

Country	Project Name		
Maldives	Health Assessment, Advocacy and capacity building, Support to Ministry of Health Coordination		
Agencies	Source Document		
WHO Partners: MoH/DPH, UNICEF/ UNFPA/NGOs/ CBOs	UN Flash Appeal: WHO Projects http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_mdv.pdf		
	Sector		
	Health		
Project Activities	Specific Needs	Budget (\$)	Time Frame
Aim: To have a rapid health assessment of the damage to the overall health system in the disaster-affected areas in order to develop immediate and recovery plans.	Services <ul style="list-style-type: none"> • Health Assessment More data required	400,000	More data required
Aim: To organize public health campaigns for the prevention of diseases, outbreaks, and for the treatment of prevalent diseases.	Services <ul style="list-style-type: none"> • Public Health Campaigns More data required	500,000	More data required
Aim: To assist MoH in coordination of the health sector activities with respective agencies, avoiding duplication, exchanging information and providing timely inputs and guidance.	Services <ul style="list-style-type: none"> • Health Sector coordination More data required	400,000	More data required

Demand Matrix – Maldives

17.03.2005

Country	Project Name		
Maldives	Provision of supplies and equipment and replenishment of essential assets		
Agencies	Source Document		
WHO Partners: MoH/DPH, UNICEF/ UNFPA/NGOs/ CBOs	UN Flash Appeal: WHO Projects http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_mdv.pdf		
	Sector		
	Health		
Project Activities			
Specific Needs		Budget (\$)	Time Frame
Aim: To contribute to ensuring that medical supply chains function as efficiently as possible and respond to the needs of end-users.		3,000,000	More data required
Services Optimizing medical supply chain More data required			

Country	Project Name		
Maldives	Technical Support		
Agencies	Source Document		
WHO Partners: MoH/DPH, UNICEF/ UNFPA/NGOs/ CBOs	UN Flash Appeal: WHO Projects http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_mdv.pdf		
	Sector		
	Various		
Project Activities			
Specific Needs		Budget (\$)	Time Frame
Aim: To provide technical assistance and to coordinate with the government along with other concerned organizations in disaster affected areas to determine the gaps, requirements and accordingly direct the health actions to fill the gaps.		250,000	More data required
Services General Technical Expertise			

Demand Matrix – Maldives

17.03.2005

Country	Project Name		
Maldives	Disease surveillance, verification and response		
Agencies	Source Document		
WHO Partners: MoH/DPH, UNICEF/ UNFPA/NGOs/ CBOs	UN Flash Appeal: WHO Projects http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_mdv.pdf		
	Sector		
	Health		
Project Activities	Specific Needs	Budget (\$)	Time Frame
Aim: To track patterns of life-threatening diseases among those at risk through prompt set-up of a surveillance and early warning system, with regular epidemiological reports.	More data required	1,000,000	More data required
Country	Project Name		
Maldives	Project Management, evaluation and reporting		
Agencies	Source Document		
WHO Partners: MoH/DPH, UNICEF/ UNFPA/NGOs/ CBOs	UN Flash Appeal: WHO Projects http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_mdv.pdf		
	Sector		
	Health		
Project Activities	Specific Needs	Budget (\$)	Time Frame
Aim: To continuously monitor and follow-up the activities under this project along with the health status in the affected areas, and accordingly take appropriate remedial measures, as necessary.	Services • Project Management Services More data required	535,000	More data required

Demand Matrix – Sri Lanka
17.03.2005

7.4. Sri Lanka Demand Matrix

Country	Project Name
Sri Lanka	
Agencies	Source Document
WB, ADB, JBIC	Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment http://www.humanitarianinfo.org/srilanka/infocentre/assessments/others/doc/JNA_ADB_World_Bank/slnafull.1.pdf
	Sector
	Environmental

Damage Assessment	Specific Needs	Budget (US\$)	Time Frame
Rubble and debris disposal	Services <ul style="list-style-type: none"> • Well cleaning • Various Impact assessments • Setting up waste management procedures • Debris disposal 	1,500,000	Short Term (3-12 months)
Study of the role of natural resources in minimizing tsunami damage		250,000	
Clean up of dug wells and tube wells in affected areas		3,000,000	
Impacts on Protected Areas and other environmentally sensitive areas affected by the tsunami		750,000	
Strategic Environmental Assessment of the Rehabilitation and Reconstruction Program		200,000	
		Total 5,700,000	
Long term environmental impacts on the marine ecosystems		1,500,000	Medium to Long Term

Demand Matrix – Sri Lanka
17.03.2005

Development of a sustainable waste management system for affected areas		6,000,000	(1-3 years)
Health care waste management		3,000,000	
Reconstruction of damaged and destroyed buildings in National Parks		1,250,000	
		Total 11,750,000	

Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name		
Sri Lanka			
Agencies	Source Document		
WB, ADB, JBIC	Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment http://www.humanitarianinfo.org/srilanka/infocentre/assessments/others/doc/JNA_ADB_World_Bank/slnafull.1.pdf		
	Sector		
	Educational		
Damage Assessment	Specific Needs	Budget (US\$)	Time Frame
<ul style="list-style-type: none"> • Reconstruction • providing water , electricity and sanitation • furnishing & equipping <p>For:</p> <ul style="list-style-type: none"> • 168 Schools • 4 universities • 18 Vocational & Technical institutions 	<p>Goods</p> <ul style="list-style-type: none"> • water storage facilities • toilets • septic tanks • textbooks & stationery • uniforms • blackboards • library books • computers and printers etc. 	37,000,000	1-2 years

Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name
Sri Lanka	
Agencies	Source Document
WB, ADB, JBIC	Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment http://www.humanitarianinfo.org/srilanka/infocentre/assessments/others/doc/JNA_ADB_World_Bank/slnafull.1.pdf
	Sector
	Health

Damage Assessment	Specific Needs	Budget (US\$)	Time Frame/Deadlines
Basic health care to the affected	Goods	1,300,000	1-3 months
Strengthening existing health institutions	<ul style="list-style-type: none"> • medical instruments (sterilizers, incubators); • 54+ ambulances; • fogging devices; • insecticides; • Drugs; 	6,800,000	1-3 months
Re-establishing preventive health care needs		4,500,000	3-12 months
Reestablishment of regular drug supplies		1,800,000	3-12 months
Psycho-social support		1,200,000	3-12 months
Health planning needs	Services	900,000	3-12 months
Reconstruct and re-equip 92 hospitals & health institutions	<ul style="list-style-type: none"> • Clean water supply, purification and decontamination (16 water bowsers); repair of cold chain; • computerize received drugs • Strengthening laboratory network • Reconstruct and re-equip 92 hospitals & health institutions 	56,600,000	1-3 years
Strengthening the health care delivery system		4,500,000	1-3 years
Strengthening the epidemiological surveillance system		900,000	1-3 years

Demand Matrix – Sri Lanka
17.03.2005

Establishing an emergency prevention and disaster mitigation system		900,000	1-3 years
		Total 62,900,000	

Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name		
Sri Lanka			
Agencies	Source Document		
WB, ADB, JBIC	Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment http://www.humanitarianinfo.org/srilanka/infocentre/assessments/others/doc/JNA_ADB_World_Bank/slnafull.1.pdf		
	Sector		
	Housing		
Damage Assessment			
Specific Needs			
Budget (US\$)			
Time Frame			
Strategy is in-situ reconstruction actively managed by affected households and done by local building contractors	Local building material suppliers are targeted. Most likely they will need vast amounts of building materials.	Data required	Data required

Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name
Sri Lanka	
Agencies	Source Document
WB, ADB, JBIC	Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment http://www.humanitarianinfo.org/srilanka/infocentre/assessments/others/doc/JNA_ADB_World_Bank/slnafull.1.pdf
	Sector
	Agriculture & Livestock

Damage Assessment	Specific Needs	Budget (US\$)	Time Frame
Micro-credit facilities to re-establish lost agriculture and livestock dependent livelihoods.	Services <ul style="list-style-type: none"> • re-establish lost agriculture and livestock dependent livelihoods. • Replace damaged agriculture facilities and infrastructure • Rehabilitation of soil and water resource • Provision of extension services to facilitate recovery phase • Restoration of damaged Salt Water Exclusion Structures, embankments and drainage canals 	2,110,000	
Replace damaged agriculture facilities and infrastructure		1,510,000	
Rehabilitation of soil and water resource and Provision of extension services to facilitate recovery phase		20,000	
Restoration of damaged Salt Water Exclusion Structures, embankments and drainage canals		150,000	
Strengthening marketing and support services		100,000	
Human capacity building, training etc.		200,000	
Strengthening institutional capacity (adaptive research, multiplication of planting material, etc.)		100,000	
		Total 4,300,000	

Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name		
Sri Lanka			
Agencies	Source Document		
WB, ADB, JBIC	Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment http://www.humanitarianinfo.org/srilanka/infocentre/assessments/others/doc/JNA_ADB_World_Bank/slnafull.1.pdf		
	Sector		
	Power		
Damage Assessment	Specific Needs	Budget (US\$)	Time Frame
Operational capability of Ceylon Electricity Board	Goods <ul style="list-style-type: none"> • Construction tools and materials • Vehicles • Office furniture 	27,100,000	
Rehabilitation and repair of damaged power infrastructure			
Upgrading and expansion of infrastructure to improve access and promote economic development.	Services <ul style="list-style-type: none"> • Rehabilitation of damaged power infrastructure • Development of electrical infrastructure 	40,000,000 – 50,000,000	

Demand Matrix – Sri Lanka

17.03.2005

Country		Project Name	
Sri Lanka			
Agencies		Source Document	
WB, ADB, JBIC		Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment http://www.humanitarianinfo.org/srilanka/infocentre/assessments/others/doc/JNA_ADB_World_Bank/slnafull.1.pdf	
		Sector	
		Water supply and sanitation	
Damage Assessment	Specific Needs	Budget (US\$)	Time Frame
Urgently needed items/equipment	<p>Goods</p> <p>water bowsers gully emptiers water meter crew cabs polyethylene pipes water disinfection kits generators water quality testing kits water purification kits sludge pumps water pumps electric gears etc.</p>		1-3 months
Provision to transit camps			3-12 months
Water supply and piped sewer system	<p>Goods</p> <p>water supply sanitation systems sewage disposal bowsers</p>	50,000,000	1-3 years

Demand Matrix – Sri Lanka
17.03.2005

Country	Project Name														
Sri Lanka															
Agencies	Source Document														
WB, ADB, JBIC	Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment http://www.humanitarianinfo.org/srilanka/infocentre/assessments/others/doc/JNA_ADB_World_Bank/slnafull.1.pdf														
	Sector														
	Railways														
Damage Assessment	Specific Needs	Budget (US\$)	Time Frame												
Repairs	<p>Goods</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">track-bed</td> <td style="width: 50%;">rails and sleepers</td> </tr> <tr> <td>bridges and culverts</td> <td>railway stations and substations</td> </tr> <tr> <td>railway employees quarters</td> <td>dwelling and relay houses</td> </tr> <tr> <td>automated signaling system</td> <td>advance communication system</td> </tr> <tr> <td>locomotives</td> <td>power sets (multiple train units)</td> </tr> <tr> <td>passenger carriages</td> <td>construction equipment</td> </tr> </table>	track-bed	rails and sleepers	bridges and culverts	railway stations and substations	railway employees quarters	dwelling and relay houses	automated signaling system	advance communication system	locomotives	power sets (multiple train units)	passenger carriages	construction equipment	15,000,000	Short-term (on-going)
track-bed	rails and sleepers														
bridges and culverts	railway stations and substations														
railway employees quarters	dwelling and relay houses														
automated signaling system	advance communication system														
locomotives	power sets (multiple train units)														
passenger carriages	construction equipment														
Rehabilitation – Longer term reconstruction & maintenance of railways system	<p>Services</p> <p>Long-term reconstruction services</p>	71,000,000	1 year												

Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name			
Sri Lanka				
Agencies	Source Document			
WB, ADB, JBIC	Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment http://www.humanitarianinfo.org/srilanka/infocentre/assessments/others/doc/JNA_ADB_World_Bank/slnafull.1.pdf			
	Sector			
	Roads			
Damage Assessment		Specific Needs	Budget (US\$)	Time Frame
Short-term repair: <ul style="list-style-type: none"> • embankment stabilization • replacement of temporary bridges with permanent bridges • structural repairs to damaged bridges • drainage and culvert repairs and enlargement • abutment slope protection • reinstatement of damaged pavements • replacement of road furniture 		Goods <ul style="list-style-type: none"> • bridge replacement material • road furniture • drainage equipment Services <ul style="list-style-type: none"> • Repairing Infrastructure 	21,000,000	6 months
Medium-term maintenance: <ul style="list-style-type: none"> • Widening & elevating of embankments and carriageways; • improvement of drainage systems; • checking of hydraulic capacities of culverts and bridges 			157,000,000	1-2 years

Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name		
Sri Lanka			
Agencies	Source Document		
WB, ADB, JBIC	Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment http://www.humanitarianinfo.org/srilanka/infocentre/assessments/others/doc/JNA_ADB_World_Bank/slnafull.1.pdf		
	Sector		
	Fisheries		
Damage Assessment	Specific Needs	Budget (US\$)	Time Frame
Providing new fishing boats or repairing damaged boats, including fishing gears	Goods <ul style="list-style-type: none"> • fishing boats • fishing gear • anchorages • landing center facilities • machinery and equipment for ports & harbours Services <ul style="list-style-type: none"> • Dredging of harbor basins • Debris removal • Reconstruction and repairs to ice plants • Repairing buildings and replacing 	98,410,000	
Reconstruction of fishery ports/harbors, anchorages and landing center facilities, provision of machinery and equipment.		18,100,000	
Dredging of harbor basins and removing and cleaning of sand and debris from harbor and boat landing basins		5,000,000	
Micro-credit		1,000,000	
Reconstruction and repairs to ice plants other fishery related small service infrastructure.		4,520,000	
Repairing public buildings and replacing damaged office facilities		12,650,000	
Technical and financial assistance for modernizing the sector		4,970,000	
Vocational training and skill development		500,000	

Demand Matrix – Sri Lanka
17.03.2005

	office facilities <ul style="list-style-type: none">• Technical and financial assistance• Vocational training and skill development	Total 145,200,000	
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Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name
Sri Lanka	
Agencies	Source Document
WB, ADB, JBIC	Sri Lanka, 2005 Post-Tsunami Recovery Program, Preliminary Damage and Needs Assessment http://www.humanitarianinfo.org/srilanka/infocentre/assessments/others/doc/JNA_ADB_World_Bank/slnafull.1.pdf
	Sector
	Hazard Risk Management

Damage Assessment	Specific Needs	Budget (US\$)	Time Frame
Early warning systems (EWS); <i>strengthening and upgrading of existing national systems</i>	Goods Improved equipment Services <ul style="list-style-type: none"> • training for warning systems • Training and exercising of disaster management plans • Improve information packages and communication strategies. 	A complete overview of requirements for improving emergency preparedness is not available at this stage.	
Emergency information and communication systems; <i>strengthening the information flow</i>			
Education and training through National Disaster Management Centre (NDMC)			
Knowledge sharing; <i>International exchange of best practices and knowledge;</i>			

Demand Matrix – Sri Lanka

17.03.2005

Country		Project Name	
Sri Lanka			
Agencies		Source Document	
UNDAC/OCHA/UNEP		UNDAC Rapid Environmental Assessment by Joint UNEP/OCHA Environment unit, February 2005	
		Sector	
		Rapid Environmental Assessment	
Damage Assessment		Specific Needs	Budget (US\$)
<ul style="list-style-type: none"> • Management of Waste and Debris • Sewage and Sanitation Management • Re-mapping Affected Areas 		For remapping: technical support and the provision of remote sensing data	Data Required
			Data Required

Country		Project Name	
Sri Lanka			
Agencies		Source Document	
OCHA/ Ministry of Urban Development and Water Supply		OCHA Situation Report – Reporting period 11-17 February 2005	
		Sector	
		Sanitation	
Project Activities		Specific Needs	Budget (US\$)
construction of 16,000 temporary toilets at campsites		16,000 temporary toilets	3,000,000
			1-3 months

Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name		
Sri Lanka			
Agencies	Source Document		
UN Habitat	Rebuilding Community Infrastructure & Shelter in Disaster Affected District of Matara, Sri Lanka (not dated)		
	Sector		
	Rebuilding in Matara		
Project Activities	Specific Needs	Budget (US\$)	Time Frame
<p>Proposal to assist in the rebuilding of communities in district of Matara.</p> <p>The tsunami has destroyed a total of 8021 houses, either partially or completely, representing over 12 percent of the total housing stock in the Matara District. The project is designed to benefit at least 5,000 affected families, or approximately 30,000 people.</p> <p>Location: Major and smaller townships of Matara, Weligama, Dickwella and Devinuwara in the Matara District.</p>	Work Item	Cost US\$	3,000,000 6-12 months
	Clearing Debris	50,000	
	Cleaning of Drains	75,000	
	Rehabilitation of community Infrastructure such as markets, parks, primary schools, municipal clinics etc.	225,000	
	Water Supply	200,000	
	Toilets and Sceptic tanks	50,000	
	Access roads	50,000	
	Housing (Repairs and Reconstruction)	1,350,000	
	Total	3,000,000	
		0	

Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name		
Sri Lanka			
Agencies	Source Document		
UN Habitat	Rebuilding Community Infrastructure & Shelter in Disaster Affected Areas of Sri Lanka locations		
	Sector		
	Emergency Shelter and Infrastructure		
Project Activities	Specific Needs	Budget (US\$)	Time Frame
18,000 affected families, or approximately 100,000 people; Location: Batticaloa/Kattankudi, Galle, Jaffna, Kilinochchi, Ampara, Matara, Kalutara and Hambantota.	<p>Services</p> <ul style="list-style-type: none"> • support to remove the debris, rebuild and repair their houses; • repairing essential infrastructure; • social recovery of affected communities, supported through skills training and local employment creation. • cleaning roads and drainage of debris; • making provision for public septic tank and latrines; • reviving community spaces. <p>Budgeted: \$ 1.000 for each family (18.000)</p>	20,000,000	6-12 months

Demand Matrix – Sri Lanka
17.03.2005

Country	Project No.		
Sri Lanka	FS/SRL/05/SO1		
Agencies	Source Document		
UN Habitat / UNHSP Donor: Government of Japan	Tsunami Human Settlements Recovery Facility		
	Sector		
	Rebuilding community social infrastructure		
Project Activities			
	Specific Needs	Budget (US\$)	Time Frame
<ul style="list-style-type: none"> • To enable the communities to rebuild their social capital through the organisation of representatives bodies with the capacity to take decisions regarding their own rebuilding process; • To enable the target communities to rebuild essential physical facilities including shelter • To help create wage employment • To promote people's engagement in the reconstruction 	Housing reconstruction packages	3,000,000	6 months

Demand Matrix – Sri Lanka
17.03.2005

Country	Project No.		
Sri Lanka	XB/SRL/		
Agencies	Source Document		
UN Habitat / UNHSP	Rebuilding Community Infrastructure and Shelter in Kalmunai District		
	Sector		
	Rebuilding Community Infrastructure		
Project Activities	Specific Needs	Budget (US\$)	Time Frame
<ul style="list-style-type: none"> • To enable the communities to rebuild their social capital through the organisation of representatives bodies with the capacity to take decisions regarding their own rebuilding process; • To enable the target communities to rebuild essential physical facilities including shelter • To help create wage employment • To promote people's engagement in the reconstruction 	Housing reconstruction packages	11,500,000	12 months

Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name		
Sri Lanka	Health sector response		
Agencies	Source Document		
WHO, Ministry of Health, UNICEF, UNFPA, MSF, IOM, Sarvodaya	Health sector response for survivors of the tsunami in Sri Lanka		
	Sector		
	Health		
Project Activities			
	Specific Needs	Budget (US\$)	Time Frame
<p>Overall goal: To reduce avoidable suffering and death due to public health consequences of tsunami.</p> <ol style="list-style-type: none"> 1. Co-ordinate health sector response, with agreed strategies and joint action; manage information requests for technical issues and public and media information 2. Set-up early warning communicable disease surveillance system 3. Assess the health needs of the affected population 4. Assess the impact on health services and facilities 4. Ensure access to adequate health care services 5. Identify and enable the filling of critical gaps in public health sector 6. Contribute to ensuring that medical supply chains function as efficiently as possible 	<p>Services</p> <ul style="list-style-type: none"> • Co-ordinate health sector response • manage information requests for technical issues and public and media information • Set-up early warning communicable disease surveillance system • Assess health needs • Assess impact on health services and facilities • Ensure access to adequate health care services • Identify and enable the filling of critical gaps in public health sector • Contribute to ensuring that medical supply chains function as efficiently as possible 	12,500,000	Data required

Demand Matrix – Sri Lanka

17.03.2005

Country	Project Name		
Sri Lanka			
Agencies	Source Document		
UNICEF / donor coordination committee	UNICEF Situation Report Sri Lanka, 28 february 2005		
	Sector		
	Education		
Project Activities			
Specific Needs	Budget (US\$)	Time Frame	
Reconstruction and re-equipping of 163 schools (180 schools need reconstruction of which 17 are under UNICEF's responsibility).	<ul style="list-style-type: none"> • Construction materials • Books & Stationery • Furniture & equipment • Computers & Printers 	Data Required	Data required

Demand Matrix – Sri Lanka
17.03.2005

Country	Project Name		
Sri Lanka	Hambantota Port		
Agencies	Source Document		
Sri Lankan Government	OCHA Situation Report for Sri Lanka Reporting Period: 11 – 17 February 2005		
	Sector		
	Harbour		
Project Activities			
	Specific Needs	Budget (US\$)	Time Frame
New port in Hambantota	<ul style="list-style-type: none"> • Jetties • Terminals • Docks • Administrative buildings 	1,500,000,000	3 years

Demand Matrix – Indonesia
17.03.2005

7.5.Indonesia Demand Matrix

Country	Project Name
Indonesia	Immediate Employment through Labour Intensive Works
Agencies	Source Document
UNDP Project Execution: Direct Execution by UNDP, under Aceh Emergency Response and Transitional Recovery Programme	UNDP-Earthquake-Tsunami 2005 Flash Appeal Projects – Indonesia. (Updated as of 24 Jan. 2005)
	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines												
<ul style="list-style-type: none"> • Provide the local authorities with heavy equipment (dump trucks, bulldozers, back hoes, loaders, etc.) plus operating crews. • Continue and scale up labour intensive clearing of public service facilities through deployment of work teams drawn from IDP camps. • Provide manual equipment, to remove debris for public service facilities that remain structurally sound but have compounds and ground floors inundated with light debris. • Provide employment for up to 50,000 persons (approx. 1 month work each) over the next six months both in Banda Aceh and in other affected urban areas. 	Equipment <ul style="list-style-type: none"> • dump trucks, • bulldozers, • back hoes, • loaders 	<p style="text-align: center;">Indicative Budget</p> <table> <tr> <td>Project Activities</td> <td style="text-align: right;">(US\$)</td> </tr> <tr> <td>▪ Heavy equipments & Manual Equipment</td> <td style="text-align: right;">5,500,000</td> </tr> <tr> <td>▪ Recruitment of Labourers</td> <td style="text-align: right;">3,500,000</td> </tr> <tr> <td>▪ Technical Assistance</td> <td style="text-align: right;">250,000</td> </tr> <tr> <td>▪ Monitoring, Reporting, Miscellaneous</td> <td style="text-align: right;">250,000</td> </tr> <tr> <td>TOTAL</td> <td style="text-align: right;">9,500,000</td> </tr> </table>	Project Activities	(US\$)	▪ Heavy equipments & Manual Equipment	5,500,000	▪ Recruitment of Labourers	3,500,000	▪ Technical Assistance	250,000	▪ Monitoring, Reporting, Miscellaneous	250,000	TOTAL	9,500,000	<p style="text-align: center;">6 months</p> <p>Activities undertaken during this early recovery period are likely to go beyond the period of the Appeal, and will dovetail with the transitional recovery phase.</p>
Project Activities	(US\$)														
▪ Heavy equipments & Manual Equipment	5,500,000														
▪ Recruitment of Labourers	3,500,000														
▪ Technical Assistance	250,000														
▪ Monitoring, Reporting, Miscellaneous	250,000														
TOTAL	9,500,000														

Demand Matrix – Indonesia
17.03.2005

Country	Project Name
Indonesia	Recovery of Livelihoods
Agencies	Source Document
UNDP	UNDP-Earthquake-Tsunami 2005 Flash Appeal Projects – Indonesia. (Updated as of 24 Jan. 2005)
Project Execution: Direct Execution by UNDP, under Aceh Emergency Response and Transitional Recovery Programme	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines																		
<ul style="list-style-type: none"> • Provide technical advisory support to the local authorities for developing strategies and priorities for livelihoods recovery ensuring community participation. • Provide small-scale enterprises with technical support and seed funding through micro-finance mechanisms. • Support rehabilitation of fisheries by repairing boats, providing financing to replace destroyed boats and rehabilitating marketing structures. • Rehabilitate market centers in Bandah Aceh and other urban centers. • Rehabilitate the paddy fields and other agricultural activities. • Support establishment of women's enterprises. • Organize skills training programmes for building trades 	Services <ul style="list-style-type: none"> • technical advisory support • technical support and seed funding • repairing boats, • replace destroyed boats • skills training 	<p style="text-align: center;">Indicative Budget</p> <table> <thead> <tr> <th>Project Activities</th> <th>(US\$)</th> </tr> </thead> <tbody> <tr> <td>▪ Participatory assessment processes</td> <td>400,000</td> </tr> <tr> <td>▪ Seed funding for micro-finance</td> <td>10,000,000</td> </tr> <tr> <td>▪ Fisheries and agriculture</td> <td>9,000,000</td> </tr> <tr> <td>▪ Women's enterprises</td> <td>7,000,000</td> </tr> <tr> <td>▪ Skills training</td> <td>4,000,000</td> </tr> <tr> <td>▪ Technical assistance</td> <td>2,000,000</td> </tr> <tr> <td>▪ Monitoring, reporting, miscellaneous</td> <td>850,000</td> </tr> <tr> <td>TOTAL</td> <td>33,250,000</td> </tr> </tbody> </table>	Project Activities	(US\$)	▪ Participatory assessment processes	400,000	▪ Seed funding for micro-finance	10,000,000	▪ Fisheries and agriculture	9,000,000	▪ Women's enterprises	7,000,000	▪ Skills training	4,000,000	▪ Technical assistance	2,000,000	▪ Monitoring, reporting, miscellaneous	850,000	TOTAL	33,250,000	<p style="text-align: center;">6 months</p> <p>Activities undertaken during this early recovery period are likely to go beyond the period of the Appeal, and will dovetail with the transitional recovery phase.</p>
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▪ Monitoring, reporting, miscellaneous	850,000																				
TOTAL	33,250,000																				

Demand Matrix – Indonesia
17.03.2005

Country	Project Name
Indonesia	Emergency Shelter and Recovery of Housing
Agencies	Source Document
UNDP	UNDP-Earthquake-Tsunami 2005 Flash Appeal Projects – Indonesia. (Updated as of 24 Jan. 2005)
Project Execution: Direct Execution by UNDP, under Aceh Emergency Response and Transitional Recovery Programme	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines																
<ul style="list-style-type: none"> • Provide emergency shelter support. • Undertake labour intensive village debris clearance. • Build local capacity to deal with housing, land and property rights. • Rehabilitate rural feeder roads. • Provide technical assistance for hazard resistant shelter rehabilitation. • Provide construction materials for rehabilitation of damaged rural houses. • Provide tool kits and construction materials for reconstruction of houses. 	<ul style="list-style-type: none"> • Emergency shelter • Construction material 	<p style="text-align: center;">Indicative Budget</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Project Activities</th> <th style="text-align: right;">(US\$)</th> </tr> </thead> <tbody> <tr> <td>▪ Emergency shelter</td> <td style="text-align: right;">700,000</td> </tr> <tr> <td>▪ Construction material</td> <td style="text-align: right;">10,000,000</td> </tr> <tr> <td>▪ Village debris clearance and rehabilitation of local infrastructure</td> <td style="text-align: right;">6,000,000</td> </tr> <tr> <td>▪ Skills training</td> <td style="text-align: right;">4,700,000</td> </tr> <tr> <td>▪ Technical assistance</td> <td style="text-align: right;">2,000,000</td> </tr> <tr> <td>▪ Monitoring, reporting, miscellaneous</td> <td style="text-align: right;">600,000</td> </tr> <tr> <td>TOTAL</td> <td style="text-align: right;">24,000,000</td> </tr> </tbody> </table>	Project Activities	(US\$)	▪ Emergency shelter	700,000	▪ Construction material	10,000,000	▪ Village debris clearance and rehabilitation of local infrastructure	6,000,000	▪ Skills training	4,700,000	▪ Technical assistance	2,000,000	▪ Monitoring, reporting, miscellaneous	600,000	TOTAL	24,000,000	<p style="text-align: center;">6 months</p> <p>Activities undertaken during this early recovery period are likely to go beyond the period of the Appeal, and will dovetail with the transitional recovery phase.</p>
Project Activities	(US\$)																		
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▪ Monitoring, reporting, miscellaneous	600,000																		
TOTAL	24,000,000																		

Demand Matrix – Indonesia

17.03.2005

Country	Project Name
Indonesia	Capacity Building for Sustainable Recovery and Risk Reduction
Agencies	Source Document
UNDP	UNDP-Earthquake-Tsunami 2005 Flash Appeal Projects – Indonesia. (Updated as of 24 Jan. 2005)
Project Execution: Direct Execution by UNDP, under Aceh Emergency Response and Transitional Recovery Programme	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines														
<ul style="list-style-type: none"> • Short intensive training and institutional support to strengthen public administration capacity. • Provide housing support to returning civil servants. • Provide technical support to Government for strengthening capacities to manage psychosocial needs. • Strengthen capacity of local NGOs in basic project and financial management. • Support legislation on disaster management and disseminate best practices for construction in areas of high hazard potential. • Enhance capacities for community based disaster risk management. • Support to participatory planning processes for recovery and reconstruction. 	<p>Services</p> <ul style="list-style-type: none"> • Capacity-building and training • Technical assistance 	<p style="text-align: center;">Indicative Budget</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: left;">Project Activities</td> <td style="text-align: right;">(US\$)</td> </tr> <tr> <td>▪ Capacity-building</td> <td style="text-align: right;">2,000,000</td> </tr> <tr> <td>▪ Workshops</td> <td style="text-align: right;">500,000</td> </tr> <tr> <td>▪ Skills training</td> <td style="text-align: right;">250,000</td> </tr> <tr> <td>▪ Technical assistance</td> <td style="text-align: right;">1,750,000</td> </tr> <tr> <td>▪ Monitoring, reporting, miscellaneous</td> <td style="text-align: right;">250,000</td> </tr> <tr> <td>TOTAL</td> <td style="text-align: right;">4,750,000</td> </tr> </table>	Project Activities	(US\$)	▪ Capacity-building	2,000,000	▪ Workshops	500,000	▪ Skills training	250,000	▪ Technical assistance	1,750,000	▪ Monitoring, reporting, miscellaneous	250,000	TOTAL	4,750,000	<p style="text-align: center;">6 months</p> <p>Activities undertaken during this early recovery period are likely to go beyond the period of the Appeal, and will dovetail with the transitional recovery phase.</p>
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▪ Monitoring, reporting, miscellaneous	250,000																
TOTAL	4,750,000																

Demand Matrix – Indonesia

17.03.2005

Country	Project Name
Indonesia	Assessment of Damage to the Health System in the Disaster-Affected Area
Agencies	Source Document
WHO Partners: Ministry of Health, provincial and district health authorities, UN agencies and NGOs	UN Flash Appeal: WHO Projects at: http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_idn.pdf
	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines
Aim: To assess the extent of damage to the overall health system in the disaster-affected area through rapid assessments of the conditions of infrastructure, essential equipment, human resources needs, and other essential system components such as the disease surveillance system, the drug supplies and distribution systems and health systems management.	Services <ul style="list-style-type: none"> • Health system assessments 	US\$ 2,000,000	Data required

Demand Matrix – Indonesia
17.03.2005

Country	Project Name
Indonesia	Establishment of an Integrated Health Emergency Unit for Disaster Response
Agencies	Source Document
WHO Partners: Ministry of Health, provincial and district health authorities, UNICEF, UNFPA	UN Flash Appeal: WHO Projects at: http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_idn.pdf
	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines
Aim: To establish a health emergency operations unit in Aceh and North Sumatra and also in Ministry of Health in Jakarta, including an integrated emergency health information system to coordinate health sector activities and health-related reports.	Services <ul style="list-style-type: none"> • Health Emergency Operations Unit • Health Information system 	US\$ 3,500,000	Data required

Demand Matrix – Indonesia

17.03.2005

Country	Project Name
Indonesia	Emergency Health Services for the Disaster-Affected Population in Aceh and North Sumatra
Agencies	Source Document
WHO Partners: Ministry of Health, provincial and district health authorities, UNICEF, NGOs	UN Flash Appeal: WHO Projects at: http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_idn.pdf
	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines
Aim: To organise public health campaigns for the prevention of disease outbreaks and for treatment of prevalent diseases such as diarrhoea, ARI, insect-borne diseases, and vaccine preventable diseases through disease surveillance, organization of immunization campaigns, provision of treatment, and public health education.	Goods <ul style="list-style-type: none"> • Vaccines Services <ul style="list-style-type: none"> • Provision of treatment • Public Health Education 	US\$ 8,000,000	Data required

Demand Matrix – Indonesia

17.03.2005

Country	Project Name
Indonesia	Provision of Emergency Child and Maternal Health Services
Agencies	Source Document
WHO Partners: Ministry of Health, provincial and district health authorities, UNICEF, UNFPA, international and national NGOs	UN Flash Appeal: WHO Projects at: http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_idn.pdf
	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines
Aim: To assist the Government and other agencies in providing child and maternal health services. The focus will be given to technical support for provision of care, preventive and treatment advice, training and essential medical supplies.	Services <ul style="list-style-type: none"> • Child & Maternal Health Services 	US\$ 5,000,000	Data required

Demand Matrix – Indonesia
17.03.2005

Country	Project Name
Indonesia	Restoration of essential health services including establishment of blood banks
Agencies	Source Document
WHO Partners: Ministry of Health, provincial and district health authorities	UN Flash Appeal: WHO Projects at: http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_idn.pdf
	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines
Aim: Using a phased approach, to assist the Government to restore the essential services previously provided by state health facilities at various levels, including public health, clinical, laboratory and rehabilitative, and minor surgical services. Activities include training of medical staff, management of human resources for health, procurement of essential medical equipment and laboratory supplies, and support to repair and restore damaged equipment where appropriate	Goods <ul style="list-style-type: none"> • Medical Equipment • Laboratory supplies Services <ul style="list-style-type: none"> • Training of Medical Staff • Management of Human Resources 	US\$ 10,000,000	Data required

Demand Matrix – Indonesia

17.03.2005

Country	Project Name
Indonesia	Re-establishment of the Health Information System
Agencies	Source Document
WHO Partners: Ministry of Health, provincial and district health authorities	UN Flash Appeal: WHO Projects at: http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_idn.pdf
	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines
Aim: To re-build the most essential components of the health information system and to re-establish the information network in Aceh and North Sumatra for disease surveillance, disease prevention and provision of health services and distribution of resources.		US\$ 3,000,000	Data required

Demand Matrix – Indonesia

17.03.2005

Country	Project Name
Indonesia	Provision of Mental Health Services in the Disaster-Affected Area
Agencies	Source Document
WHO Partners: Ministry of Health, provincial and district health authorities, UNICEF, international and national NGOs	UN Flash Appeal: WHO Projects at: http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_idn.pdf
	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines
Aim: To build capacity, organise and strengthen the mental health services of provincial and district health authorities, including the establishment of a community-based mental health programme.		US\$ 1,500,000	Data required

Demand Matrix – Indonesia

17.03.2005

Country	Project Name
Indonesia	Restoration of Water and Sanitation Systems in the Disaster-Affected Area
Agencies	Source Document
WHO Partners: Ministry of Health, provincial and district health authorities, UNICEF, international and national NGOs	UN Flash Appeal: WHO Projects at: http://www.who.int/hac/crises/international/asia_tsunami/appeal/en/projects_idn.pdf
	Sector

Project Activities	Specific Needs	Budget	Time Frame / Deadlines
Aim: In collaboration with partners, rehabilitate the water supply and sanitation waste disposal services in affected areas.		US\$ 3,000,000	Data required

Demand Matrix – Indonesia

17.03.2005

Country	Project Name
Indonesia	
Agencies	Source Document
	The Consultative Group on Indonesia, 19-20.01.2005: Indonesia, preliminary damage and loss assessment
	Sector
	Housing Sector – Extent and Valuation of Damage and Losses

Damage Assessment	Specific Needs	Damage & Losses	Time Frame / Deadlines														
Overall, it is estimated that about 19% of the approximately 820,000 building units (about 151,600 units) in the affected districts suffered an average of about 50% damage while about 14% (about 127,300) were completely destroyed.	Goods: <ul style="list-style-type: none"> • Furniture Services: <ul style="list-style-type: none"> • Debris Removal • Construction 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Assets & Services</th> <th style="text-align: right;">Estimated Cost US\$</th> </tr> </thead> <tbody> <tr> <td>Modern Houses</td> <td style="text-align: right;">85,965,288.00</td> </tr> <tr> <td>Semi- Modern Houses</td> <td style="text-align: right;">1,285,309,362.00</td> </tr> <tr> <td>Traditional Houses</td> <td style="text-align: right;">57,737,880.00</td> </tr> <tr> <td>Tertiary Infrastructure</td> <td style="text-align: right;">184,654,294.00</td> </tr> <tr> <td>Furniture</td> <td style="text-align: right;">225,391,576.00</td> </tr> <tr> <td>Debris Removal</td> <td style="text-align: right;">3,849,192.00</td> </tr> </tbody> </table>	Assets & Services	Estimated Cost US\$	Modern Houses	85,965,288.00	Semi- Modern Houses	1,285,309,362.00	Traditional Houses	57,737,880.00	Tertiary Infrastructure	184,654,294.00	Furniture	225,391,576.00	Debris Removal	3,849,192.00	Data Required
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1 IDR = 0.000106922 USD

Demand Matrix – Indonesia
17.03.2005

Country	Project Name
Indonesia	
Agencies	Source Document
	The Consultative Group on Indonesia, 19-20.01.2005: Indonesia, preliminary damage and loss assessment
	Sector
	Education Sector – Damage by School Type

Damage Assessment	Specific Needs	Damage & Losses	Time Frame / Deadlines																								
Current estimates of the impact of the earthquake and tsunami are that as many as 45,000 students and 1,870 teachers were lost. Approximately 1,962 schools ¹² were destroyed or damaged in Aceh and 104 in Nias. This represents 28 of the stock in Aceh province and 20 of the stock in the district of Nias.	<p>Goods:</p> <ul style="list-style-type: none"> • Water sanitation equipment • Tents • Stationary • Books • <p>Services:</p> <ul style="list-style-type: none"> • Construction • Training/ Capacity building • Counselling services 	<table border="1"> <thead> <tr> <th style="background-color: #cccccc;">Education Level</th> <th style="background-color: #cccccc;"># damaged</th> <th style="background-color: #cccccc;">Estimated Cost US\$</th> </tr> </thead> <tbody> <tr> <td>Preschools</td> <td>239</td> <td>2,882,403.28</td> </tr> <tr> <td>Primary Schools</td> <td>1137</td> <td>32,753,950.87</td> </tr> <tr> <td>Junior Secondary Schools</td> <td>263</td> <td>19,406,556.84</td> </tr> <tr> <td>General Senior Secondary Schools</td> <td>143</td> <td>19,029,442.95</td> </tr> <tr> <td>Vocational Senior Secondary Schools</td> <td>18</td> <td>2,701,918.94</td> </tr> <tr> <td>Pesantren</td> <td>248</td> <td>31,190,002.78</td> </tr> <tr> <td>Higher Education Institution</td> <td>17</td> <td>2,213,285.40</td> </tr> </tbody> </table>	Education Level	# damaged	Estimated Cost US\$	Preschools	239	2,882,403.28	Primary Schools	1137	32,753,950.87	Junior Secondary Schools	263	19,406,556.84	General Senior Secondary Schools	143	19,029,442.95	Vocational Senior Secondary Schools	18	2,701,918.94	Pesantren	248	31,190,002.78	Higher Education Institution	17	2,213,285.40	Data Required
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Demand Matrix – Indonesia

17.03.2005

		Activities	Unit	Estimated Cost US\$
		Recruiting New Teachers		
		- Permanent replacement	Teachers	999,720
		- Temporary replacement	Teachers	
				3,079,353.60
		Training New Teachers		
		- Permanent teachers	Teachers	999,720.70
		- Temporary teachers	Teachers	64,153.20
		Counselling for students and teachers	Groups	2,084,979.00
		Clean Up of Facilities	Buildings	4,276,880.00
		Classrooms and offices	Tents	192,459.60
		Water supply, sanitation	Units	128,306.40
		Emergency support	Sets	53,461.00
		- Books & stationery		
		- Scholarships students/yr	Students/yr	4,009,575.00

1 IDR = 0.000106922 USD

Demand Matrix – Indonesia
17.03.2005

Country	Project Name
Indonesia	
Agencies	Source Document
	The Consultative Group on Indonesia, 19-20.01.2005: Indonesia, preliminary damage and loss assessment
	Sector
	Health Sector – Extent and Valuation of Damage and Losses

Damage Assessment	Specific Needs	Damage & Losses	Time Frame / Deadlines																						
The tsunami resulted in the destruction of five hospitals (three public and two private, from a total of 17 public and 10 private hospitals). Nineteen health centres (of a total of 239) were destroyed; a further 11 health centres will require major renovation and two will require minor renovation. The losses were greatest in Kabupaten Aceh Jaya and Banda Aceh city.	<p>Goods:</p> <p>Services:</p> <ul style="list-style-type: none"> • Construction 	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Item (Damaged &/or Lost)</th> <th style="text-align: center;">Estimated Cost US\$</th> </tr> </thead> <tbody> <tr> <td>Public hospitals</td> <td style="text-align: right;">45,537,438.27</td> </tr> <tr> <td>Public health centres</td> <td style="text-align: right;">3,246,365.76</td> </tr> <tr> <td>Public health sub-centres</td> <td style="text-align: right;">3,480,524.94</td> </tr> <tr> <td>Other public and admin</td> <td style="text-align: right;">4,556,587.95</td> </tr> <tr> <td>Private hospitals</td> <td style="text-align: right;">20,568,050.53</td> </tr> <tr> <td>Other private facilities</td> <td style="text-align: right;">2,665,351.62</td> </tr> <tr> <td>Public health programs</td> <td style="text-align: right;">4,383,802.00</td> </tr> <tr> <td>Replacement personnel</td> <td style="text-align: right;">4,024,651.00</td> </tr> <tr> <td>Facility cleanup</td> <td style="text-align: right;">324,294.43</td> </tr> <tr> <td>Additional health</td> <td style="text-align: right;">574,812.67</td> </tr> </tbody> </table>	Item (Damaged &/or Lost)	Estimated Cost US\$	Public hospitals	45,537,438.27	Public health centres	3,246,365.76	Public health sub-centres	3,480,524.94	Other public and admin	4,556,587.95	Private hospitals	20,568,050.53	Other private facilities	2,665,351.62	Public health programs	4,383,802.00	Replacement personnel	4,024,651.00	Facility cleanup	324,294.43	Additional health	574,812.67	Data Required
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Demand Matrix – Indonesia
17.03.2005

Country	Project Name
Indonesia	
Agencies	Source Document
	The Consultative Group on Indonesia, 19-20.01.2005: Indonesia, preliminary damage and loss assessment
	Sector
	Religion and Culture Sector – Extent and Valuation of Damage and Losses

Damage Assessment	Specific Needs	Damage & Losses	Time Frame / Deadlines																
<p>Many places of worships were severely affected by the earthquake and tsunamis. A preliminary estimation is done using information gathered from Podes and estimated proportion of damaged occurred in the affected areas provided by Minister of Home Affairs. Overall estimated amount needed for rebuilding places of worship in Aceh and North Sumatra is US million</p>	<p>Goods:</p> <p>Services:</p> <ul style="list-style-type: none"> • Construction • 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Item (Damaged &/or Lost)</th> <th style="text-align: center;">Estimated Cost US\$</th> </tr> </thead> <tbody> <tr> <td>Mosques</td> <td style="text-align: right;">30,557,131.46</td> </tr> <tr> <td>Menunasah</td> <td style="text-align: right;">34,882,660.97</td> </tr> <tr> <td>Prayer Room</td> <td style="text-align: right;">7,587,078.20</td> </tr> <tr> <td>Protestant Church</td> <td style="text-align: right;">7,219,159.60</td> </tr> <tr> <td>Catholic Church</td> <td style="text-align: right;">2,098,130.41</td> </tr> <tr> <td>Confucius Temple</td> <td style="text-align: right;">248,593.65</td> </tr> <tr> <td>Temple</td> <td style="text-align: right;">427,581.08</td> </tr> </tbody> </table>	Item (Damaged &/or Lost)	Estimated Cost US\$	Mosques	30,557,131.46	Menunasah	34,882,660.97	Prayer Room	7,587,078.20	Protestant Church	7,219,159.60	Catholic Church	2,098,130.41	Confucius Temple	248,593.65	Temple	427,581.08	Data Required
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Demand Matrix – Indonesia
17.03.2005

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	Transportation Sector – Extent and Valuation of Damage and Losses																																
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<p>Roads Infrastructure</p> <ul style="list-style-type: none"> Of the six major roads in the affected area, it is estimated that 316 kilometres or 19% of the road length was damaged and 46% of bridges, including about 120 bridges destroyed. The national coastal road to Meulaboh in the south has been destroyed over 80 kilometres or 30% of its length and 110 or 60% of the bridges. It is estimated that about 124 kilometers of urban roads, 1,150 kilometres of kabupaten roads and 340 kilometers of village roads were impacted, with a total damage cost of Rp. 343 billion. <p>Road traffic and transport infrastructure.</p> <ul style="list-style-type: none"> Based on the vehicles registered in the most affected areas and relating damages to those of housing in the same areas, it is estimated that about 7.2% or 29,800 vehicles were destroyed or seriously damaged with a replacement value in the order of US\$ 185 million, almost all privately owned. heavy damage to the bus terminals in Banda Aceh, Meulaboh, and Lhokseumawe, and moderate damage to those in Sigli, Langsa, Bireun, and Gunung Sitoli 	<p>Goods:</p> <ul style="list-style-type: none"> Vehicles Motor Cycles Light Trucks Busses Ferries Weigh-Bridges Vehicle testing Stations Traffic Lights Road Signage Navigation Infrastructure <p>Services:</p> <ul style="list-style-type: none"> Construction in; <ul style="list-style-type: none"> Roads Bridges Ports Ferry Terminals Airport infrastructure 	<table border="0"> <thead> <tr> <th style="text-align: left;">Item (Damaged &/or Lost)</th> <th style="text-align: center;">Qty impacted</th> <th style="text-align: right;">Estimated Cost US\$</th> </tr> </thead> <tbody> <tr> <td>Roads</td> <td></td> <td style="text-align: right;">185,509,670.00</td> </tr> <tr> <td>• National & Local Rds</td> <td style="text-align: center;">Km 1937</td> <td></td> </tr> <tr> <td>• Bridges</td> <td style="text-align: center;">437</td> <td></td> </tr> <tr> <td>Land</td> <td></td> <td style="text-align: right;">314,778,368.00</td> </tr> <tr> <td>Transport</td> <td></td> <td></td> </tr> <tr> <td>• Road Vehicles</td> <td style="text-align: center;">29,746</td> <td></td> </tr> <tr> <td>• Bus Terminals</td> <td style="text-align: center;">8</td> <td></td> </tr> <tr> <td>• Road Safety Facilities</td> <td style="text-align: center;">8</td> <td></td> </tr> <tr> <td>• Ferry Terminals</td> <td style="text-align: center;">8</td> <td></td> </tr> </tbody> </table>	Item (Damaged &/or Lost)	Qty impacted	Estimated Cost US\$	Roads		185,509,670.00	• National & Local Rds	Km 1937		• Bridges	437		Land		314,778,368.00	Transport			• Road Vehicles	29,746		• Bus Terminals	8		• Road Safety Facilities	8		• Ferry Terminals	8		Data Required
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Demand Matrix – Indonesia

17.03.2005

<p>(North Sumatra). There has also been some damage to road safety infrastructure, including roadside weighbridges, vehicle testing stations, traffic lights, and road signage, etc. Perum Damri reports heavy damage to its Banda Aceh depot and to 52 buses. Banda Aceh's UleUheue ferry terminal has been totally destroyed, while those in Meulaboh and Lamteng have suffered heavy damage. Six others, including Gunung Sitoli, have suffered light damage.</p> <p>Ports and Shipping</p> <ul style="list-style-type: none"> • DGSC reports heavy damage to nine public ports in Aceh, principally those in Banda Aceh and along the west coast, and light damage to another five ports. There is also heavy damage to five public ports in North Sumatra. Damage is estimated at US\$ 27.7 million. DGSC also reports significant damage to maritime navigation facilities in the same areas. <p>Civil Aviation</p> <ul style="list-style-type: none"> • Preliminary surveys undertaken by DGAC personnel indicate airport damage to be relatively light. 	<p>(runways, tarmacs, buildings)</p>	<p>Ports</p> <ul style="list-style-type: none"> • Public Port Infrastructure 19 • Navigation Facilities 9 <p>Airports</p> <ul style="list-style-type: none"> • Airport Infrastructure 4 	<p>27,692,798.00</p> <p>4,918,412.00</p>	
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1 IDR = 0.000106922 USD

Demand Matrix – Indonesia

17.03.2005

Country	Project Name
Indonesia	
Agencies	Source Document
	The Consultative Group on Indonesia, 19-20.01.2005: Indonesia, preliminary damage and loss assessment
	Sector
	Energy Sector – Extent and Valuation of Damage and Losses

Damage Assessment	Specific Needs	Damage & Losses	Time Frame / Deadlines																														
<p>Generation</p> <ul style="list-style-type: none"> Preliminary inspections indicate damage to generation plant has been relatively light, totalling US\$ 4.5 Million. <p>Transmission</p> <ul style="list-style-type: none"> The 150KV transmission line and associated substations have not suffered any damage and are functioning normally. <p>Distribution</p> <ul style="list-style-type: none"> There has been severe damage to PLN's distribution networks in the Banda Aceh and Meulaboh regions, and to a lesser extent in the Sigli and Bireun regions. PLN estimates damage in these four regions at 1,100 circuit kilometres of medium voltage line, 1,750 circuit-kilometres of low voltage line, 45 MVA distribution transformer capacity, and 90,000 household connections have been damaged. Total replacement cost is estimated at US\$ 34.5 million. 	<p>Goods:</p> <ul style="list-style-type: none"> Power generation equipment Electricity distribution equipment Fuel Tanks Fuels Distribution Equipment <p>Services:</p> <ul style="list-style-type: none"> 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Item (Damaged &/or Lost)</th> <th style="text-align: left;">Damage</th> <th style="text-align: right;">Estimated Cost US\$</th> </tr> </thead> <tbody> <tr> <td colspan="3">Electric Power</td> </tr> <tr> <td>• Power Generation</td> <td>Light</td> <td style="text-align: right;">4,490,724.00</td> </tr> <tr> <td>• Transmission Network</td> <td>Nil</td> <td style="text-align: right;">0.0</td> </tr> <tr> <td>• Distribution Network</td> <td>Severe</td> <td style="text-align: right;">34,535,806.00</td> </tr> <tr> <td>• Other Facilities</td> <td>Severe</td> <td style="text-align: right;">14,434,470.00</td> </tr> <tr> <td colspan="2">Petroleum Fuel</td> <td style="text-align: right;">14,060,243.00</td> </tr> <tr> <td>• Petroleum Fuel Storage</td> <td>5</td> <td style="text-align: right;">9,334,290.60</td> </tr> <tr> <td>• Petroleum Fuel Stock</td> <td>7,909 l</td> <td style="text-align: right;">3,549,810.40</td> </tr> <tr> <td>• Retail Distribution</td> <td>3</td> <td style="text-align: right;">1,069,220.00</td> </tr> </tbody> </table>	Item (Damaged &/or Lost)	Damage	Estimated Cost US\$	Electric Power			• Power Generation	Light	4,490,724.00	• Transmission Network	Nil	0.0	• Distribution Network	Severe	34,535,806.00	• Other Facilities	Severe	14,434,470.00	Petroleum Fuel		14,060,243.00	• Petroleum Fuel Storage	5	9,334,290.60	• Petroleum Fuel Stock	7,909 l	3,549,810.40	• Retail Distribution	3	1,069,220.00	Data Required
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Demand Matrix – Indonesia

17.03.2005

<p>Public Fuel Supply</p> <ul style="list-style-type: none">• Pertamina reports heavy damage to its Kreung Raya and Meulaboh depots, and lesser damage to its Lhokseumawe, Sitoli and Sabang depots. Damage to the Krueng Raya and Meulaboh caused rupture of tanks and resulted in fuel losses. Many SPBUs have been damaged but details are not yet available. Pertamina's branch office in Banda Aceh has also suffered some damage. The replacement cost is estimated at Rp. 130 billion, including for lost fuel stock.			
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1 IDR = 0.000106922 USD

Demand Matrix – Indonesia

17.03.2005

Country	Project Name
Indonesia	
Agencies	Source Document
	The Consultative Group on Indonesia, 19-20.01.2005: Indonesia, preliminary damage and loss assessment
	Sector
	Communications Sector – Extent and Valuation of Damage and Losses

Damage Assessment	Specific Needs	Damage & Losses	Time Frame / Deadlines																		
<p>Communications & Postal Service</p> <ul style="list-style-type: none"> The tsunami caused significant damage to Telkom's fixed line network, and in particular the last mile of copper wire connection. There was also damage to exchanges, although repairs were made very quickly in many instances. Both Telkomsel and Indosat/Satelindo suffered damage to GSM base transceiver stations and associated facilities, most of which were reinstated quickly. However, MOC reported that all but eight of 111 lines provided to remote villages under the Universal Service Obligation (USO) scheme are damaged. Telkom and other operators were quick to mobilize VSAT and satellite communications equipment to support relief and recovery efforts. PT Pos reported damage to 27 post office buildings 	<p>Goods:</p> <ul style="list-style-type: none"> Telecommunication equipment <p>Services:</p>	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Item (Damaged &/or Lost)</th> <th style="text-align: right;">Damage</th> <th style="text-align: right;">Estimated Cost US\$</th> </tr> </thead> <tbody> <tr> <td colspan="3">Telecommunications</td> </tr> <tr> <td>• USO Connections</td> <td style="text-align: right;">111</td> <td style="text-align: right;">20,710,791.40</td> </tr> <tr> <td>• Fixed Connections</td> <td style="text-align: right;">98,860</td> <td></td> </tr> <tr> <td colspan="3">Postal Services</td> </tr> <tr> <td>• Postal Facilities</td> <td></td> <td style="text-align: right;">940,913.60</td> </tr> </tbody> </table>	Item (Damaged &/or Lost)	Damage	Estimated Cost US\$	Telecommunications			• USO Connections	111	20,710,791.40	• Fixed Connections	98,860		Postal Services			• Postal Facilities		940,913.60	Data Required
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Demand Matrix – Indonesia

17.03.2005

Country	Project Name
Indonesia	
Agencies	Source Document
	The Consultative Group on Indonesia, 19-20.01.2005: Indonesia, preliminary damage and loss assessment
	Sector
	Water Supply & Sanitation Sector – Extent and Valuation of Damage and Losses

Damage Assessment	Specific Needs	Damage & Losses	Time Frame / Deadlines																															
<p>Damage to water supply and sanitation has been estimated to total US\$ 25.5 million, comprising US\$ 28.5 million (96%) for water supply and US\$ 0.9 million (4%) for sanitation. For water supply, 63% of the damages were incurred by small-scale and private providers and the balance by the water supply enterprises.</p>	<p>Goods:</p> <ul style="list-style-type: none"> • Water treatment equipment • Water Tank Trucks • Water distribution equipment • Water pumps <p>Services:</p> <ul style="list-style-type: none"> • Well digging services 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Item (Damaged &/or Lost)</th> <th style="text-align: left;">Damage</th> <th style="text-align: left;">Estimated Cost US\$</th> </tr> </thead> <tbody> <tr> <td colspan="3">Water Supply</td> </tr> <tr> <td>• Water Treatment Plant capacity</td> <td>1495 L/s</td> <td rowspan="2">28,590,942.80</td> </tr> <tr> <td>• Water tank Trucks</td> <td>108</td> </tr> <tr> <td>• Pipe Network</td> <td>895km</td> <td rowspan="5">962,298.00</td> </tr> <tr> <td>• Small Tankers</td> <td>70</td> </tr> <tr> <td>• Vendors</td> <td>570</td> </tr> <tr> <td>• Dug Wells</td> <td>60,000</td> </tr> <tr> <td>• Hand pumps</td> <td>15,000</td> </tr> <tr> <td colspan="3">Sanitation</td> </tr> <tr> <td>• Sludge Treatment</td> <td>6 20</td> <td></td> </tr> <tr> <td>• Vacuum Truck</td> <td></td> <td></td> </tr> </tbody> </table>	Item (Damaged &/or Lost)	Damage	Estimated Cost US\$	Water Supply			• Water Treatment Plant capacity	1495 L/s	28,590,942.80	• Water tank Trucks	108	• Pipe Network	895km	962,298.00	• Small Tankers	70	• Vendors	570	• Dug Wells	60,000	• Hand pumps	15,000	Sanitation			• Sludge Treatment	6 20		• Vacuum Truck			<p>Data Required</p>
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Demand Matrix – Indonesia

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	Sector															
	Agriculture Sector – Extent and Valuation of Damage and Losses															
Damage Assessment	Specific Needs	Damage & Losses		Time Frame / Deadlines												
<p>Irrigation</p> <ul style="list-style-type: none"> All irrigation schemes which were in the coastal areas were significantly affected by the tsunami. The total area affected by the tsunami is estimated at 28,000 ha (technical, semi-technical and simple irrigation systems). <p>Standing Crop</p> <ul style="list-style-type: none"> Based on the estimates provided by the Ministry of Agriculture, crops on 21,000 ha of sawah and 29,000 ha of dry land were damaged. The immediate losses are estimated at 80,000 tons of unhusked rice and 160,000 tons of other crops. <p>Live Stock</p> <ul style="list-style-type: none"> It is estimated that 23,300 large ruminants, 21,000 small ruminants and about 2.5 million poultry birds were lost. The preliminary estimate of damages to animal husbandry are estimated at US\$ 13.5 million. <p>Soil drainage, farm machinery and implements.</p> <ul style="list-style-type: none"> The soils that have received deposits of salt from the tsunami must be leached and drained at an estimated cost of US\$ 24.1 million. Replacement of farm machinery and farmers' implements has an estimated cost of US\$ 29.8 million 	<p>Goods:</p> <ul style="list-style-type: none"> Agricultural equipment and machinery Domestic Livestock <p>Services:</p> <ul style="list-style-type: none"> Soil remediation services 	<table border="1"> <thead> <tr> <th style="text-align: center;">Item</th> <th style="text-align: center;">Estimated Cost US\$ Million</th> </tr> </thead> <tbody> <tr> <td>Lands permanently lost</td> <td style="text-align: right;">40.1</td> </tr> <tr> <td>Standing Crop Losses</td> <td style="text-align: right;">21.9</td> </tr> <tr> <td>Infrastructure Machinery</td> <td style="text-align: right;">29.8</td> </tr> <tr> <td>Future Crop Losses</td> <td style="text-align: right;">118.1</td> </tr> <tr> <td>Livestock</td> <td style="text-align: right;">13.5</td> </tr> </tbody> </table>		Item	Estimated Cost US\$ Million	Lands permanently lost	40.1	Standing Crop Losses	21.9	Infrastructure Machinery	29.8	Future Crop Losses	118.1	Livestock	13.5	Data Required
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Demand Matrix – Indonesia
17.03.2005

Country	Project Name
Indonesia	
Agencies	Source Document
	The Consultative Group on Indonesia, 19-20.01.2005: Indonesia, preliminary damage and loss assessment
	Sector
	Fisheries Sector – Extent and Valuation of Damage and Losses

Damage Assessment	Specific Needs	Damage & Losses			Time Frame / Deadlines
<ul style="list-style-type: none"> The fisheries sector has been heavily affected by the disaster. A large number of fisher people have been killed (an estimated 15-20% of the fisher people in the 18 kabupatens), most of the infrastructure and facilities have been destroyed or damaged, and most of the community members have lost their houses, fishing boats and gear. Overall, it is estimated that 55% of the fishing harbors/ports were damaged (valued at Rp. 103 billion). MMAF lost almost 90% of its assets, which were mostly located in the hardest hit area of the tsunami (around Banda Aceh, except for the hatchery research stations in Simelue and Nias). The damage to brackish water culture ponds has been widespread. Even in areas where the tsunami did not do significant damage (such as in the southern part of Aceh), floods have partially damaged the infrastructure. In total the damage is valued at Rp. 466 billion which is about 50% of the total damage value to the fisheries sector. 	<p>Goods:</p> <ul style="list-style-type: none"> Fishing Equipment Boats <p>Services:</p> <ul style="list-style-type: none"> Construction Fishing Port Infrastructure 	<p>Description</p> <p>Fishing Ports MMAF's* Losses Brackish Water Culture Fishing Boats Fishing Equipment *Ministry of Marine Affairs and Fisheries</p>	<p>Estimated Cost of Damage US\$ Million</p> <p>40.1 21.9 29.8 118.1 13.5</p>	<p>% of Total Capacity</p> <p>55% 88% 41% 64% 66%</p>	Data Required

Demand Matrix – Indonesia
17.03.2005

Country	Project Name
Indonesia	
Agencies	Source Document
	The Consultative Group on Indonesia, 19-20.01.2005: Indonesia, preliminary damage and loss assessment
	Sector
	Enterprise Sector – Extent and Valuation of Damage and Losses

Damage Assessment	Specific Needs	Damage & Losses	Time Frame / Deadlines												
<p>Overall damages to large firms, medium to large-scale manufacturing enterprises, small and informal businesses and public markets amount to Rp. 2 trillion.</p> <p>Large enterprises.</p> <ul style="list-style-type: none"> With one notable exception, these facilities have suffered relatively light damage. The exception is PT. Andalas which suffered severe damage. <p>Large and medium-scale manufacturing.</p> <ul style="list-style-type: none"> Overall for large and medium scale manufacturing the damages are assessed to be around Rp. 44 billion (excluding the big companies discussed above), whilst the losses from reduced production are estimated at Rp. 169 billion. <p>Small-scale and unregistered businesses.</p> <ul style="list-style-type: none"> Assuming that each small informal business had around Rp. 10 million in total assets and that all of this was destroyed – this amounts to a total damages figure of Rp. 800 billion. A rough estimate of economic losses can be obtained by multiplying the estimated number of businesses destroyed by the 	<p>Goods:</p> <p>Services:</p>	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Firms & Trading Facilities</th> <th style="text-align: right;">Estimated Cost of Damage* US\$ Million</th> </tr> </thead> <tbody> <tr> <td>Largest Firms</td> <td style="text-align: right;">62.1</td> </tr> <tr> <td>Large Manufacturing Firms</td> <td style="text-align: right;">22.8</td> </tr> <tr> <td>Small Firms/MSME's</td> <td style="text-align: right;">111.8</td> </tr> <tr> <td>Damage to Public Markets</td> <td style="text-align: right;">17.6</td> </tr> <tr> <td>Agro-based industry and commerce</td> <td style="text-align: right;">256.0</td> </tr> </tbody> </table> <p>*Both in terms of Assets and Revenue Flows</p>	Firms & Trading Facilities	Estimated Cost of Damage* US\$ Million	Largest Firms	62.1	Large Manufacturing Firms	22.8	Small Firms/MSME's	111.8	Damage to Public Markets	17.6	Agro-based industry and commerce	256.0	Data Required
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Demand Matrix – Indonesia

17.03.2005

<p>average number of workers in each business and the average wage – this yields an annual loss of Rp. 246 billion.</p> <p>Public facilities for commerce and trade.</p> <ul style="list-style-type: none">• As a first approximation, the Ministry of Trade has assumed that all of these markets have been destroyed. For the restoration phase the Ministry is intending to construct:<ul style="list-style-type: none">○ 293 traditional markets in Aceh and North Sumatra as a total cost of approximately Rp.74 billion (Rp. 250 million per market),○ 18 wholesale markets in 18 regencies/cities in Aceh and North Sumatra. Each would cost Rp. 2 billion,○ 19 warehouses in Aceh and North Sumatra. Each would cost around Rp. 2.5 billion. <p>Agro-based Industries and Commerce.</p> <ul style="list-style-type: none">• On the basis of price differentials between retail, wholesale and farmgate and at-dock values, a four-year loss in added value for these sectors was arrived at. This amounts to Rp. 2,394 billion.			
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Demand Matrix – Indonesia

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Country	Project Name
Indonesia	
Agencies	Source Document
	The Consultative Group on Indonesia, 19-20.01.2005: Indonesia, preliminary damage and loss assessment
	Sector
	Regional Governance Sector – Extent and Valuation of Damage and Losses

Damage Assessment	Specific Needs	Damage & Losses	Time Frame / Deadlines																												
<p>The disaster of December 26, aggravated the institutional, infrastructure and governance challenges, and generated numerous additional challenges. In public buildings, 21% of the public buildings and 19% of the equipment were destroyed, 21% of the personnel were severely affected, and 27% of the public records were destroyed. The replacement value of these damage and losses to the regional governance in the Province of Aceh is preliminarily estimated to be over \$81 million.</p>	<p>Goods:</p> <ul style="list-style-type: none"> • Office equipment & machinery <p>Services:</p> <ul style="list-style-type: none"> • Construction 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Category*</th> <th style="text-align: center;">Qty impacted</th> <th style="text-align: center;">% Damage</th> <th style="text-align: center;">Estimated Cost US\$</th> </tr> </thead> <tbody> <tr> <td>Buildings</td> <td style="text-align: center;">156</td> <td style="text-align: center;">21%</td> <td style="text-align: center;">33.1</td> </tr> <tr> <td>Equipment</td> <td style="text-align: center;">208</td> <td style="text-align: center;">19%</td> <td style="text-align: center;">11.8</td> </tr> <tr> <td>Personnel</td> <td style="text-align: center;">10,073</td> <td style="text-align: center;">21%</td> <td style="text-align: center;">4.3</td> </tr> <tr> <td>Record</td> <td></td> <td style="text-align: center;">27%</td> <td style="text-align: center;">18.1</td> </tr> <tr> <td>Others</td> <td></td> <td></td> <td style="text-align: center;">6.4</td> </tr> <tr> <td>Oversight</td> <td></td> <td></td> <td style="text-align: center;">7.3</td> </tr> </tbody> </table> <p><small>*Includes Public Administration, Justice, Parliament and Police</small></p>	Category*	Qty impacted	% Damage	Estimated Cost US\$	Buildings	156	21%	33.1	Equipment	208	19%	11.8	Personnel	10,073	21%	4.3	Record		27%	18.1	Others			6.4	Oversight			7.3	<p>Data Required</p>
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India - Demand Matrix
17.03.2005

7.6. India Demand Matrix

Country	Project Name
India	
Agencies	Source Document
ADB, WB and UN	Preliminary Damage and Needs Assessment – by ADB, World Bank and United Nations
	Sector
	Housing

Damage Assessment	Specific Needs	Damage & Losses			Time Frame	
Almost 154,000 houses were either destroyed or damaged entailing losses of about \$228.5 million. In estimating the financing needs, not only housing has been taken into consideration, but also common shared property and infrastructure (water & sanitation, roads, power supply).	<ul style="list-style-type: none"> - Construction Material - Water & Sanitation - Roads & Drainage - Power Supply 		Damage & Loss	Financing Needs for Housing, Land & Infrastructure		
		State/UT	US\$ Mio	Short term	Medium term	
		Andhra Pradesh	0.45	0.90	-	
		Kerala	21.15	45.05	-	
		Pondicherry	11.73	18.40	36.30	
		Tamil Nadu	195.17	95.65	292.70	
Total	228.50	160.00	329.00			

India - Demand Matrix
17.03.2005

Country	Project Name
India	
Agencies	Source Document
ADB, WB and UN	Preliminary Damage and Needs Assessment – by ADB, World Bank and United Nations
	Sector
	Health

Damage Assessment	Specific Needs	Damage & Losses			Time Frame																	
<p>Tamil Nadu: Three primary health centers (PHCs), 16 health sub-centers (HSCs) and the government district hospital in Nagapattinam were severely damaged. Other government facilities were also damaged to some extent.</p> <p>Kerala: Two PHCs and two HSCs were damaged in Kollam.</p> <p>No destruction of health infrastructure in Pondicherry or Andhra Pradesh.</p>	<p>Goods</p> <ul style="list-style-type: none"> • drugs, equipment and patient amenities <p>Services</p> <ul style="list-style-type: none"> • Reconstruction/Renovation and refurbishing of district and government hospitals, Primary Health Centers and Health Sub Centers; • Provision of basic health care and psychosocial support • Development of health sector disaster mitigation plan • Improving communication facilities • Health system assessment • prevention of HIV/AIDS, malnutrition and anemia. • Control of vector and water borne diseases • Development of disease surveillance 	<table border="1"> <thead> <tr> <th rowspan="2">State/UT</th> <th rowspan="2">Total Damages & Losses US\$ Mio</th> <th colspan="2">Financing Needs</th> </tr> <tr> <th>Short term</th> <th>Medium term</th> </tr> </thead> <tbody> <tr> <td>Kerala</td> <td>3.20</td> <td>2.16</td> <td>-</td> </tr> <tr> <td>Tamil Nadu</td> <td>12.54</td> <td>8.50</td> <td>0.70</td> </tr> <tr> <td>Total</td> <td>15.74</td> <td>10.66</td> <td>0.70</td> </tr> </tbody> </table>	State/UT	Total Damages & Losses US\$ Mio	Financing Needs		Short term	Medium term	Kerala	3.20	2.16	-	Tamil Nadu	12.54	8.50	0.70	Total	15.74	10.66	0.70		
State/UT	Total Damages & Losses US\$ Mio	Financing Needs																				
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Kerala	3.20	2.16	-																			
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India - Demand Matrix
17.03.2005

Country	Project Name
India	
Agencies	Source Document
ADB, WB and UN	Preliminary Damage and Needs Assessment – by ADB, World Bank and United Nations
	Sector
	Agriculture & Livestock

Damage Assessment	Specific Needs	Needs Assessment Budget	Time Frame																																										
<p>Damage to the agricultural sector is mainly confined to the destruction of standing crops. Intrusion of seawater has induced salinity and water logging and caused semi-permanent damage; effective crop growing won't be possible for the next two to three years until seasonal rain flushes out the salt. Also, the loss of domestic livestock is large.</p>	<ul style="list-style-type: none"> • Surveying affected agricultural lands to estimate the extent and grades of salinity/sodicity. • •Scraping and removing marine/mud sediments and sand deposited lands; establishing model reclamation fields; mobilizing saline tolerant seeds, planting materials and green manure crop; introducing bacterial strains like Rhizobia, Azospirillum, Pseudomonas and Phosphobacterium which have the property of nitrogen fixation and phosphate mobilization. • •Reviving horticultural crops with and without soil amelioration. • •Restoring affected pasture lands, farm ponds and dug wells. • •Estimating water quality of all sources and identifying the pockets where ground water can still be tapped. 	<table border="1"> <thead> <tr> <th colspan="6">Needs Assessment for Agriculture and Livestock (Rs. Crore)</th> </tr> <tr> <th>Activity</th> <th>Tamil Nadu</th> <th>Pondi-cherry</th> <th>Andhra Pradesh</th> <th>Kerala</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Replacement cost to crop and live stock losses</td> <td>21.70</td> <td>2.66</td> <td>0.94</td> <td>8.12</td> <td>33.42</td> </tr> <tr> <td>Rehabilitation of soil resources</td> <td>35.32</td> <td>1.38</td> <td>1.44</td> <td>16.24</td> <td>54.38</td> </tr> <tr> <td>Strengthening marketing and support services</td> <td>4.13</td> <td>0.60</td> <td>0.08</td> <td>1.61</td> <td>6.42</td> </tr> <tr> <td>Total (Rs. Crore)</td> <td>61.15</td> <td>4.64</td> <td>2.46</td> <td>25.97</td> <td>94.22</td> </tr> <tr> <td>Total (US\$ Mio)</td> <td>14.06</td> <td>1.07</td> <td>0.57</td> <td>5.97</td> <td>21.66</td> </tr> </tbody> </table>	Needs Assessment for Agriculture and Livestock (Rs. Crore)						Activity	Tamil Nadu	Pondi-cherry	Andhra Pradesh	Kerala	Total	Replacement cost to crop and live stock losses	21.70	2.66	0.94	8.12	33.42	Rehabilitation of soil resources	35.32	1.38	1.44	16.24	54.38	Strengthening marketing and support services	4.13	0.60	0.08	1.61	6.42	Total (Rs. Crore)	61.15	4.64	2.46	25.97	94.22	Total (US\$ Mio)	14.06	1.07	0.57	5.97	21.66	
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India - Demand Matrix
17.03.2005

	<ul style="list-style-type: none">• Providing fodder for animals and arranging vaccination for livestock.• •Re-establishment of home gardens with salt tolerant vegetables.		
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India - Demand Matrix
17.03.2005

Country		Project Name															
India																	
Agencies		Source Document															
ADB, WB and UN		Preliminary Damage and Needs Assessment – by ADB, World Bank and United Nations															
		Sector															
		Fisheries															
Damage Assessment																	
Specific Needs																	
Budget																	
Time Frame																	
<p>Basically, the whole operation fleet has been eliminated and with that the livelihoods of the population in the area. Total assessed value of damages to Assets and Losses in Production and Income for all 4 states/UT is 2,469,8 Rs. Crore or 567,8 US\$ Mio. Damages include boats, fishing equipment, shrimp ponds, hatcheries, oyster farms, stocks,</p>	<p style="text-align: center;">Services</p> <ul style="list-style-type: none"> • Completion and revisions of assessments • Evaluation of options for reconstructing the sector • Identification of new forms of livelihood in coastal villages, especially for women and youth. <p>After completion of assessments and evaluation of reconstruction options, more details will be available on the exact need of the following goods:</p> <ul style="list-style-type: none"> • Trawlers • FRP boats • Net sets • Wooden catamarans • Outboard motors 	<table border="1"> <thead> <tr> <th>Activity</th> <th>Costs US\$ Mio</th> </tr> </thead> <tbody> <tr> <td>Short Term 12mths</td> <td></td> </tr> <tr> <td>Completion and revisions of assessments (Inc. assistance for crews)</td> <td style="text-align: right;">54,1</td> </tr> <tr> <td>Evaluation of options for reconstructing the sector</td> <td style="text-align: right;">0.3</td> </tr> <tr> <td>Identification of new forms of livelihood</td> <td style="text-align: right;">0.26</td> </tr> <tr> <td>Mid-Term</td> <td></td> </tr> <tr> <td>Replacement of lost assets</td> <td style="text-align: right;">229.6</td> </tr> </tbody> </table>		Activity	Costs US\$ Mio	Short Term 12mths		Completion and revisions of assessments (Inc. assistance for crews)	54,1	Evaluation of options for reconstructing the sector	0.3	Identification of new forms of livelihood	0.26	Mid-Term		Replacement of lost assets	229.6
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India - Demand Matrix
17.03.2005

Country	Project Name																		
India																			
Agencies	Source Document																		
ADB, WB and UN	Preliminary Damage and Needs Assessment – by ADB, World Bank and United Nations																		
	Sector																		
	Rural and Municipal Infrastructure																		
Damage Assessment																			
Specific Needs	Budget	Time Frame																	
<ul style="list-style-type: none"> • Salination of sand point wells (US\$ 210,000) in Andhra Pradesh. • Loss of 1,158 hand pumps and hamlets in Tamil Nadu • Damage to 33 piped water supply systems and 200 hand pumps (US\$ 800,000) in Tamil Nadu • Damage to pipelines, pumps and electrical installations and saline intrusion (US\$ 3 Mio) in Kerala • Damage to sanitation facilities (US\$ 800,000) 	<p>Goods:</p> <ul style="list-style-type: none"> • Hand pumps • Hamlets • Water supply systems • Electrical installations • Sanitation facilities 	<p>This budget list has consolidated immediate and medium term services.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Item</th> <th style="width: 30%;">Need</th> </tr> </thead> <tbody> <tr> <td>Water supply</td> <td style="text-align: right;">39.61</td> </tr> <tr> <td>Sanitation</td> <td style="text-align: right;">12.75</td> </tr> <tr> <td>Power</td> <td style="text-align: right;">6.14</td> </tr> <tr> <td>Public buildings</td> <td style="text-align: right;">18.72</td> </tr> <tr> <td>Internal/rural roads</td> <td style="text-align: right;">18.36</td> </tr> <tr> <td>Drainage</td> <td style="text-align: right;">2.83</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">98.42</td> </tr> </tbody> </table>		Item	Need	Water supply	39.61	Sanitation	12.75	Power	6.14	Public buildings	18.72	Internal/rural roads	18.36	Drainage	2.83	Total	98.42
Item	Need																		
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India - Demand Matrix
17.03.2005

Country	Project Name
India	
Agencies	Source Document
ADB, WB and UN	Preliminary Damage and Needs Assessment – by ADB, World Bank and United Nations
	Sector
	Transport

Damage Assessment	Specific Needs	Budget		Time Frame
			short term	medium term
<p>Road Subsector: In the districts of Nagapattinam, Kanniyakumari and Cuddalore of Tamil Nadu, and Pondicherry, more than 80 km of ODR and MDR, located within 800 m of the coastline, were seriously damaged.</p> <p>Ports and Fishing Harbors The restoration cost for each port was estimated based on market unit rates for reconstructing breakwaters, wharfs and buildings, dredging, and procurement of a dredger etc.</p>	<p style="text-align: center;">Services</p> <ul style="list-style-type: none"> • Protective works for ports and fishing harbours • Breakwaters and dredging • Reconstruction of roads, bridges • Reconstruction of ports and fishing harbours • Studies & Consulting services 	<p>Roads & Bridges</p> <p>Road reconstruction 13.45 3.79</p> <p>Bridges reconstruction 3.96 9.39</p> <p>studies and consulting 0.69 2.30</p> <p>Ports and fishing harbours</p> <p>Ports reconstruction 17.23 6.00</p> <p>Fishing Harbour reconstruction 4.53 3.87</p> <p>Studies and consulting 1.61 2.30</p> <p>Total 41.47 27.65</p>		

India - Demand Matrix
17.03.2005

Country	Project Name
India	
Agencies	Source Document
ADB, WB and UN	Preliminary Damage and Needs Assessment – by ADB, World Bank and United Nations
	Sector
	Coastal Protection

Project Activities	Specific Needs	Budget	Time Frame
<p>Damage to coastal protection structures was limited. The total estimated cost of damage is Rs. 186 crore, or US\$ 42.8million. The immediate focus should be on restoration of damaged infrastructure for protection against coastal hazards such as cyclones and subsequent storm surges and river floods.</p> <p>The aim of the reconstruction and recovery strategy is to strengthen coastal protection infrastructure in order to permanently reduce future damage and loss of life from sea-based hazards. In planning coastal protection measures, it is important to consider the land use of the coastal area concerned, as well as the status of coastal erosion. The coastal zone can be divided into three categories: (i) port and city area; (ii) fishery village or fishery and agricultural usage area and (iii) little human activity (as a village relocation or environmental preservation). Each category may require different measures.</p>	<p style="text-align: center;">Services</p> <ul style="list-style-type: none"> • Widening and strengthening of banks of rivers and drains • Restoration of seawalls • Equipment restoration • Study & survey services 	42,8 Mio	

India - Demand Matrix

17.03.2005

Country	Project Name
India	
Agencies	Source Document
ADB, WB and UN	Preliminary Damage and Needs Assessment – by ADB, World Bank and United Nations
	Sector
	Hazard Risk Management

Needs & Budget		Time Frame
Components/ Projects	Costs (US\$)	
Short term		
Multi-hazard risk assessment in the affected areas in the coastal areas with priority on affected <i>talukas</i>	2.15	
Preparation of sectoral risk reduction guidelines (technical guidelines, suggested techno-legal arrangements, process guidance)	0.8	
Community based reconstruction planning	2.22	
Information, communication and public awareness	1.9	
Mechanisms for dissemination of Early Warning Systems in the coastal districts	1	
Sub Total	8.07	
Medium term		
Multi-hazard risk assessment in unaffected but vulnerable Areas	1.6	
Capacity Building at the village, block and district levels for Early Warning Systems in the coastal districts	0.8	
Community based disaster risk management programs	2.25	
Disaster risk information systems	2.25	
Studies/ pilots on state specific studies on risk transfer mechanisms	2.25	
Sub Total	9.15	
TOTAL	17.22	

8. Funding

This section strives to give a brief overview of the funding situation for the recovery and reconstruction phase of the Tsunami disaster. It must be noted that it is very difficult to keep up with the constant developments of the donor funding in a document. However the following provides an update of the situation as of mid-March.

Firstly an update on the response to the Flash appeal is presented. This is then followed with a more detailed look at funding from major donors, in terms of amounts and what the funds are to be used for, as far as this information is available.

8.1. Flash Appeal

Most of the resources initially earmarked to the UN Flash Appeal from the humanitarian budgets of donor governments - \$863 million in total - have been allocated to specific NGOs or UN agencies. UNDP has been the third largest recipient within the UN of such resources with a total pledged to date of almost \$100 million, this may increase to a total of about \$120 million under this first phase of the operation, representing close to 70% of the requirements identified in the Flash Appeal. Never before had the UN/UNDP benefited of such generosity under a humanitarian appeal.

Funding decisions during the recovery and reconstruction phase will be primarily made by donor governments at the country level. The following table²¹ analyses donor pledges based on the information available to us to date.

For each significant donor:

- The second column (Total pledge) indicates how much the donor has pledged in total to the overall Tsunami effort, whether it is for the relief phase or the reconstruction phase, and whether it will be channelled bilaterally or through multilateral institutions such as the UN. This total is then divided into three sub-components.
- The third column (To Flash Appeal) indicates how much of this total has been pledged to the UN Flash Appeal – most Flash Appeal pledges have been allocated to specific NGOs or UN agencies; however, when this is not the case, the unallocated part of the pledge is shown in column 4.
- The fifth column (Outside Flash Appeal - committed) represents those pledges made outside the Flash Appeal which have either been already used/allocated (for in kind relief aid for instance), or which will be channelled bilaterally (as in the case of the Australian pledge to Indonesia).
- Finally, the sixth column (Outside Flash Appeal - uncommitted) represents those pledges made outside the Flash Appeal and for which no decision has yet been made as far as we know.
- The table also indicates when donors have publicly expressed an interest or a preference for specific recipient countries. Information on donors' particular priorities, however, is more likely to be available at the local level and we encourage you to consult with the local embassies of the donors concerned.

²¹ http://content.undp.org/go/tsunamirelief/Tsunami-Files/download/Total+Tsunami+pledges.xls?d_id=213956&q11n.enc=ISO-8859-1

Table 7: Funding Pledges & Contribution
as at 13.03.2005

Donor	Total pledge	To Flash Appeal	o/w unallocated	Outside Flash Appeal comm., incl. Bilateral	Outside Flash Appeal uncomm.	Detailed information	Donor Expressions of interest / priorities					
							INS	SRL	MAL	SEY	THA	IND
	1 + 2 + 3	1		2	3							
OECD/DAC DONORS												
US	\$950 mio	\$34 mio	\$0 mio	\$67 mio	\$850 mio	Total pledge = \$350 from January + \$600 additional request in Feb. Of the \$850 mio uncommitted, \$250 mio is for relief activities and \$339 mio for large-scale infrastructure projects, such as the reconstruction of highways in Indonesia, \$168 mio for smaller-scale infrastructure projects such as building schools, health clinics, water distribution systems, housing and livelihood programs, \$62 mio for technical assistance for capacity building, and \$35 mio to create early warning systems						
Germany	\$665 mio	\$68 mio	\$0 mio	\$17 mio	\$579 mio	€500 mio						
EC/ECHO	\$645 mio	\$94 mio	\$63 mio	\$4 mio	\$547 mio	€450 mio o/w €100 mio for relief aid through ECHO and €350 mn for l.t rehabilitation and reconstruction (€240 mio for Indonesia, €80 mio for SL and €30 mio for others) + €1 bn credit	x	x	x	x	x	x
Japan	\$500 mio	\$228 mio	\$0 mio	\$34 mio	\$239 mio	The l.t. commitment of \$239 mio will be disbursed bilaterally to Indonesia (\$142 mio), Sri Lanka (\$78 mio) and the Maldives (\$19 mio)	x	x	x			
France	\$443 mio	\$17 mio	\$0 mio	\$43 mio	\$383 mio	€300 mio for reconstruction						
Australia	\$431 mio	\$18 mio	\$0 mio	\$413 mio	\$0 mio	Aus\$60 mio initially pledged for Indonesia, Sri Lanka and Maldives + Aus\$500 mio (\$387 mio) in grants and Aus\$500 mio in loans over 5 years for Indonesia (all bilateral)	x					

Table 7: Funding Pledges & Contribution
as at 13.03.2005

Donor	Total pledge	To Flash Appeal	o/w unallocated	Outside Flash Appeal comm., incl. Bilateral	Outside Flash Appeal uncomm.	Detailed information	Donor Expressions of interest / priorities					
							1 + 2 + 3	1	2	3	INS	SRL
Canada	\$351 mio	\$30 mio	\$0 mio	\$132 mio	\$189 mio	Can\$ 425 mio over 5 years o/w Can\$265 mio for relief and recovery (o/w Can\$36 mio through CIDA to the Flash Appeal) and Can\$160 mio for l.t. recovery. The uncommitted US\$189 mio includes US\$57 mio for relief over 5 years and US\$131 mio for reconstruction ovre 5 years. Canada has assumed the chair of the Bilateral Donors' Group, which was established to coordinate the delivery of international assistance in Sri Lanka.						
Netherlands	\$266 mio	\$26 mio	\$0 mio	\$9 mio	\$233 mio	€20 mn pledged initially (€13 mn for Indonesia, €7 mn for Sri Lanka) + an additional €200 mn over 5 years (75% for Indonesia, 25% for Sri Lanka)	x	x				
Norway	\$172 mio	\$65 mio	\$0 mio	\$9 mio	\$96 mio	NOK 1 bn (\$170 mn) pledged for humanitarian relief, reconstruction and development, o/w NOK 400 mn (\$65 mn) to the UN Flash Appeal. Receiving UN Agencies for projects in INS: FAO NOK 6.5 mio (\$1 mio), WHO NOK 9.5 mio (\$1.5mio), UNDP NOK 20 mio (\$3.1 mio), UNEP NOK 2 mio (\$0.3mio). Receiving UN Agencies for projects in SRL: FAO NOK 19mio (\$3mio), UNDP NOK 27.5mio (4.3mio), WHO NOK 13mio (\$2mio).	x	x				
UK	\$140 mio	\$75 mio	\$19 mio	\$35 mio	\$30 mio	Of the \$75 mio pledged against the Flash Appeal, GBP10 mio will go un-earmarked to OCHA for allocation						
Italy	\$113 mio	\$22 mio	\$0 mio	\$92 mio		Of the overall \$100 mio + pledge, \$46 mio will be for Sri Lanka		x	x			
Denmark	\$77 mio	\$21 mio	\$8 mio	\$23 mio	\$34 mio	The assistance from Denmark for recovery includes: DKK 50 million (\$9 mio) to Sri Lanka which has already been committed. DKK 50 million to Indonesia - also committed and finally 100 million for environmental assistance in Aceh which has not yet been fully committed. In addition, the MFA has also allocated DKK 20 million for environmental assistance in Thailand.		x				

Table 7: Funding Pledges & Contribution
as at 13.03.2005

Donor	Total pledge	To Flash Appeal	o/w unallocated	Outside Flash Appeal comm., incl. Bilateral	Outside Flash Appeal uncomm.	Detailed information	Donor Expressions of interest / priorities											
							1 + 2 + 3	1	2	3	INS	SRL	MAL	SEY	THA	IND		
Sweden	\$75 mio	\$23 mio	\$8 mio	\$9 mio	\$43 mio	SEK 500 mn o/w SEK 80 mn already disbursed (NGOs, OCHA, WFP, UNICEF), SEK 150 mn committed against Flash Appeal and SEK 270 mn yet to be allocated												
Spain	\$70 mio			\$70 mio		€ 6 mn in emergency aid o/w 4 from central govt and 2 from local and regional gvts + € 50 mn for long-term reconstruction credits												
Austria	\$69 mio			\$1 mio	\$68 mio	€ 50 mn over 3 years o/w € 2.1 mn for co-financing												
Finland	\$69 mio	\$13 mio	\$5 mio	\$15 mio	\$41 mio	€20 mn for relief aid + €30 mn over 3 years for reconstruction in Indonesia and Sri Lanka	x	x										
Switzerland	\$55 mio	\$5 mio	\$0 mio	\$26 mio	\$20 mio	For relief aid												
NZ	\$45 mio	\$14 mio	\$0 mio	\$17 mio	\$14 mio	NZ\$ 10 mio (US\$ 7 mio) initially + NZ\$58 mio, o/w NZ\$20 mio for UN, NZ\$20 mio (US\$14 mio) bilateral to Indonesia over 5 years	x											
Belgium	\$38 mio	\$0 mio	\$0 mio	\$19 mio	\$19 mio	€ 30 mn o/w €15 mn for humanitarian aid (UNICEF, FAO, NGOs, in kind) and €15 mn for reconstruction												
Ireland	\$14 mio	\$5 mio	\$0 mio	\$8 mio														
Greece	\$13 mio	\$13 mio	\$0 mio	\$13 mio								x						
Portugal	\$10 mio	\$3 mio	\$0 mio	\$7 mio		€8 mn												
Luxembourg	\$7 mio	\$4 mio	\$0 mio	\$1 mio	\$2 mio	For relief aid												
OTHER DONORS (over \$1 mn)																		
Saudi Arabia	\$163 mio	\$1 mio	\$0 mio	\$163 mio		Includes public donations worth \$101 mn												
Kuwait	\$100 mio			\$70 mio	\$30 mio	\$100 mn o/w \$30 mn in cash and \$70 mn through bilateral projects												
China	\$64 mio	\$20 mio	\$15 mio	\$44 mio														
Korea	\$55 mio	\$5 mio	\$4 mio	\$5 mio	\$45 mio	Over three years												

Table 7: Funding Pledges & Contribution
as at 13.03.2005

Donor	Total pledge	To Flash Appeal	o/w unallocated	Outside Flash Appeal comm., incl. Bilateral	Outside Flash Appeal uncomm.	Detailed information	Donor Expressions of interest / priorities								
							1 + 2 + 3	1	2	3	INS	SRL	MAL	SEY	THA
Singapore	\$40 mio														
Qatar	\$25 mio	\$3 mio	\$0 mio	\$22 mio											
UAE	\$20 mio					\$20 mn	x								
Algeria	\$2 mio	\$2 mio	\$2 mio												
Mexico	\$2 mio	\$2 mio	\$0 mio												
Brunei		\$4 mio	\$4 mio				x								
Russia		\$22 mio	\$0 mio												
Trinidad		\$2 mio	\$2 mio												
IFIs															
ADB						\$676 mn for immediate assistance									
IsDB						\$500 mn in loans o/w \$10 mn for emergency relief									
World Bank						\$300 million in initial financial support to Indonesia, \$100 million to Sri Lanka, and \$12 million to the Maldives + up to \$1 bn subsequently									
Total	\$5,800 mio	\$863 mio	\$130 mio	\$1,368 mio	\$3,462 mio										

8.2. Australian relief packages²²

The Minister for Foreign Affairs, Mr. Downer, made the first of three Australian Government aid announcements on 27 December, announcing an initial contribution of \$10 million. A subsequent \$25 million in relief aid was announced on 29 December, and another \$25 million on 31 December 2004.

The funding allocated for direct relief includes assistance for Indonesia, Sri Lanka, the Maldives, Seychelles and for Australian non government organisations (NGOs) and to support the relief work in other countries. As well, there is provision for the deployment of Australian technical and coordination specialist personnel.

In support of the United Nations (UN) response to the Asian tsunami, \$25 million of the initial contribution of \$60 million was allocated to UN agencies.

The following tables 8 & 9 outline the allocation of Australia's initial contribution of \$60 million by target country or group:

Table 8: Allocation of Australia's initial contribution

Indonesia - \$33 million	
Amount	Purpose
\$12.5 million	Health and water sanitation
\$8.25 million	Coordination and support services
\$7 million	Food and non-food items
\$5.25 million	Shelter

Sri Lanka and the Maldives - \$14.25 million	
Amount	Purpose
\$4 million	Food and non-food items
\$4 million	Education
\$2.5 million	Health and water sanitation
\$2.25 million	Environment
\$1 million	Shelter
\$0.5 million	Coordination and support services

Australian Non Government Organisations - \$12 million

This includes contributions to the Australian Red Cross and the International Federation of Red Cross and Red Crescent Societies.

²² AUSAID at <http://www.usaid.gov.au/hottopics/tsunami/relief.cfm>

Seychelles and other affected areas - \$750,000

Australia will provide \$500,000 to a UN Flash Appeal to help the Seychelles recover from the Indian Ocean tsunami. The contribution will provide shelter for families and also be used to rebuild infrastructure and help with general economic recovery. The Australian Government will continue to work with international partners to assess and identify effective ways to assist those most affected by the disaster.



\$1 billion package for Indonesia

On 5 January 2005, the Prime Minister, Mr John Howard announced the \$1 billion Australia-Indonesia Partnership for Reconstruction and Development (APIRD). The APIRD, a 5 year commitment, is the largest single aid package in Australia's history.

The package will consist of \$500 million in grants and \$500 million in concessional loans over 40 years with no interest and no repayments of principal over the first 10 years.

Table 9: Timeline of Australia's aid announcements²³

Target Country or group	Amount (AU\$)	Purpose
<i>Announced 5 January 2005</i>		
Indonesia	\$1 billion	Australia-Indonesia Partnership for Reconstruction and Development - the package will consist of equal parts of grant assistance and highly concessional financing.
<i>Announced 31 December 2004</i>		
Indonesia	\$7.5 million	Urgent public health measures focusing on preventative health and water and sanitation
Indonesia	\$7.5 million	Supporting international organisations such as UNICEF, WHO and IOM, as well as local Islamic and women's organisation
Indonesia	\$5 million	Logistics support in isolated areas
Sri Lanka and the Maldives	\$5 million	Work by international agencies and local organisations to address urgent public health needs
<i>Announced 29 December 2004</i>		
Indonesia	\$10 million	Immediate needs, including food and water, shelter and clothing, medical care, emergency power and public health measures
Sri Lanka	\$5 million	International emergency relief efforts

²³ ibid

Australian NGOs	\$5 million	Relief programs and appeals of Australian NGOs
International relief	\$5 million	International emergency relief efforts in other countries, including Thailand and the Maldives, and deployment of Australian civilian surgical/medical teams
<i>Announced 27 December 2004</i>		
Initial contribution	\$10 million	Australian Red Cross and the International Federation of the Red Cross and Red Crescent Societies (IFRC) - \$5 million; United Nations and other international relief agencies in Indonesia - \$3 million; Australian NGOs (CARE Australia, Oxfam-Community Aid Abroad and World Vision Australia) - \$2 million
Total	\$1.06 billion	

8.3. Canada

The Government of Canada decided on 2 January 2005 to contribute USD 66 Mio (CAD 80 million²⁴) in the aftermath of the disaster.²⁵

On 10 January 2005 Canadian Prime Minister Paul Martin announced a commitment of up to CAD 425 million toward a comprehensive package of disaster relief measures and rehabilitation assistance following the Indian Ocean earthquake and tsunamis.

Canada's commitment over the next five years comprises:

- CAD 265 million for humanitarian and rehabilitation assistance, including an estimated CAD 150 million to match the generous contributions of individual and groups of Canadians to eligible charitable organizations; and,
- CAD 160 million for ongoing rehabilitation assistance to the affected region from 2005-09.

The sum of CAD 265 million can be divided into three:

1. **Humanitarian and Rehabilitation Assistance and Debt Moratorium (CAD 73 million)**

Canada is pledging up to CAD 73 million in immediate humanitarian and recovery assistance and the offer of a debt moratorium to affected countries. A significant amount of this is in response to the UN flash appeal. The Canadian International Development Agency (CIDA) will allocate these funds through various channels, including: international organizations; Canadian non-governmental organizations; emergency flights of relief supplies; and local initiatives in affected countries.

²⁴ Applied currency conversion rate: 1 USD = 1.21463 CAD

²⁵ News item on homepage Canadian government <http://www.pm.gc.ca/eng/news.asp?id=381>

2. Matching of Individual Contributions (as much as \$150 million by January 11)

Donations of individuals and groups are being matched dollar-for-dollar by the government and will be matched to eligible Canadian non-governmental organizations (NGOs) already involved in relief efforts on the ground.

3. Incremental Operational Costs (\$42 million)

These funds are allocated to fund the operational costs of Canadian individuals deployed in the region by the government, like members of the Disaster Assistance Response Team (DART), government personnel, and forensic experts and so on.

Ongoing reconstruction assistance

Ongoing reconstruction assistance from CIDA will amount to USD 160 million between 2005 and 2009. Given the scale of existing needs in the aftermath of the disaster, the Government of Canada will carefully coordinate its response to longer-term rehabilitation and reconstruction in the most-affected countries of Sri Lanka and Indonesia. Support will be country specific and driven by the needs and priorities identified by the countries themselves.

Drawing on its extensive experience in social and economic development, Canada will support small entrepreneurs and work with local authorities in re-building small-scale infrastructure and rehabilitating and strengthening systems to provide basic social services.

8.4. Denmark

The Danish government momentarily has allocated USD 73 million (DKK 420 Mio) 26 in funding for the tsunami-struck region²⁷. Of this sum, a total of USD 34,8 million (DKK 200 Mio) has been committed to emergency relief efforts and a total of USD 17,4 million (DKK 100 Mio) has been allocated to reconstruction activities. The remaining USD 20,9 million (DKK 120 Mio) has been allocated for assistance in dealing with environmental damage, for instance the destruction of coastal zones and water resources.

The Danish support is primarily targeted at Sri Lanka and Indonesia, the countries that were hit the hardest. It focuses on providing support to the provision of clean drinking water, which poses one of the biggest problems right now. The support is given through three channels, namely through Danish aid organisations, UN agencies and through the Danish Emergency Management Agency that can provide competence and experience with efforts in crisis areas. The USD 17,4 million assigned to reconstruction will initially be divided equally between Sri Lanka and Indonesia. The exact structure of the reconstruction efforts will be determined after an assessment of needs and will be based on the preferences of both countries.

²⁶ Applied currency conversion rate: 1 USD = 5.75504 DKK

²⁷ <http://www.um.dk/da/menu/Udviklingspolitik/Aktuelt/FokusPaa/Flodboelgen/DanskBistand/>

Of the USD 20,9 million allocated for environmental assistance, USD 15,7 million is assigned to Indonesia and USD 5,2 million is assigned to Thailand.

Table 11 provides an overview of the Danish funding for emergency relief.

Table 11 Overview of Danish funding for emergency relief

	USD Mio	DKK Mio
Sri Lanka		
Danish Red Cross	1.39	8
Evangelical Lutheran Church Emergency Relief	1.39	8
Danish Refugee Council	1.04	6
Danida centre in Colombo	0.87	5
Red Barnet	0.87	5
Small NGO's and Danish Bilharziasis Laboratory (DBL)	0.87	5
Danish Emergency Management Agency, water cleaning and drugs	2.43	14
UNHCR	1.74	10
Indonesia		
ADRA-Denmark	0.87	5
Danish Red Cross	2.09	12
Danish Emergency Management Agency (mobile hospital)	5.56	32
International Red Cross Committee (ICRC)	1.74	10
WHO	2.26	13
Donation from embassy in Jakarta	0.10	0.6
India		
Donation from embassy i New Delhi	0.10	0.6
Regional		
UNICEF	4.34	25
World Food Program	4.34	25
Office for Coordination of Humanitarian Aid (OCHA)	0.87	5
Ministry of Defence (airplane transport)	1.39	8.0
Other expenses	0.49	2.8
Total	34.75	200
Funds per category		
Danish NGO's	8.51	49
Ministry of Defence / Danish Emergency Management Agency	9.38	54
UN and ICRC	15.29	88
Danida	1.56	9
Total	34.75	200
Geographical division		
Indonesia	12.62	72.6
Sri Lanka	10.70	61.6
Regional + other expenses	11.43	65.8
Total	34.75	200

8.5. Germany

Three months following the tsunami disaster in the Indian Ocean, the German government has committed itself to long-term aid in the region. But it will closely follow the funds' implementation.

The German government is shifting gears in its support for areas devastated by the December tsunami. Development Minister Heidemarie Wieczorek-Zeul said Germany's initial acute emergency aid would now increasingly go into reconstruction efforts.

These efforts will focus on Sri Lanka and Indonesia. Germany has provided 84.6 million euros (USD 110.2 million) in emergency aid so far. In the next three to five years, a further 500 million euros will follow. The focus will in particular be on health care, education, vocational training, house building, as well as the reconstruction of local government and economy.

In Indonesia, Germany will help mainly with reconstruction efforts, while in Sri Lanka, the focus will be on re-establishing basic infrastructure. The German government ties certain conditions to the aid: Corruption must be prevented, weaker groups in the population like children, women and older people are not to be disadvantaged and sustainable development has to be realized." The minister stressed that the funds would be allocated to individual projects.²⁸

Tsunami early warning system

Eleven weeks after deadly tsunamis swept through southern Asia, Germany has officially signed a pact with Indonesia to set up a tsunami early warning system. The agreement was signed Monday by Germany's Federal Minister for Education and Research Edelgard Bulmahn and her Indonesian counterpart Kusamayanto Kadiman in the capital Jakarta. The system will use newly developed buoys and sensors placed on the seafloor to record wave movements, with data transmitted to research centres, which would then issue necessary warnings. The first buoys are to be placed along Indonesia's coast in October. The system is expected to cost around 60 million dollars.

According to Bulmahn, other affected countries in the region have also expressed an interest in cooperating with Germany on their early warning systems. German Foreign Minister Joschka Fischer offered to provide the technology to governments of tsunami-affected countries during his visits to the region in January.²⁹

²⁸ News item on homepage German Federal Foreign Office, 24 February 2005

[http://www.auswaertiges-
amt.de/www/en/willkommen/deutschlandinfo/nachrichten_dtl/nachrichten_archiv_html?wb=1](http://www.auswaertiges-amt.de/www/en/willkommen/deutschlandinfo/nachrichten_dtl/nachrichten_archiv_html?wb=1)

²⁹ News item on homepage German Federal Foreign Office, 14 February 2005

[http://www.auswaertiges-
amt.de/www/en/willkommen/deutschlandinfo/nachrichten_dtl/nachrichten_archiv_html?wb=2](http://www.auswaertiges-amt.de/www/en/willkommen/deutschlandinfo/nachrichten_dtl/nachrichten_archiv_html?wb=2)

8.6. Norway

The Norwegian Minister for Foreign Affairs, Mrs. Hilde Frafjord Johnson, made the first of two Norwegian government aid announcements on 28 December 2004, announcing an initial contribution of \$9 million (NOK 50 Mio)³⁰. A subsequent \$9 million in relief aid was announced on 30 December, and an extra \$158 million (NOK 1 Bio) on 18 January 2005, making a total of \$174 million (NOK 1,1 Bio).

Of the total sum promised \$84 million (NOK 530 Mio) has been allocated and \$66 million (NOK 416 Mio) has been pledged to the UN Flash Appeal. The government has divided this UN Flash Appeal sum into \$45 million (NOK 286 Mio) for emergency relief and \$21 million (NOK 130 Mio) for the reconstruction efforts, particularly in Sri Lanka and Indonesia. The remaining \$18 million (NOK 114 Mio) are to be divided between NGO's.³¹

Table 10 below shows a specification for the allocated funds and some details as to which organisation or sector funds have been allocated and why.

Table 10: Specification of funds of Norway

	USD Mio	NOK Mio
Total Humanitarian Aid	79.10	500
Transitional Aid:		
- Sri Lanka	47.46	300
- Indonesia	31.64	200
- Thailand	1.34	8.50
- Somalia	0.47	3
- Regional UN agencies	4.67	29.50
- Regional agencies	3.96	25
- Strengthening embassies	2.37	15
- Unallocated per 15 March	2.06	13
- NORAD Solidarity Fund	0.95	6
Total Transitional Aid	94.92	600
Total Norwegian Tsunami Aid	174.03	1,100

Below are further specifications for Indonesia, Sri Lanka and the region

Indonesia		
UN agencies	6.01	38
Multi Donor Fund	19.78	125
NGO's	3.69	23.30
Indonesian mapping organisation	2.17	13.70
Total	31.64	200

³⁰ Applied currency conversion rate: 1 USD = 6.32092 NOK

³¹ Norwegian Ministry of Foreign Affairs, Situational Report, 17 February 2005

"Gjenoppbygging etter flodbølgekatastrofen" (Reconstruction after the tsunami disaster)

<http://odin.dep.no/ud/norsk/tema/katastrofe/norskbistand/032041-120003/dok-bn.html>

Sri Lanka		
UN agencies	9.41	59.50
Multi Donor Fund	19.78	125
Norwegian NGO's	11.07	70
Other society and business organisations	7.20	45.50
Total	47.46	300

Regional		
UN International Strategy for Disaster Reduction (ISDR)	1.50	9.50
UNDP	3.16	20
NORAD Solidarity Fund	0.95	6
Regional organisations (not allocated)	3.96	25
Total	9.57	60.50

AID TO INDONESIA

UN agencies: Emphasis has been put on encouraging survivors to actively participate in the fishery and agriculture sector, the debris removal and general cleaning. Agencies that work for the vulnerable groups in society are targeted in the long term development work.

Receiving agencies are:

FAO: Fishing Equipment and Production material: NOK 6,5 Mio
 WHO: Healthcare information, medication, blood bank,: NOK 9,5 Mio
 UNDP: Construction of secure housing: NOK 20 Mio
 UNEP: Mapping of environmental damage: NOK 2 Mio

Multi Donor Fund: Over half of the aid is allocated for a planned multi donor fund that should consist of international organisations, national governments and donor countries.

NGO's: Because of the conflict between the Aceh independence movement GAM and the Indonesian authorities, the Aceh province was fairly closed before the tsunami. Therefore, it is the opinion of Norway that support should only be given to organisations that already have established contact in the province. Negotiations with selected organisations are underway. Norway is keen to focus on environment & support to minorities, women and children.

Indonesian mapping organisation: After a request from the mapping organisation Norway has promised digital mapping for the affected areas. The maps will be used for the reconstruction projects and should become available to all parties active in these projects.

AID TO SRI LANKA

UN agencies: UN projects within the fishery, primary health services and capacity building for local organisations are targeted.

Receiving agencies are:

FAO: Fishery projects: NOK 19 Mio
UNDP: Capacity building of local organisations: NOK 27,5 Mio
WHO: Primary health services: NOK 13 Mio

Non-profit organisations, both social and business: The Norwegian support will primarily go to projects within the fishery sector, the restoring of jobs and reconstruction of schools. Other support will go to the reconstruction of cultural heritage, which is of great importance to the people of Sri Lanka. The emphasis should be on cooperation with local organisations to make them better equipped for their future work.

Multi Donor Fund: The international community is working on creating a multi donor fund that can collect international support for Sri Lanka in a coordinated fashion.

AID TO THAILAND AND SOMALIA

Thailand

Thailand has not asked for humanitarian relief assistance, but has encouraged support for specific experience, for instance in dealing with marine areas and environments, removal of salt deposits, geotechnical destruction and rehabilitation of livelihoods. The ministry of Foreign Affairs is currently evaluating these efforts.

Somalia

The tsunami has come on top of years of drought and periodical floods together with serious security issues. Norway wants to focus on accommodating the immediate humanitarian needs as well as contributing to making the population self-sufficient through small scale fishery activities. This is done by supporting the UN agency Food and Agriculture Organisation FAO.

Regional efforts

Agencies receiving funds are:

UN International Strategy for Disaster Reduction (ISDR): NOK 9,5 Mio
UNDP: NOK 20 Mio
NORAD Solidarity Fund: NOK 6 Mio
Various efforts: NOK 25 Mio

Regional warning system: The tsunami disaster confirms the need for a regional early warning system. Support for this system has been given through funds allocated to ISDR. UNESCO is responsible for the coordination of the development of this system and further support is being considered.

UNDP: Support has been given to UNDP in the tsunami-struck region in order to develop capacity for planning, rehabilitation and reconstruction. Target groups are national and local governments together with regional and local non-profit organisations. The efforts include coordination, risk analysis, capacity building and warning systems.

Solidarity Fund: Through the Norwegian Solidarity Fund small projects have been able to find funding. These funds have nearly all been allocated.

9. Next Steps

As aid agencies, national governments and other entities complete the task of developing and implementing recovery and reconstruction projects, data on the type of goods/services requirements will become more abundantly available. This data will require continuous monitoring and updating of the demand matrices.

The immediate next steps include the dissemination of this preliminary analysis to all stakeholders involved, these include UN Agencies, International Financial Institutions, Donor Development Agencies, National & Local Governments, NGO's and the supplier community. Their reactions to this information will be sought in order to identify issues for forthcoming procurement that may be addressed through collaboration between procuring entities. In cooperation with project staff in the field, supply markets requiring in depth analysis will be identified. The results of these analyses will then be used in the potential formulation of co-operative and collaborative procurement strategies that may influence and improve the outcomes of the procurement effort in the recovery and reconstruction phases.