

ANNEX V - HEALTH

A. INTRODUCTION

1. Health care services in Sri Lanka are mainly provided through a well organized curative and preventive health network in the country. The damage to the health sector resulting from the tsunami is sizable in both the curative and the preventive networks. The damage includes total destruction of approximately 44 health institutions – i.e., a large obstetric and gynaecology teaching hospital, many District hospitals, rural hospitals, peripheral units to small central dispensaries – and losses of medical officers in health clinics, medical equipment, drug stores, district health offices and about 54 vehicles (including ambulances). Another 48 health institutions were partly damaged with loss of medical instruments, equipment and vehicles. This damage was widespread among all affected districts. Furthermore, leading to further immediate and medium-term needs, the demand on nearby health institutions has also suddenly increased due to internally displaced populations.

B. CONSULTATIONS AND SITE VISITS

2. The health damage has been assessed in many different ways. Primarily, the damage assessment documents presented by the Government – Ministry of National Planning and the Ministry of Health (MOH) – were used, as was the needs assessment report from the UN which was prepared with information provided by bilateral agencies, International NGOs and field-based UN agencies. Verification of the proposed damage was carried out through site visits to the most devastated districts in the East and South (Batticaloa, Ampara, Trincomalee and Galle). The team also visited three districts – one in the East (Ampara) and two in the South (Hambantota and Galle) – to meet, observe and verify information with the district health authorities.

3. The team contained members from the WHO, JICA, JBIC and the World Bank. The team met with many personnel both in the UN system (addressing immediate health needs) and officials from MOH and the Finance Commission of the Ministry of Finance.

C. DAMAGE OVERVIEW

4. The damage to the health sector is substantial – loss of health infrastructure and health personnel – creating a total breakdown of the health system in the affected districts.

5. The *health physical infrastructure* losses include at least 92 partially or fully damaged health institutions. These included hospitals, drug stores, cold rooms, preventive health care offices, health staff accommodation facilities, and district health offices. In addition, a large number of vehicles (ambulances, lorries, vans, double cabs, and motor bikes) and majority of the medical equipment and office equipment in the affected areas were totally destroyed.

6. The *loss of health personnel* includes medical officers, nurses, midwives, and other support staff. Furthermore, a large number of health staff were injured and traumatized by the event, many also losing their families, belongings and homes. During the mission, the District Medical Officer of a major base hospital in the Galle district reported an absenteeism rate of 50% among his support staff.

7. These losses have resulted in a virtual *breakdown of the health system*. This encompasses the inability to deal with the main curative and preventive activities including mental health; the breakdown of the medical supply collection/storage/distribution system; and the disruption of community channels and networks for community care, health promotion and prevention. This affects both the displaced and non-displaced populations living in the coastal areas.

Table 1: Summary of Damage to Health Services in the Affected Districts

Type of health institution	Number damaged (partial and fully)	Estimated replacement cost LKR (US \$)
Hospital damage	35	5106.5 (46.2)
Damage to preventive health sector	57	1150.5 (10.4)
Total	92	6257.0 (56.6)

Table 2: Health Infrastructure Damage by Affected District

Province and District	Number of damaged health institutions		Estimated damage cost LKR (US\$)
	Fully damaged	Partially damaged	
North East Province			
Trincomalee	3	6	1,059.5 (9.6)
Mullativu	6	0	462 (4.2)
Jaffna	0	4	17 (0.15)
Kilinochchi	1	0	6.5 (0.06)
Batticaloa	9	10	1,268 (11.5)
Amparai	11	2	1,183 (10.7)
Southern Province			
Hambantota	0	5	22.5 (0.2)
Matara	2	5	230.5 (2.1)
Galle	10	8	1,957 (17.7)
Western Province			
Kalutara	2	3	28.5 (0.3)
Colombo	0	5	22.5 (0.2)
Total	44	48	6,257.0 (56.6)

8. The estimated cost of replacing damaged physical infrastructure (totally and fully damaged) has been estimated at approximately LKR 6.2 billion (\$56.6 million).

9. This estimate does not include the short and medium-term costs required to address transitional arrangements that need to be put in place to restore health services. Furthermore, it does not include the cost of loss of health personnel and the traumatized health staff who have survived the ordeal. This cost also does not include the additional service needs required by the majority of affected and displaced people (such as for

psycho-social support, additional drugs and supplies, additional expenses related to epidemic preparedness and disease surveillance).

D. RECONSTRUCTION AND RECOVERY NEEDS

10. The reconstruction and recovery of the health sector should be addressed in three stages: immediate needs (day 1 – 3 months), short-term needs (3 – 12 months), and medium and long-term needs (1 – 3 years).

Immediate Health Needs

11. Basic health care to the affected

Immediate health needs include making available immediate basic health care to people displaced by the disaster. Measures also need to be taken to provide clean water into the camp sites, hospitals and other important areas. Establishing temporary water purification systems, cleaning up contaminated wells in camp sites (schools, religious institutions and other public centers) and in homes where both displaced and non-displaced but affected people are living are of prime importance. The MOH further requires 16 water bowsers to continue the supply of clean water for use by seven affected districts. The mission estimates the cost of this at approximately LKR 140 million (\$1.3 million).

12. Immediately following the disaster, adequate food supplies were needed for the displaced first as cooked food and then in the form of dry rations.

13. The other urgent need was for medical and psycho-social care of the injured and displaced. As it is well documented that communities affected by major disasters experience extreme stressors, immediate support is needed in psycho-social aspects in addition to the urgent medical needs of the injured. These activities have not been budgeted, but care was been and will need to continue to be provided by Government, well wishers, hospitals, NGOs and donors.

14. Prevention of Communicable Diseases

The prevention of communicable diseases – especially vaccine preventable diseases and vector borne diseases among the displaced and other affected people – is important. Establishment of immunization and vector control measures were initiated with support from the MOH, UNICEF, WHO and the donor agencies. These measures encompass emergency repair of the cold chain, as well provision of fogging devices and insecticides. Addressing the prevention of communicable diseases through strengthening emergency epidemiological surveillance for major communicable diseases is also paramount. This includes the emergency strengthening of the communication system, laboratory support system, transportation arrangements and feed back and preventive arrangements among affected populations.

Short-term Health Needs

Strengthening existing health institutions

15. Short-term health needs include the strengthening of existing non-damaged health institutions to provide curative services to displaced and affected populations. This encompasses the renting or setting up of temporary facilities for providing care, providing additional accommodation facilities, improving the existing facilities to accommodate more patients through better laboratory facilities, improving toilet facilities, establishing/improving blood bank, purchase of urgently needed equipment (sterilizers, incubators, etc.). The major hospitals in all affected districts (Jaffna, Trincomalee, Batticaloa, Matara, Hambantota, Karapitiya, Balapitiya, Elpitiya and Kalutara hospitals) need to be strengthened and supported to accommodate the additional demands on them. Moreover, establishing a patient referral system supplied with ambulances to meet the urgent demands is critically needed to provide essential health services to the most vulnerable. The renovation, strengthening activities need to follow the policies and strategies adopted by the Government for different levels of curative care institutions. The MOH has not estimated these costs as of yet, but a rough mission estimate is at least an additional LKR 750 million (\$6.8 million) will be required.

Re-establishing preventive health care needs

16. It is also essential to re-establish essential preventive health care needs such as immunization (resources to establish the cold chain), disease surveillance, safe water supply, maternal and child health care, other reproductive health care, mental health, epidemic control measures, vector borne and zoonotic disease control (Dengue, Malaria, Filariasis, Rabies), food and water borne disease control measures (Dysentery, Typhoid, Hepatitis, Cholera) proper sanitation and hygienic practices, nutrition surveillance and supplementary feeding as needed. The costs to put in place these additional preventive health measures are not yet budgeted by the MOH, but have been estimated by the mission at about LKR 500 million (\$4.5 million).

Reestablishment of regular drug supplies

17. Measures are also needed to support the re-establishment of the regularized drug supply of the Medical Supplies Division of the MOH. The drugs and medical supplies received from many donor agencies and countries need to be inventoried and computerized for their more efficient future use. Furthermore, destruction of three regional drug stores in the districts of Ampara (Kalmunai), Mullativu and Matara also resulted in the loss of a large supply of drugs. Therefore, there is a short-term need to meet regular drug needs of MOH, estimated at approximately LKR 200 (\$1.8 million).

Psycho- social support

18. There is also a need for planning and implementing a holistic program addressing the psycho-social needs of the affected and displaced. Mental health resources in Sri Lanka are limited and have been further damaged by the disaster. Hence, there is a substantial need for enhancing the capacity of the health system to prevent and manage psycho-social and mental health problems to respond to the present challenges. These psycho-social needs will be needed by the traumatized survivors, care providers (medical

personnel, teachers, police etc), orphans and other vulnerable groups (i.e., the elderly, survivors of families who have lost many members of their family units and the disabled). The estimated cost for delivering the mental health program is estimated at LKR 130 million (\$1.2 million).

Health planning needs

19. The Ministry of Health and the Provincial Health Authorities need additional support to revisit the previous map of health institutions. This need has great importance as the under utilization of lower level hospitals in the country was very high prior to the disaster. Following the disaster, this is further complicated by the temporary demographic changes observed in the affected areas. Furthermore, the resettlement and housing arrangements of the displaced and a potential ban on construction along a 300 meter coastal belt will need to be considered in making decisions regarding building new health institutions. The assessment team estimates the cost to be at least LKR 100 million (\$0.9 million) for these activities.

Medium and Long-term Needs

Reconstruct and re-equip health institutions

20. In the medium to long-term, the health sector will need to reconstruct and re-equip the health institutions damaged by to the disaster. Building norms should be reviewed to minimize the vulnerability of those constructions to natural hazards. The estimated total cost of reconstruction, including providing all medical and other equipment vehicles for these institutions by the MOH is approximately LKR 6,257.0 million (\$56.6 million). This estimate is currently being verified by an independent team from the Building Economics Department of the University of Moratuwa.

Strengthening the health care delivery system

21. It is also essential to further strengthen health care delivery to the affected especially as they move into their own housing and to new communities, villages, etc. It will be important to re-build the health community channels and network for community care, and health promotion and prevention activities in these new surroundings. Furthermore, continuing support to vulnerable groups, psycho-social support to the needy, orphan child care, elderly care, and disabled care will have to be streamlined and continued. The mission estimated these costs to be about LKR 500 million (\$4.5 million).

Strengthening the epidemiological surveillance system

22. The MOH will also need to strengthen and establish where necessary epidemiological surveillance capacity at the district level in the affected areas. This entails setting up and/or strengthening the district level laboratory network. The mission estimates this cost to be about LKR 100 million (\$0.9 million)

Establishing an emergency preparedness and disaster mitigation system

23. There will also be a need to support and revisit the national emergency preparedness and disaster mitigation system of the health system, the usefulness of which

was further strengthened following the disaster. This should include a vulnerability assessment of existing health institutions and the strengthening of the disaster management capacity of the MOH. Technical assistance from WHO and other partners will be required to plan the activity. The mission estimates the cost for this to be about LKR 100 million (\$0.9 million).

Table 3: Summary of Health Sector Needs

Item	Need	Estimated cost in LKR million (US \$ million)		
		Short term	Medium to long term	Total cost
1.1	Basic health care to the affected	140 (1.3)		140 (1.3)
2.1	Strengthening existing health institutions	750 (6.8)		750 (6.8)
2.2	Reestablishing preventive health care needs	500 (4.5)		500 (4.5)
2.3	Reestablishment of regular drug supplies	200 (1.8)		200 (1.8)
2.4	Psycho-social support	130 (1.2)		130 (1.2)
2.5	Health planning needs	100 (0.9)		100 (0.9)
3.1	Reconstruct and re-equip health institutions		6,257 (56.6)	6,257 (56.6)
3.2	Strengthening the health care delivery system		500 (4.5)	500 (4.5)
3.3	Strengthening the epidemiological surveillance system		100 (0.9)	100 (0.9)
3.4	Establishing an emergency prevention and disaster mitigation system		100 (0.9)	100 (0.9)
	Total estimated costs for recovery	1820 (16.5)	6957 (62.9)	8,777 (79.3)

24. The total recovery needs are estimated at approximately LKR 8.8 billion (\$79.3 million), including the additional essential health needs over and above the reconstruction package estimated by the MOH.

E. ENVIRONMENTAL AND SOCIAL IMPACTS

25. Following the disaster, important social impacts include the short and medium-term needs for orphan care, care for the disabled and the elderly, the care of the other vulnerable survivors.

26. Furthermore, environmental issues related to health care waste management of newly established hospitals will be of concern and should be addressed during the planning stages of these new institutions.