

Annex V: HEALTH

A. Introduction

1. Healthcare in Tamil Nadu, Andhra Pradesh, Kerala and Pondicherry is mainly provided through well-organized curative and preventive healthcare networks, with Kerala ranking as the best in the country on many health indicators. The tsunami has damaged health-related infrastructure, including equipment and amenities, and disrupted routine health services in the affected areas. Moreover, with pressure on district health delivery systems increasing manifold, regular curative and preventive care in unaffected areas of the same districts has been disturbed.

2. The needs assessment team held consultations with state and district government personnel, numerous affected people, NGOs, and donors assisting the management of temporary shelters. The team visited Cuddalore, Nagappattinam and Kanniyakumari districts in Tamil Nadu; Alappuzha and Kollam districts in Kerala; as well as sites in Andhra Pradesh and Pondicherry, including Karaikal.

B. Pre-tsunami Situation

3. Healthcare has been provided through a well-organized state health system and by private providers. In the rural areas, services were provided through government hospitals and a network of primary health centers (PHCs), health sub-centers (HSCs) and outreach clinics. In urban areas, government hospitals, dispensaries and mother and child care centers offered health services. The private sector, providing mainly outpatient and curative care, accounted for about half of health services provided.

4. The health status of Tamil Nadu, Kerala and Pondicherry is among the best in the country. Basic health indicators such as the Crude Birth Rate, Crude Death Rate, Infant Mortality Rate, Total Fertility Rate and Female Literacy Rate have been well above the national average as indicated in Table 1.

Table 1. Basic health indicators

Indicator	Tamil Nadu	Kerala	Pondicherry	India
Crude Birth Rate (CBR)	17.8	17.9	17.8	24.8
Crude Death Rate (CDR)	6.9	7.8	6.5	8.9
Infant Mortality Rate (IMR)	30.1	14	23	63
Total Fertility Rate (TFR)	2	1.8	1.8	3.2
Female literacy percentage	64.6	87.9	74.1	54.2

Source: Reproductive Child Health (RCH) Survey, GoTN and the MoH&FW, GoI

Status of HIV/AIDS in the Tsunami-affected States

5. HIV prevalence in the tsunami-affected states is considered by the National AIDS Control Program (NACO) as being among the highest in India (Table 2), with the affected districts in Tamil Nadu and Andhra Pradesh identified as high prevalence districts. A rate above 1 % indicates a generalized epidemic. AIDS is already the second largest killer of Indian adults, second only to TB.

Table 2. Prevalence of HIV/AIDS in the tsunami affected states

HIV Prevalence rate % 2003 - NACO	General Population (Antenatal Consultations)	STD Patients Consultations	Female Sex Workers (FSW)	Injecting drug users (IDUs)
Andhra Pradesh	1.25	19.6	19.4	n/a
Kerala	0.33	4.0	2.2	n/a
Tamil Nadu	0.75	9.2	8.8	63.8
A&N Islands	0.50	1.6	n/a	n/a
Pondicherry	0.13	2.6	n/a	n/a

6. Voluntary counseling and testing (VCT), counseling for prevention of parent to child transmission (PPCT) and free anti retro-viral treatment (ART) is being provided through the national program. But loss of livelihood and clustering of population in temporary shelters increases the likelihood of transmission of HIV/AIDS. Therefore, prevention of sexually transmitted diseases (STDs) and HIV/AIDS in the tsunami-affected communities needs to be addressed.

C. Damage Assessment

7. **Tamil Nadu:** The tsunami affected 13 out of Tamil Nadu's 14 coastal districts to varying degrees with Nagapattinam, Kanniyakumari and Cuddalore worst affected in respect of loss of life and damage to health infrastructure.

8. Three PHCs, 16 HSCs and the government district hospital in Nagapattinam were severely damaged. Other government facilities were also damaged to some extent. The state government's estimates for damages and losses in the health sector are summarized in Table 3. These include the costs of specific health activities in response to the disaster. There are no estimates yet of the damages to private sector institutions.

9. Following the tsunami, the displaced population was sheltered in relief camps all along the coast in the affected districts. The state mobilized doctors, health and sanitation inspectors, and village health nurses from the affected and other districts to form mobile medical teams. These helped provide both preventive (immunizations, vector control and water quality monitoring) and curative (treatment of illnesses and trauma care) services during the first month in the camps. Several NGOs pitched in with emergency care.

10. With assistance from UN agencies, adequate steps were taken by the districts to control vector borne and water borne diseases, and prevent and manage childhood illnesses. Except for sporadic occurrence of measles, chicken-pox and gastroenteritis, no major outbreak has been reported. With assistance from WHO and the National Institute of Communicable Diseases, a post-disaster disease surveillance system was established in four districts.

11. **Kerala:** Two PHCs and two HSCs were damaged in Kollam. No other hospitals or health centers were damaged. The affected communities are sheltered in relief camps and preventive and curative healthcare are being provided. The damage to health infrastructure and losses incurred through relief activities is summarized in Table 3.

12. **Pondicherry:** No hospitals or dispensaries were destroyed. The main losses are due to the expenditure on health and preventive care provided to the 23 relief camps.

Table 3. Estimate of damages and losses in the government health sector (\$ million)

Item	Damage	Loss
Tamil Nadu		
District and government hospitals	2.10	--
Primary Health Centers and Health Sub Centers	0.46	--
Equipment and commodities (including drugs, equipment and patient amenities)	2.70	--
Relief measures (personnel, fuel costs and drugs)*	-	3.28
Control of vector borne and water borne diseases	-	3.46
Immunization campaigns	-	0.12
Disease surveillance	-	0.42
Total Tamil Nadu	5.26	7.28
Kerala		
Health infrastructure	0.45	--
Relief measures	--	2.75
Total Kerala	0.45	2.75
Pondicherry		
Relief measures including immunization campaigns (not estimated)	--	--
Total Pondicherry	--	--
GRAND TOTAL	5.71	10.03

Sources: Fund allocation documents from the Directorate of Public Health & Preventive Medicine and the Directorate of Medical & Rural Health Services, Government of Tamil Nadu. Report from the Government of Kerala.

* These losses only include the expense for preventive and curative relief services provided, and not those due to disruption of health services.

D. Current Situation

13. Most relief camps have been closed now in Tamil Nadu, with affected people either returning to their villages or in the process of shifting to temporary shelters. Provision of healthcare services is in a transition phase, moving from the emergency relief teams approach to re-establishing primary healthcare services. Vector control and water quality monitoring is being carried out in the temporary shelters and villages. Psycho-social support is also being provided by the government with assistance from the UN and local NGOs.

14. In Kerala, the population is still clustered in relief camps with 12,192 such inmates in Kollam alone. The government is in the process of building temporary accommodation. Medical care is being provided by the district health services with support from NGOs. Control of vectors and water quality monitoring is continuing.

15. In Karaikal (Pondicherry), all the camps have been closed and the government is in the process of building two relief shelters in TR Pattinam and Kotancherry.

E. Relief and Rehabilitation

Tamil Nadu

Short term needs

16. The following have been identified as short term needs to be addressed on a priority basis:

- Since the timeline for reconstruction of damaged houses is uncertain, the affected population will be residing in temporary shelters for an extended period. The need, therefore, is to strengthen provision of basic healthcare services, including RCH and immunization services, to the communities. This could be provided through the regular health system and by restarting outreach services. Provision of basic sanitation, vector control, water quality monitoring, surveillance for epidemic prone illnesses, and psycho-social support are also crucial.
- The state is renovating the damaged district hospital, PHCs and HSCs, and replacing lost equipment and other amenities with support from the National Calamity Relief Fund, Health System Development Project, RCH II program and UNICEF. Renovation of other damaged sub-district hospitals has been planned at a later stage. With the loss of livelihood, patients will not be able to seek healthcare from private providers. This will increase the patient turnover in government facilities. There is therefore a need to renovate the sub-district hospitals (Sirkali and Tharangampadi hospitals in Nagapattinam; Cuddalore, Chidambaram and Parangipettai hospitals in Cuddalore; and Kanniyakumari and Kollachal hospitals in Kanniyakumari) and upgrade existing PHCs.
- An in-depth assessment of the needs and priorities of the health sector needs to be conducted on a priority basis.
- Addressing the needs of the vulnerable population: information, education and communication (IEC) for prevention of HIV/AIDS, malnutrition and anemia.

Medium term needs:

- A long term health sector disaster mitigation plan, including specific training for health staff at all levels in disaster prone districts, is required as part of the community-based disaster and risk management program being envisaged for the state. (Funds to be allocated in the proposed state Disaster Risk Mitigation Plan.)
- The state has planned a phased renovation and upgrading of rural and urban hospitals and centers through the Health System Development Project, RCH II project and NABBARD (the national agriculture bank for reconstruction and development) project. Hospitals and centers in the tsunami affected districts need to be taken up on a priority basis.
- Health system strengthening in the affected districts:
 - Human resource issues in the health sector in the affected districts need to be addressed, including capacity building of staff, filling of vacancies and mobility support – only 50% of PHCs have vehicles, and fresh loans to village health nurses for two-wheelers should be considered.

- Improving communication facilities (phones, fax machines etc.) at all levels in the affected districts.
- Building public-private partnerships so that the private health sector, civil societies and NGOs complement government healthcare services.
- Health financing: Provision of financial protection (such as health insurance schemes) to the affected communities against catastrophic illness, and augmentation of health financing by the state for a disaster mitigation program.
- Newer initiatives like accreditation of health facilities for standardization of the quality of healthcare services.

Table 4: Summary of health sector resource needs in Tamil Nadu (\$ million)

Item	Estimated Cost
Short-term needs:	
District and government hospitals	2.10
Primary Health Centers and Health Sub Centers	0.05
Equipment and commodities (including drugs, equipment and patient amenities)	2.70
Provision of basic health care and psychosocial support*	3.00
Renovation of damaged hospitals and health centers	0.45
Addressing the needs of the vulnerable population: IEC for prevention of HIV/AIDS, malnutrition and anemia.	0.05
Medium term needs:	
Development of health sector disaster mitigation plan**	--
Improving communication facilities	0.15
Total	8.50
Other items to be supported	
Health system assessment	0.050
Human resource development	0.600
Building public private partnerships	0.050

* Plans for psycho-social support (approximate cost \$500,000) is being addressed by the UN team for Recovery support.

** Cross-sectoral issue. Budget included in Disaster Risk Mitigation plan

Kerala

17. The short, medium and long term needs for health sector rehabilitation as indicated by the state are stated below.

Short and medium term needs: (in the three affected districts)

- Reconstruction and refurbishing of damaged health institutions
- Control of vector and water borne diseases
- Disease surveillance
- Provision of psycho-social support
- Drugs and supplies
- Information, education and communication (IEC) campaign for prevention of communicable diseases, including HIV/AIDS

Long term needs:

- Integrated coastal health projects in all the other districts
- Trauma care and accident management project in all nine coastal districts

Table 5: Summary of health sector resource needs in Kerala (\$ million)

Item	Estimated Cost
Continued Relief Measures	
Control of vector and water borne diseases	0.07
Disease surveillance	0.03
Drugs and supplies	0.11
Short-term needs	
Reconstruction and refurbishing of damaged health institutions	1.80
Provision of psycho-social support	0.13
IEC for prevention of communicable disease including HIV/AIDS	0.02
Sub Total	2.16

Pondicherry

18. A detailed assessment is required before identification of short- or long-term needs.