

INDIA

WEEKLY TSUNAMI SITUATION REPORT

as on

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OFFICE OF WHO REPRESENTATIVE TO INDIA

India

Weekly Tsunami Situation Report

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1. Key issues

The tsunami caused extensive damage in the states of Tamil Nadu, Andhra Pradesh and Kerala and the Union Territories (UT) of Andaman & Nicobar Islands and Pondicherry on 26 December 2004. It affected nearly 2,260 km of the coastline besides the entire areas of Nicobar Islands. Tidal waves as high as 3 to 10 metres penetrated inland ranging from 300 m to 3 km.

Andaman & Nicobar Islands in the Bay of Bengal were particularly badly affected by the earthquake under the sea, which caused the tsunami. A total of 215 aftershocks have been reported so far.

The Government of India, in association with the affected states/UTs, mounted massive relief and rescue operations on the mainland and in the Andaman and Nicobar group of islands. According to the latest estimates, 157,393 dwelling units in 897 villages were damaged. A total of 638,297 persons were evacuated, and the total affected population is reported to be about 3.6 million. Around 14,827 hectares of cropped areas were damaged. The number of cattle lost is reported to be 10,260, while 74,025 boats were destroyed.

As per preliminary estimates, the total financial loss in the mainland states of Tamil Nadu, Andhra Pradesh, Kerala and Pondicherry is estimated at Indian Rupees (INR) 53.22 billion (US\$ 1.8 billion). The detailed damage assessment for Andaman & Nicobar Islands is being undertaken.

2. Situation update

Mainland

The first phase of the rescue and relief operations is almost over.

The administrations of the state governments/UTs are implementing rehabilitation measures for the affected populations by providing temporary shelters for all those who lost their houses and living quarters.

Fishermen, particularly those living close to the sea, were the worst affected group of people, and a comprehensive relief package has been put in place for their rehabilitation. The package consists of dwelling units, fishing boats, fishing nets, etc., to enable the fishermen to resume their normal life and start earning their livelihood.

All schools in the affected districts of Andhra Pradesh have reopened. Most of the schools in the affected areas in Tamil Nadu, Kerala and Pondicherry have also reopened.

Andaman & Nicobar Islands (A&N)

The A&N administration had evacuated people from smaller islands to eight bigger islands in Andaman and Nicobar where the relief efforts were concentrated. A total of 40,106 persons have been accommodated in 153 relief camps. But the number of relief camps in Port Blair (Andaman Islands) has been reduced from 78 to 27. The number of inmates has been reduced from 11,338 to 6,571. The islands from where the entire populations have been evacuated included are: Bambooka, Little Nicobar, Pilomillow and Trinket in Nicobar. Availability of adequate supplies of food items, clothing, utensils and drinking-water has been reported from all the islands. Proper health care is also being provided. On the infrastructure side, power and

communication facilities have been partially restored and their total restoration will take some more time. Banks have started functioning at Car Nicobar, Kamotra, Little Andaman, Great Nicobar and Campbell Bay. Fair Price Shops are functional at Campbell Bay, Car Nicobar, Katchal and Terrassa.

The death toll reported so far, as well as the number of persons who are either missing or have been displaced, is given in the Table.

Table. **Number of deaths, injuries and missing and displaced persons due to tsunami in India**

No. of deaths	No. of injured persons	No. of missing persons	No. of displaced persons	No. of affected districts/islands
10,872	Tamil Nadu (3432 as on 3-2- 2005)	5,764 persons are reported to be missing in A&N Islands and are feared to be dead	647,556	41
	Andaman & Nicobar (1514 as on 22-2-2005)			
	Pondicherry (561 as on 12-01-2005)			
	Kerala (1707 as on 10-01-2005)			

Note: Figures from Andhra Pradesh not available.

Situation analysis, including major developments

Communicable diseases

Mainland

Though no outbreak of communicable diseases has been reported by any of the government agencies involved in the rescue and relief operations, there have been sporadic cases of acute respiratory infection and acute diarrhoeal disease reported from affected areas as well as non-affected areas in Tamil Nadu and Kerala. No reports of epidemics have been received so far, and the situation is under surveillance by the Ministry of Health and Family Welfare (MoH&FW), Government of India.

Andaman & Nicobar

The status of medical facilities available in various islands of Andaman and Nicobar are as follows:

Car Nicobar:

There are 13 medical professionals functioning. The NICD surveillance team collected 115 samples for suspected malaria cases, of which 34 cases were found positive.

Terrassa and Chowra

There are nine doctors and two paramedics functioning. Antilarval measures have been taken up. The medical team has recommended indoor residual spray (IRS), use of larvicides and universal use of insecticide-treated bednets (ITN) as immediate preventive measures.

Katchal:

There are two medical professionals functioning. No case of vector-borne disease has been reported.

Nancowry and Kamorta:

There are eight medical professionals in position. Routine field visits and sanitation measures have been taken. No case of measles or water-borne diseases has been reported. A medical team visited Hitui, a distant island, and detected and managed four cases of acute diarrhoeal disease (ADD) and five cases of fever. An IEC session held on water safety, fever surveillance and ORS use. Of the 437 water samples subjected to residual chlorine test, five were found unsatisfactory.

Little Andaman:

There are three doctors and three paramedics functioning. A mass health education campaign has been conducted to encourage the use of pit latrines and promote good personal hygiene. Anti-larval measures have also been taken. A medical surveillance team visited Onge camp.

Great Nicobar:

There are six medical professionals in position. No case of measles or malaria has been reported. The water treatment plant has now been improved by replacing the filter. A desalination plant has been commissioned.

Environmental health (access to safe water and hygiene and sanitation)

Mainland

The water supply systems have been restored in most of the affected areas. However, sanitation services need to be improved in the camps and their surroundings. Community members are being persuaded to participate in the environmental sanitation programmes.

Andaman & Nicobar Islands

The status of restoration of water supply, including activation of local water sources in the Andaman and Nicobar Islands, is as follows:

Car Nicobar:

- 24 wells reactivated. Water supply restored in HQ and loop road areas. In other areas people fetch water from local wells. Total restoration 85%.

Terrassa:

- Stream water is available. Water-wells restored by pumping water. 43% water supply restored.

Katchal:

- Natural water sources available at Mil Dera and Bechadera. Mineral water supplied to relief camps. Normal water supply restored.

Nancowry:

- Well-water and stream water available. 100% of water supply restored. Water supplied by boat to Champion village.

Kamorta:

- Water supply available at sub-divisional HQ. Spring water is being utilized at Munak village. Potable water transported by boat.

Little Andaman:

- Drinking-water supply to Hut Bay, RK Pur, VK Pur and Rabindra Nagar restored. The water supply restoration at Netaji Nagar would be taken up along with the construction of the new road and on repatriation of the residents from the relief camps. Restoration of water supply at Harminder Bay is in progress. The pipeline has been laid.

Great Nicobar:

- 100% water supply restored. Of the three ring wells at HQ before tsunami, only one remains functional while others have been abandoned due to saline water. Open wells without walls have been dug. These are to be made of concrete. One reverse osmosis (RO) plant commissioned. Efforts are being made to restore the Mahar Nallah water source by APWD.

3. Actions taken by WHO

Details of the activities carried out by WHO in the tsunami-affected areas so far are as follows:

Activities completed by WHO India Country Office to provide relief and rehabilitation to tsunami-affected populations in India

Areas of work	Completed/ Ongoing Activities
Coordination and liaison	<ul style="list-style-type: none">• An Operations Cell established in the WHO India Office and regular liaison being maintained with the WHO Regional Office and Headquarters.• Liaison with Government of India, state governments and development partners.• Day-to-day interaction with Emergency Medical Relief (EMR) Cell of MOH&FW, Government of India, and the National Institute of Communicable Diseases (NICD).• A WHO Coordination Cell established in Chennai to coordinate health-related activities with the state government authorities in Tamil Nadu.• WHO is represented by a NPO in the UN recovery support team in Chennai.• Four national staff and 9 consultants from NPSP (Polio) and RNTCP (TB) projects deployed for field operations.• WHO NPO (IVD) assisted the World Bank/Asian Development Bank team in the health sector assessment and rehabilitation needs in the tsunami-affected states.• A symposium on the management of health emergencies in disasters held by the Department of Health and Family Welfare, Govt. of Tamil Nadu, in collaboration with the WHO India Country Office on 23 February in Chennai.• WHO/NPO-Epidemiology positioned at Trivandrum to coordinate with the state government and partners in health-related activities in Kerala.• Guidelines provided in 28 areas of work of disaster management.
Disease surveillance	<ul style="list-style-type: none">• Four Disease Surveillance Units established in Tamil Nadu in Nagapattinam, Kanyakumari, Cuddalore and Kancheepuram.• Supportive supervision and training being provided by a team from WHO and NICD.<ul style="list-style-type: none">– Sensitization meetings on disease surveillance conducted for medical officers and paramedical workers in Kanyakumari, Cuddalore and Chingleput districts of Tamil Nadu.– Training workshops in IDSP held at Nagapattinam (17-19 Feb) and Cuddalore (24-26 Feb) districts in Tamil Nadu and Krishna (17-19 Feb) and Guntur (14-16 Feb) districts in Andhra Pradesh. 209 medical officers and 220 health workers trained till date.– IDSP manuals adapted and being used for training of medical officers and health workers.

	<ul style="list-style-type: none"> Weekly collated reports on disease surveillance being received from 14 districts of Tamil Nadu. Action being taken at district level on the basis of these reports and analyses. A work contract has been initiated with the Community Medicine and Microbiology departments of Madras Medical College to strengthen disease surveillance in Kancheepuram district. Surveillance Officers of IDSP states (including the affected states of Andhra Pradesh, Tamil Nadu and Kerala) were briefed on 4 February in Delhi about steps to be taken to strengthen disease surveillance.
Psychosocial support	<ul style="list-style-type: none"> WHO/NPO (NMH) led a UN Disaster Management Team to Chennai for assessment. WHO has developed a framework for providing psychosocial support for affected populations along with UNICEF and UNDOC. Contracts initiated with NIMHANS, Bangalore; VIMHANS, New Delhi; SCARF, Chennai; Medical College, Alleppy; JIPMER, Pondicherry; and SMHA, Kerala. A state-level consultation was held on 24 January and an action plan finalized for Tamil Nadu. The Tamil Nadu government setting up a cell in the Department of Social Welfare for coordinating psychosocial support. 766 persons trained in Tamil Nadu; 100 teachers trained in Pondicherry; psychosocial interventions provided in relief camps in Kerala; and 57 community-level workers trained in Nagapattinam. A training manual for helping children was developed by VIMHANS. At a meeting of WHO, UNICEF and VIMHANS representatives held in Chennai from 22 to 24 Feb., the training manual to be used for providing psychosocial support was reviewed and finalized. A list of master trainers was also prepared. Technical assistance was provided to Kerala to develop a sustainable strategy using existing infrastructure in the Health Department. Similar discussions were also initiated with Andhra Pradesh. Services of trained psychologists made available to assist various initiatives in the affected states. The training of NGO volunteers in providing psychosocial support in affected areas of Kerala, Andhra Pradesh and Pondicherry being expanded through medical colleges.
Water quality & environmental sanitation	<ul style="list-style-type: none"> 1000 chloroscopes provided to monitor the quality of drinking water in affected areas. Environmental sanitation projects set up for fourteen villages with support from Gandhigram Rural Institute, Gandhigram. Technical assistance provided to district authorities for strengthening monitoring of drinking-water quality, hygiene education and waste management in Nagapattinam, Kanyakumari and Karaikal through Gandhigram Rural Institute. Insecticide-treated bednets provided to affected districts in Tamil Nadu.
Maternal & child health	<ul style="list-style-type: none"> Surgical and emergency health kits provided to Kerala, Andhra Pradesh and Tamil Nadu. Additional medical supplies being provided to Tamil Nadu. A strategic plan and proposals developed for strengthening nursing services in collaboration with the Indian Nursing Council and the Tamil Nadu Nursing Council, including training of nursing professionals in psychosocial support and development of curriculum in disaster management for nurses.
Immunization	<ul style="list-style-type: none"> Technical assistance provided to Tamil Nadu, Kerala, Andhra Pradesh, Pondicherry and Andaman & Nicobar for measles and polio vaccination and vitamin A supplementation campaigns. With support from WHO and UNICEF, 71,338 children vaccinated till date in Tamil Nadu. Support being provided for treatment of acute respiratory infection (ARI)/gastroenteritis (ORS/co-trimoxazole) as per Integrated Management of Neonatal and Childhood Illnesses (IMNCI) guidelines. Technical assistance being provided in Cuddalore, Nagapattinam, Kanyakumari and Kancheepuram to re-establish outreach services for reproductive and child health and immunization in temporary shelters and affected villages, in collaboration with the ICDS Department, by establishing "health and nutrition centres".
Health systems	<ul style="list-style-type: none"> Survey of all public and private health care facilities in 13 affected districts in Tamil Nadu planned to: <ul style="list-style-type: none"> Map out the details of the health care facilities and services available in the selected districts;

	<ul style="list-style-type: none"> – Profile the health care facilities, type of services, systems of networking, costs and prices of services provided; – Create a database of the health care facilities. • Technical assistance provided in health financing to Tamil Nadu for: <ul style="list-style-type: none"> – Financial protection of below-poverty-line (BPL) families due to catastrophic illness; – Development of state health accounts; – Tracking of financial resources at district level. • Documentation (print and video) of the state's health sector's response to the tsunami disaster under way. This will include: <ul style="list-style-type: none"> – Identification and documentation of the response with regard to its appropriateness, timeliness, methods used, challenges faced and follow-up actions, among other aspects, and draw lessons from them. – To document the best practices adopted by the Government of Tamil Nadu.
HIV/AIDS	<ul style="list-style-type: none"> • Technical assistance being provided to affected districts in Tamil Nadu for awareness generation on the risk of HIV/AIDS and promotion of the use of condoms for prevention. • Packaging of these activities with the routine health care and psychosocial support services.
eHealth	<ul style="list-style-type: none"> • Situation analysis done along with major stakeholders at the national level. • Consultations held between WHO/NPO (eHealth) and resource groups on ongoing health telematics initiatives in affected regions.

Activities planned

Disease surveillance

- Negotiations being conducted to provide laboratory and epidemiology support to Nagapattinam district by the Thanjavur Medical College and to Cuddalore district by JIPMER, Pondicherry.
- Providing WHO support for the strengthening of the disease surveillance system in Andaman and Nicobar Islands being discussed with the Government of India.

Water and environmental sanitation

- A proposal to assess the change of status of the drinking-water quality in the coastal belt of Tamil Nadu due to tsunami being developed with the Tamil Nadu Water and Drainage Board.
- Strengthening of the health care waste management system in government centres in the tsunami-affected areas in Tamil Nadu being planned in consultation with the state government.

Maternal and child health

- A proposal for strengthening the health system for ensuring maternal, newborn and child health services by provision of specialists and staff nurses through collaboration with FOGSI, the Indian Academy of Paediatrics (IAP) and the Indian Nursing Council (INC) being finalized.
- A proposal for adapting IMNCI guidelines in disaster situations being developed in collaboration with the Indian Academy of Paediatrics, the Institute of Child Health, Chennai, and the Tamil Nadu government.
- Training under way of doctors, workers and health volunteers in the identification and management of diarrhoea, pneumonia and serious malnutrition in children aged between 2 months and up to 5 years.

Health systems

- To explore the involvement of the private sector in the provision of health care (TB, malaria, immunization), disease surveillance, etc.
- To develop of a resource centre (document and electronic) at the state health department.

eHealth

- Pilot projects for a mobile eHealth kit for telemedicine consultation from remote, inaccessible areas.
- An expert support group for round-the-clock telemedicine referral services with central follow-up.
- Model eHealth support for emergency preparedness, mitigation, relief and rehabilitation system in the future.

Other areas of support planned

- The Additional Director-General/Director, NICD, has appreciated the support for training and other inputs received from WHO for the National Surveillance Programme for Communicable Diseases (NSPCD). He has requested additional WHO support for coordination and supervision of the existing NICD Central Surveillance Unit in Andaman & Nicobar Islands. WHO will provide technical assistance through St. John's Medical College, Bangalore, to strengthen the surveillance activities on the islands.
- A map depicting various ongoing activities in relation to the rehabilitation of tsunami-affected populations in different states in India is given at Annex.

5. Contact persons at the office of the WHO Representative to India, Nirman Bhawan, New Delhi

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