WHO Conference on Health Aspects of Tsunami Disaster in Asia

Phuket, Thailand
4–6 May 2005
Health Aspects of the Tsunami Disaster - Maldives

Photo Source: www.tsunamimaldives.mv
On the morning of 26 December 2004, at about 6:25 am, tremors were felt in the Maldives for about 5 minutes.

At around 9:20 am, tsunamis struck the islands of the Maldives.

Tidal waves of 4 to 12 feet were reported in all parts of the country.

Photo Source: www.tsunamimaldives.mv
Vulnerability Indicators

✓ Highest elevation 1.5m above sea level
✓ 88 inhabited islands face perennial beach erosion
✓ Wide dispersal of population across very small islands
✓ Remoteness and inaccessibility of islands
✓ Extremely high economic dependence on tourism
✓ High import dependence.

Photo Source: www.tsunamimaldives.mv
Tsunami Impact on Maldives

- Population: ~ 280,000 (2000)
- Land area: 300 sq km
- Number of inhabited islands: 199
Devastation: Human cost

Deaths: 82
Missing: 26
Injured: 1,313
Displaced and homeless: 6,650 homeless in their own islands and 4,918 residing in other islands (total homeless and displaced: 11,568)
13 islands totally evacuated
Entire population of the Maldives was affected

Photo Source: Dr. Shifan
Social Devastation

Health

One Regional Hospital,
2 Atoll Hospitals,
14 Health Centers
20 health posts & 10 family health
sections destroyed / severely
damaged

Risk of epidemics

Photo Source: Dr. Shifan

Tsunami
Health
Conference

World Health
Organization
Social Devastation

**Education**
Over 50 schools damaged
Most of the books and study material washed away
2,969 students affected

**Housing**
Houses totally destroyed - 2,190
Houses partly destroyed - 1,940

*Photo Source: Dr. Shifan*
Devastation: Psychosocial

- 40% of population under 15 years
- Over 6,786 people including mainly women and children severely traumatized, having first being involved in fighting for their lives in the rising waters / subsequently displaced/ personal belongings, homes and livelihoods lost / damaged.
- Socio-psychological trauma → longest to heal

Photo Source: www.tsunamimaldives.mv
Dr Ohn Kyaw showing level of height that the water reached in this particular island.

**Fight for life**

**Level of water during the tsunami wave in an island**

Photo Source: WHO
Constraints - Responding to the Needs

- Geographical dispersion and the difficulties of access to islands
- Transport and logistical difficulties
- Communication failure
- High unit cost of delivery of relief supplies
- Unpredictable weather and rough seas
- Inadequate resources

Photo Source: www.tsunamimaldives.mv
COORDINATION

- No Emergency Preparedness Response Plan
- A National Emergency Response Plan Development in progress
- Formation of National Disaster Management Centre
National Disaster Management Center

- Ministerial Committee
- Chief Coordinator
- Planning Unit
- Health Relief Unit
- Foreign Relations Unit
- Aid Coordination and Management Unit
- Finance
- Support Services
- Logistics and Relief Camps
- Housing Development Unit
- Media

Tsunami Health Conference

World Health Organization
Health Relief Team

Minister (Policy Communications)

Chief Coordinator (Technical Advice & Media)

Deputy Chief Coordinator (Management of Operations And Inter-sector Coordination)

Coordinator (Surveillance)
Coordinator (Emergency Medical Care)
Coordinator (Logistics)

Coordinator (Psychosocial Support)
Coordinator (Medical Supplies)
Coordinator (Water and Sanitation)

Coordinator (International Relief and Aid Coordination)

Tsunami Health Conference

World Health Organization
Water and Sanitation / Food safety.

- shallow freshwater aquifers impacted by infiltrated flood water
- oil spillage from generator stores
- leaks from septic tanks
- Food safety
- Prevention of diseases
Response Plan

Emergency Response
- Establish health task force
- Attend to injured
- Initiate and dispatch medical relief supplies
- Initiate surveillance for epidemics
- Establish contact with all health facilities
- Initiate psychosocial support
- Initiate damage reporting
Immediate Emergency & Recovery Needs

• Safe drinking water and adequate food supplies

• Shelter for the homeless

• Carefully controlled health and hygiene programs

• Schools and health facilities

• Reinstatement of utilities including electricity, communications, etc.

• Immediate psycho-social support needed

• Intensive and strategically designed emergency preparedness plan and establishment of tsunami early warning system

Photo Source: www.tsunamimaldives.mv
Response Plan

Intermediate Response

• Continue medical relief and psychosocial support
• Damage Assessment
• Outbreak response
• Water and sanitation assessment
• Dispatch medical supplies
• Dispatch water
• Coordinate international medical relief efforts
• Initiate and monitor outreach medical teams
• Manage medical and water relief supplies
Response Plan

Delayed Response

• Operationalising affected health facilities
• Rebuilding affected facilities
• Rebuilding affected water and sanitation systems
• Reverting back to normal operations
Challenges

- Provision of safe water and sanitation
- Continued Psychosocial support
- Logistics
- Strengthening the public health programmes especially reproductive health & nutrition
- Restoration of damaged health facilities
- LACK OF CAPACITY

Photo Source: www.tsunamimaldives.mv
WHO Response to the Emergency

- WHO acted promptly in conjunction with the MoH, other UN agencies and NGO’s.
- WHO placed due emphasis to supporting the MoH on establishing disease surveillance and a subsequent system of stringent monitoring measures to ensure adequate and immediate outbreak response.
- WHO provided/facilitated the procurement of Emergency health kits (5); Surgical kits (10); ORS (100,000 packs) and Chlorine (6.5 MTs).
WHO Response to the Emergency

• Manpower technical expertise to the WCO and GoM was rendered in the areas of budget/administration, water & sanitation, health care waste management, mental health, media operations and donor relations, food safety, logistics, epidemiology & disease surveillance, and emergency preparedness and response.
Water Safety Plans

• WHO with MWSA → WSP
  – Will identify parameters
  – Will include guidance on Emergencies
  – Ways to overcome temporary disruptions of water supply

• Rainwater harvesting

• Sewage treatment and disposal

• Desalinated plants in islands – Donor agencies & governments.
FOOD SAFETY

• WHO assist DPH to identify food safety monitoring tools
• Facilitate procurement
• Identify training needs
• Review of existing guidelines & application
  – Field visit / Food safety audit of a resort, a food processing company, water processing company
Psychosocial Support

• The Red Cross & Red Crescent Societies psychosocial team was in the Maldives within ten days of the disaster.
• The team quickly trained 57 counsellors in psychological first aid.
• 321 teachers throughout the country have been trained and are now implementing activities in schools.
• Volunteer teams immediately went to islands and form Emotional Support Brigades
• Implimented by psychosocial unit of NDMC facilitated by UNFPA, UNICEF
• WHO also provided technical materials for training.
• UNFPA → Coordinator of Psych support.
• Red Cross → Qualitative Rapid Assessment of Overall Emotional Status in islands
NEEDS ASSESSMENT

• No system in place locally for need assessment


• The Japan Bank for International Cooperation (JBIC) joined the latter stages of the mission.
LOCAL RESPONSE

- National Security Services & Maldives Police Services
- NGO’s
- Private Agencies and local Businessmen
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**Tsunami Health Conference**

**World Health Organization**
GAPS

- Lack of clear protocols
- Existing reporting system need improvement
- Lack of training in reporting / documentation
- Low optimization of existing transport system
- No maintenance schedule for sensitive electronic equipment
- Communication in Emergencies
CAPACITIES

• Airport Emergency Plan
  – Mock Exercises
  – Adaptation to Other Emergencies

• National Disaster Management Centre

• National Unity in Crisis