

NSCI-UNEP-EC Project
on
DISASTER RISK REDUCTION IN TOURISM
DESTINATION, Kanniyakumari, India

Activity A – 4

ASSESSMENT OF LOCAL DISASTER PREPAREDNESS

1.0 Introduction:

Kanniyakumari is a small town, located at the southern most tip of India, attracting lot of tourists, both national and international. It is surrounded by Bay of Bengal on the east, Arabian Sea on the west and Indian Ocean on the south. The livelihood of local people depends mainly on the tourism. Though, man made disasters are not likely in the town, natural disasters are quite likely. During Tsunami, which struck in December, 2004, no tourist died in the town, though around 800 people were killed in a nearby area. The policy decisions, concerning the local areas are made by elected bodies at various levels. The elected bodies are;

At rural areas,

- Village Panchayat (grass root level)
- Panchayat Union (Block development level)
- District Panchayat (Revenue District level)

At urban areas,

- City Corporations
- Municipalities
- Town Panchayats

Kanniyakumari is a Town Panchayat with elected Chairperson, Vice-

Chairperson and 18 counselors. The decisions of the elected local body are implemented by an Executive Officer. Kanniakumari has an area of 4.91 sq.Kms. with 32 streets, approximately 4900 houses and a few slums. The tourists population is around 1,800,000 per annum. The local preparedness for disaster was assessed during last week of April, 2007. The approach followed for the assessment was:

- Perusal of existing Disaster Management Plans
- Interaction with:
 - * District revenue authorities
 - * Police officials at District level and Kanniyakumari
 - * District health officials
 - * Executive Officer at Kanniyakumari
 - * Fire officials at Kanniyakumari and at District level
 - * Manager of Poompuhar Shipping Corporation (Ferry service provider.
 - * General Manager of a star hotel
 - * Responsible persons of Voluntary Organisations
 - * A few persons from common public

The main areas considered for assessing the Disaster Preparedness are:

1. Risk Identification and Assessment
2. Legal framework and Authority
3. Availability of Organisation to manage the disasters
4. Early warning systems
5. Communication system
6. Resources available and needed for emergency planning
7. Tourism related issues

These areas are dealt individually and based on the information collected; suggestions are made at the end.

2.0 Current status of Disaster Preparedness at Kanniyakumari.

2.1 Risk Identification and Assessment:

2.1.1 Risk Identification

A district disaster management plan is available in which five major disasters are identified. They are:

- I. Water and climate related disaster
(Cyclone, Gales, Rain, Flood etc.,)
- II. Geological related disaster
(Earthquake, Landslide etc.,)
- III. Sea erosion
- IV. Accident related disaster(road accidents)
- V. Biological related disaster
(cattle epidemics, food poisoning etc.,)

The risk identification has not been done specifically to the Kanniyakumari Town. Specific threats, such as, Ferry accident, Stampede in temples and tourists spots, are to be addressed. The following are the observations made during interaction with the district and local (Kanniyakumari Town Panchayat) authorities:

- Likely location and types of natural and man-made risks are known but not formally documented.
- Information on the number and nationality of tourists, at or near the risk areas are available with the ferry operator, if the tourists use the ferry. Such information may not be available at other risk areas.
- No monitoring system is available to know the no. of tourists at a time in Kanniyakumari,

- The local police records the occurrence of road accidents/ disasters. Their impact and the resultant losses are computed by the district administration. Dissemination of such information to the public is minimal.
- Risk and safety issues are considered as and when new tourists projects are taken up. But it is not through experts involvement.
- No shelter, for mitigation efforts, is identified. During Tsunami, churches, schools were used as shelters.

2.1.2 Risk assessment:

Risk assessment has been done at the district level, only for the scenarios - Cyclone, Gales, Rainfall, Road accidents, Fires and Biological disasters. According to the available disaster management plan, only cyclone is considered as high damage risk scenario. The risk assessment is quantified based on the data available with the Meteorological department and not using scientific tools. Further, the risk assessment pertaining to the individual localities, particularly for Kanniyakumari town, is not available. The following are the observations made during interaction with the officials.

- The health department has identified the health and environmental problems due to disasters in the district. The police and fire departments have identified the likely areas of road accidents and geared up to handle the situations.
- No risk assessment has been made, scientifically.
- Data on the disasters like, cyclone and road accidents are available with the district administration or police. They are to be evaluated.
- The levels of vulnerability and the probable locations of natural hazards are to be assessed.

- Drills have been organised to assess the level of preparedness in a few villages and not in Kanniyakumari town Panchayat.

2.2 Legal Framework and Authority:

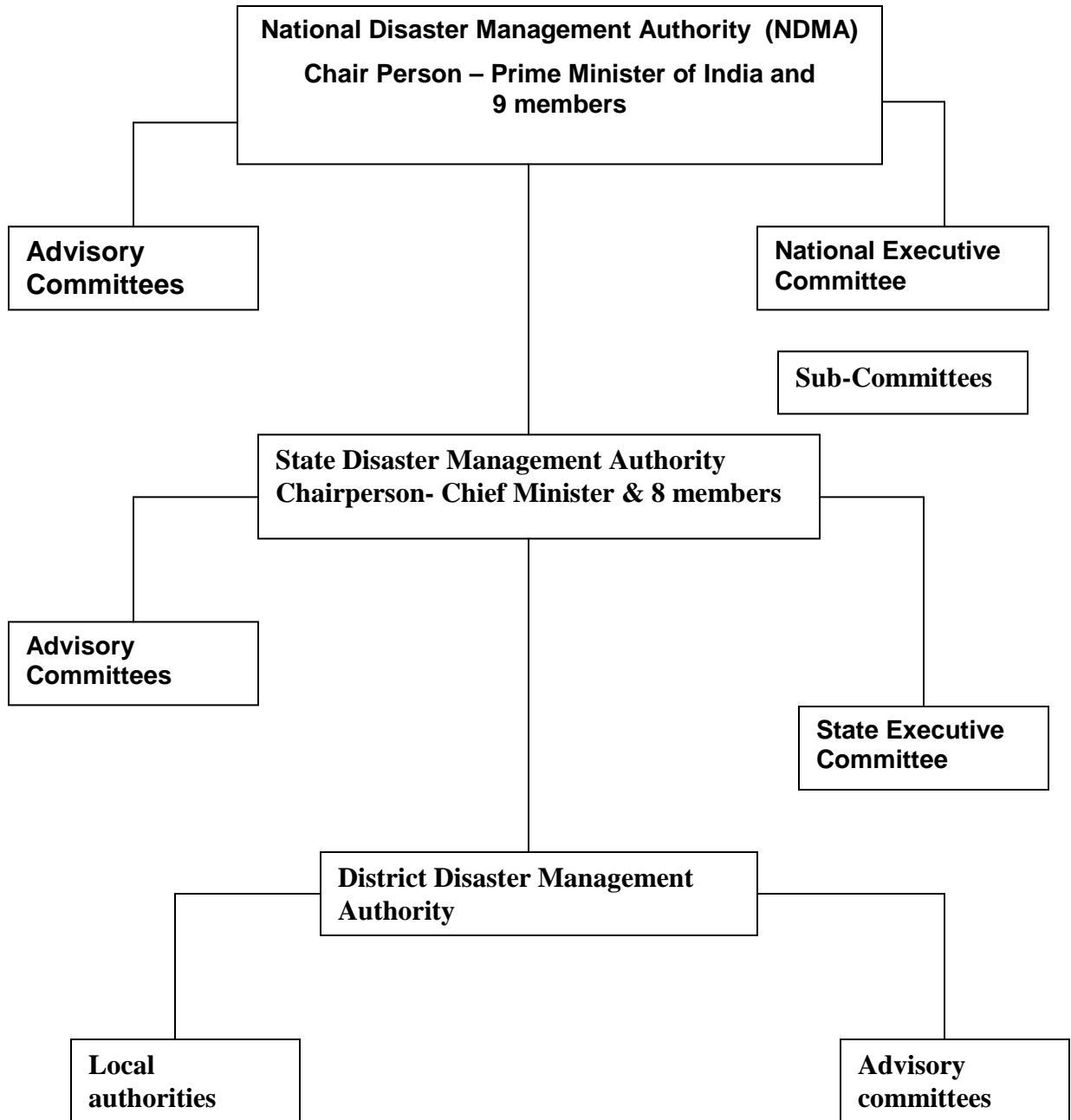
Two statutes deal with the emergency preparedness. They are:

- i) The Disaster Management Act, 2005 (DMA) and
- ii) For Chemical emergency The Chemical Accidents (Emergency Planning, Preparedness & Response Rules, 1996 notified under the Environment (Protection) Act, 1986.

The salient features of DMA:

- Formulation of National, State and District Authorities for Disaster Management.
- Preparation of Disaster management Plans for the Nation, State and District
- Nomination of Executive Committees at the National and State levels, to implement the policies of the National and State Disaster Management Authorities.
- Appointment of expert sub-committees to advise the National and State authorities
- Powers and responsibilities are listed in the Act in respect of each committee.
- The responsibilities of the Local authority are also given in the Act.
- A National Institute of Disaster Management is formed and functioning.
- The Act empowers the National Authority to create a National Disaster Response Force and also a Mitigation fund.

The State and District authorities have to form the Disaster Management Authority and prepare a plan as envisaged under DMA. The organizational structure under the DMA is given under:



ORGANISATION OF DISASTER MANAGEMENT SYSTEM

The CA (EPPR) Rules, 1996 deals with the emergency procedures for the Chemical related accidents. The salient features of the above Rules are setting up of Crisis Groups at Central (National), State, District and Local levels to identify, assess, evaluate and plan to manage the emergencies, if occurs, in their jurisdictions. Such a group is formed and a plan is available for the District.

Current status on legal framework:

- The State (Tamilnadu), the District (Kanniyakumari) and Local Authority (Kanniyakumari Town Panchayat) are in the process of preparing Disaster Management Plan as required under the DMA.
- The Health Department have a plan of action for various health related disasters. But it is not documented as a plan.
- The Executive Officer of Kanniyakumari Town Panchayat has to take concurrence from District authority to declare any event as disaster. Local authority, is part of the organisation for disaster management and authority may be delegated to him to declare disaster.
- The plan for the disaster management by each department as required under the DMA is not available.

2.3 Organization Structure in Kanniyakumari

The Kanniyakumari town Panchayat (Local body) have nominated ten committees, at local level, one each for a ward consisting of 2000 people.(The local population of Kanniyakumari is around 20,000.) Each local committee is having 9 members with the elected counselor as convener. One or two members from each committee is attached to special groups, formed to take care of emergency operations like, Rescue, First aid, Food, Drinking water, Communication, Search etc., The special groups are given training in their respective areas. Thus, in each ward a group of people will

be available for emergency operations. The training of the local level committees would started in April 2007 and would be continued, as informed by the Executive Officer, Town Panchayat, Kanniakumari.

Current situation:

- Committees, with stakeholders as members, are available to handle emergencies.
- The authority and responsibilities of each member have to be defined.
- The capabilities of the members are to be assessed and augmented, if needed.
- A few drills were organised in villages. It was not done at Kanniyakumari town, which is a tourist hot spot.
- Chain of command for each activity, during emergencies is not documented in the District disaster plan.
- The Disaster management plan at district level and local level (to be prepared) are to be reviewed and the following areas are to be included in the disaster management plans:

- # Line of command for various identified disaster scenarios.

- # Agencies or departments are to be identified for getting technical guidance to manage the disasters, effectively.

- # Frequency for the meeting of the coordinating group and assessing the preparedness.

- # Evaluation the response activity and correcting the shortfalls

- # Identifying trained commanders with needed equipment
- # Identification of sources of funding

2.4 Early warning system:

The meteorological station will communicate the likely disastrous situation to the district collector and also to All India Radio stations. The district collector will decide on the declaration of disaster and initiate needed action through the concerned district level departments. At local level, the warning will be given to the public through public address system or beating the drum and announcing the danger.

The warning is also given through mobile phones, wherever possible.

A disaster control centre is maintained at the district administration office at a Nagercoil with a dedicated telephone. It is toll free number (1077). The control centre is manned round the clock and can be accessed from anywhere in the district.

Current status:

- o The system available at present, at Kanniyakumari, needs up gradation. Siren, with predetermined tones, may warn the people, better.
- o The warning system to the tourists is absent.
- o Drills on the preparedness should have built in component to check the effectiveness of the warning system.
- o During cyclones, the telephone system may fail. Wireless or HAM radio system may be useful to warn the authorities.

2.5 Communication:

The process of creating awareness, through training, at local level , to handle the emergencies, have started with the help of UNDP representative. As large number of people are to be trained, the frequency of the programmes are to be increased. Pamphlets are also issued to the public in the local language containing the information on the preparedness for selected natural disasters. As such, awareness creation amongst the public has started and needs strengthening.

Current status:

Information exchange and Dissemination

- Local community is exposed to training on a few selected risk scenarios, but not all the possible scenarios. Ferry accident, stampede in public gathering places, fire in shopping area etc. are to be covered for the community at Kanniakumari town.
- Communication in the event of a disaster is an important area and no procedure is available nor a responsible person/organisation is identified. (Ref: Current District disaster management plan)
- Police personnel are having wireless system and will be used during emergencies, as informed by the Deputy superintendent of Police, Kanniyakumari. The Manager, Poompuhar Shipping Corporation and the crew members of the ferry are also provided with wireless phones. The identified commander for disaster management, in the Town Panchayat would also need such equipment for effective communication and coordination.
- No formal system of information sharing between organisations exists, at present.

- As mentioned earlier, some risks (Stampede, ferry accident etc.,) are not covered in the existing district disaster management plan.
- The “lessons learned” from elsewhere are to be disseminated to the coordinating group. No system is available for the same. This may be done in the meetings or through mails.
- Community relation activities are taken care by various non-governmental organisations with the help of district administration.
- District collector handles the media during accidents or disasters.

Information sources and data base sharing

No data system is available to provide responders with rapid information on specific risks.

Notification Procedures

Network of notifying an emergency is available. A telephone with toll- free number (1077) is available in the control centre located in the district administration office and manned round the clock. No procedure is available for notification of accidents and their consequences. It must be through a standard format with special provision for multiple notifications to Media, State and Central authorities.

2.6 Resources and Emergency Planning:

Personnel

As it may not be possible to maintain an exclusive group of personnel for the disaster management work, for want of funds, existing personnel belonging to various departments are given additional responsibilities of disaster management work. However an officer from UNDP is available for the work connected with “Preparedness” for managing disasters. Though the fire station at Kanniyakumari has a sanctioned strength of 17 personnel for 24 hours work, most of them are deployed elsewhere on other duty, on most of the days.

Improvements needed:

- It needs to be ensured that a minimum number of personnel are available at the emergency related centres.
- A list of experts (Toxicologists, occupational Health physicians etc) with their addresses and contact phone numbers must be available at the control centre.
- A list of trained personnel in rescue operations should also be available.
- Mutual – Aid arrangements between Town Panchayat and supportive organisations for supply of additional man-power may be made and the nodal persons in such organisations, are to be listed in the control room for seeking help during emergencies.
- List of travel agencies, hotels, and consulates of foreign tourists should also be available.

Training

Training of identified groups for emergency operations at local level was started. They are exposed to rescue, fire control, first aid and

handling the dead . These topics are covered during one day. The effectiveness of the existing system of training would improve, if the following suggestions are considered:

- The disaster scenarios will be different at different locations. Training should be need based.
- Training of all the concerned, like, hotel staff, tourists guides, tourist taxi operators, Governmental authorities should also be trained.
- Infrastructure, like, projectors, DVDs, hall etc., should be provided.
- After initial exposure, intensive & specialized training should be given to the selected groups who will be assigned with specialized task.
- Cross training is needed between various groups to avoid overlapping of functions.
- Soft ware data for simulating the models of various disasters may be necessary for training.
- Effectiveness of the training should be assessed for improvement.
- Standard curriculum will ensure uniformity in the training.

Equipment

The fire station at Kanniyakumari has the following equipments:

- Tender (water –9000 lts.) --- 1 No.
- Water tanker(4000 lts.) -- 1 No.
- DCP,FOAM, CO₂ Extinguishers -- 1 each
(located in the tender)
- Rescue materials (rope, shovel & crowbar)

In addition, fire stations are located within 15 Km radius from Kanniyakumari and the district fire officer can requisition any equipment needed for the control of fire or rescue operations.

It was informed by the station officer that the tender was sent for major repairs. He also added that no major fire had occurred in Kanniyakumari.

A primary health centre(PHC) is located at Kanniyakumari with 51 beds. A senior civil surgeon and three specialist doctors are available with para-medical staff. One ambulance is provided to the PHC. A few private hospitals and one medical college hospital are functioning at Nagercoil, 20 Kms. away from Kanniyakumari. A number of ambulances are available and their movements are monitored by a control room functioning round the clock at the office of the Deputy Director (Health services) Nagercoil. Needed medicines and first aid equipments are also stocked for preventing epidemics during post – disaster period.

The police department is equipped with Walk - talkies, mobiles, wireless and transport and they can mobilise transport at a short notice for the movement of victims or the rescue personnel

The meteorological station at Thiruvananthapuram (90 kms from Kanniyakumari) has all the data collection and dissemination equipment for climatologically related emergencies. The Regional Meteorological Centre at Chennai, has instruments to monitor the movement of cyclone through satellite and inform to all the district collectors and the media. However, Tsunami prediction equipment is not available.

Improvements needed:

- Portable fire extinguishers, rescue equipments are not adequate. Their scale may be reviewed and augmented
- Maintenance schedule for the emergency equipment has to be prepared. It should be strictly adhered to.
- Personal protective equipments for the rescue operations are to be identified and made available.
- Mutual aid agreement may be made with the nearby organisations, for the supply of equipment like Self Contained Breathing Apparatus, Helicopter, Fire tender, Bull dozer, etc.,
- If the equipments are to be drawn from mutual aid members, a procedure may be developed to draw them on 24 hours basis. Such a procedure should be available in the control centre.

Facilities

- Though a emergency control centre available at Nagercoil, which can be used as command centre, similar centre is to be identified at Kanniyakumari Town.
- Temporary shelters, to accommodate the evacuated people, are also not identified and formal agreement made with the owner.
- During a disaster, large quantity of waste/debris is likely. A procedure for the disposal of such wastes will also be required.

2.7 Tourism Related issues:

Kanniakumari town is a tourists centre and economic activities depend mostly on the tourists. Though, no tourist was killed due to Tsunami in Kanniakumari, the risk potential is high on them because of culture, language, lack of awareness on various risks etc.,The

interaction with the officers of the State Government, stressed the need of risk reduction in tourism sector in Kanniakumari town. The local community should have good knowledge on various risks related to tourists. They should contain such risks and be prepared to rescue the tourists in case of any disaster. The following areas needs strengthening:

Distribution of tourism in space and time

- Identification of location and concentration of tourists
- Analysis of distribution of tourists, season/month wise. The Manager, Poompuhar Shipping Corporation maintains such a record. Similar records will be needed from hotel owners, district administration and other stakeholders.
- The statistics of tourists flow, as to whether it is concentrated at a particular place or freely distributed will be needed to post additional personnel for safety.

Hot-spots of tourism activity

- Though, the hot spots of tourists are well known to the local community, it is to be documented with statistical data.
- Tourists activities are to be categorized as cultural, religious or relaxation.
- The tourists population and the local population in the above hotspots are to be compiled for the purpose of rescue, awareness creation etc., for the disaster management.

Composition of tourism load

- Assessment of special needs of tourists like elderly, disabled, sick etc., for providing additional care and assistance during disaster.
- Internationally accepted signboards for escape during disasters should be displayed at conspicuous places.

- Information on likely disasters, warning system, action to be taken and escape routes /shelters are to be given to tourists on their arrival at Kanniyakumari. Responsibility should be fixed on the hotels and tourism department.

3.0 Summary and Suggestions:

There is a system of Disaster Management at District level. A plan is also available. It needs to be reviewed and more risk scenarios at various locations are to be included. The line of command for each scenario may vary and it should be decided in advance and documented. Various improvements suggested under the above paragraphs are to be included in the plan. In order to prepare an effective Disaster Management Plan at the district level the following procedure may be considered:

- Decide on risk scenarios at **each local level** (eg. Flood, Land slide, cyclone, Fire, Stampede, Ferry capsizing , Tsunami, sea entering the houses etc.,)
- Based on the risk analysis (probability and consequences) prioritize the scenarios.
- Vulnerability (areas or people likely to be affected) map should be prepared
- Decide on the roles of various departments or agencies to minimise the effects of disaster.
- The departments/agencies should prepare a plan on their role and responsibilities on various scenarios identified.
- Departments/agencies plan must be integrated with inclusion of inputs mentioned under various paragraphs.

- The local level plans must be integrated to make it as District level plan.
- With the advanced software technology available in India, it must be possible to predict the extent of geographic or societal damage due to various disasters, both natural and man-made.

Kanniakumari is highly literate district. The officers of various departments and concerned agencies nominated on the coordinating group are capable of identifying, evaluating and managing any situation that lead to a disaster. Their contribution will make a model and practical disaster Management Plan, both at the Local and District level.
