

## REVENUE DEPARTMENT

### 2.4 Disaster Preparedness

#### **Executive Summary**

With a view to manage various disasters in the country, Government of India enacted the Disaster Management Act, 2005, framed (October 2009) a National Policy on Disaster Management and issued various guidelines on the subject to the States. The Act, besides outlining the policy, legal and institutional framework, provides for continuous and integrated process of planning and implementation of the policies and plans in a holistic and sustainable manner. A Performance Audit of Disaster Preparedness of the State brought out the following important issues:

The State Disaster Management Authority (SDMA) was constituted in September 2008 and the District Disaster Management Authorities (DDMAs) were established in January 2012, but the SDMA and DDMAs in five out of six test-checked districts did not meet even once and therefore could not perform their statutory duties. The State Executive Committee formed in January 2009 met only once.

A draft State Disaster Management Plan prepared in May 2010 is yet to be approved by the State Disaster Management Authority. Disaster Management Rules have not been framed by the State Government. There was no dedicated manpower for the State Disaster Management Authority.

The vulnerability profile of geographical areas located within the districts has not been prepared and efforts to reduce the risk by disaster preparedness measures have not been spelt out.

The Emergency Operation Centres which are the nerve centres of early warning system were non-functional and not in the state of operational readiness in the test-checked districts.

Fourteen out of 59 early warning systems in Cuddalore district and all the 30 early warning systems in Nagapattinam district were not in working condition.

The State has not constituted the Disaster Mitigation Funds at the State and District levels and has also not constituted the District Disaster Response Funds.

Vulnerability assessment of structures, prioritization and retrofitting of the lifeline structures and infrastructure were not done in Chennai city, which is in seismic zone III.

### 2.4.1 Introduction

With a view to manage various disasters in the country, Government of India (GoI) enacted the Disaster Management Act, 2005, framed (October 2009) a national policy on disaster management and issued various guidelines on the subject to the States. The Act, besides outlining the policy, legal and institutional framework, provides for continuous and integrated process of planning, coordination and implementation of the policies in a holistic and sustainable manner. In the context of the State exposed to many disasters and to ascertain to what extent it had complied with the legal provisions, a Performance Audit of Disaster preparedness of the State was conducted.

Tamil Nadu has a long coastline of about 1,076 km. The State is frequently subjected to devastation by natural calamities like cyclonic storms and flooding due to its location in a highly vulnerable part of the peninsular India. There are 13 districts situated in the eastern coastal stretch of the State. On an average, the State of Tamil Nadu faces one or two severe cyclones during the north-east monsoon period. Even during the non cyclonic phase, the State receives copious rainfall as a result of formation of low pressure / depressions in the Bay of Bengal. Cyclones and low pressure / depressions bring intense rains which cause large scale flooding and inundation in the vulnerable areas. The State has been classified under seismic zone II and Chennai, the State capital falls under seismic zone III. During the last decade, the State was exposed to climate and geologically related disasters.

The details of major disasters that occurred in the State during the last decade are given in **Appendix 2.9**.

### 2.4.2 Organisational structure

The National Disaster Management Authority constituted by GoI under the provisions of the Disaster Management Act, 2005 (Act), concentrates on preparedness, mitigation, rehabilitation and reconstruction and also formulates appropriate policies and guidelines for effective national disaster response and relief works. The State Disaster Management Authority headed by the Chief Minister of the State, the State Executive Committee headed by the Chief Secretary of the State and the District Disaster Management Authorities headed by District Collectors are the statutory authorities constituted under the provisions of the Act.

The Principal Secretary-*cum*-Commissioner of Revenue Administration, Disaster Management and Mitigation Department, who is also the State Relief Commissioner, is responsible for preventive, relief and rehabilitation activities in the State. He acts as the nodal officer in planning and coordinating with the other departments to take measures for relief, rescue and restoration before, after and during the period of disasters.

### **2.4.3 Audit objectives**

The objectives of Performance Audit were to check whether;

- the State / district disaster preparedness strategy, action plans and policies have been prepared in consonance with the national policy and whether they were reviewed periodically;
- the various types of disasters, their potential of damage and requisite preparedness and mitigation efforts have been identified and mapped at the State / district level;
- the State and District Disaster Management Authorities have been established by the Government and were effective in monitoring the situation in the event of disasters;
- the State have framed guidelines to govern financial arrangements, allocation and utilisation of funds and whether timely availability of funds was ensured and the funds were utilised efficiently and economically;
- the early warning systems and mechanisms to predict and communicate to the public about the disasters are in place and in the state of operational readiness at the State /district level;
- training and emergency exercises for disaster preparedness have been conceived and conducted at the State / district level and
- adequate manpower was provided to the statutory authorities and field offices.

### **2.4.4 Audit Criteria**

The disaster preparedness of the State was evaluated with reference to the terms and conditions contained in the following sources.

- Disaster Management Act, 2005,
- National Policy on Disaster Management, 2009,
- District Disaster Management Plans and
- Guidelines and other instructions issued by GoI and the State Government.

### **2.4.5 Scope of Audit**

Performance Audit covering the period 2007-12 was conducted during May to October 2012 and records in the Disaster Management Section of Revenue Department in the Tamil Nadu Secretariat, the Commissionerate of Revenue Administration, Disaster Management and Mitigation Department (CRA, DMMD), the Commissionerate of Municipal Administration and Disaster

Management Cells in the six districts<sup>45</sup> selected for the study were test checked in audit. The districts were selected because of their frequent exposure to disasters. The audit objectives, criteria and scope were discussed with the Principal Secretary and Commissioner of Revenue Administration in an Entry Conference held on 7 June 2012. Pursuance by audit to arrange for an Exit Conference with the Principal Secretary of the Department has not been responded to till date. The audit findings are given below:

## **Audit findings**

### **2.4.6 Planning**

#### **2.4.6.1 State Disaster Management Plan**

As per Section 23 (2) of the Act, the State Executive Committee was to prepare the State Disaster Management Plan (SDMP) having regard to the guidelines laid down by the National Authority and as per Section 18 (2) of the Act, State Disaster Management Authority (SDMA) was to approve the SDMP. Under Section 78 of the Act, the State Government may make State Disaster Management Rules.

Audit scrutiny of records of CRA, DMMD revealed that a draft State Disaster Management Plan (2010-2015) prepared (May 2010) is yet to be approved by the SDMA (October 2012). Though the Act does not specify approval of SDMP by the National Disaster Management Authority (NDMA), the SDMP was sent (May 2010) by the CRA, DMMD to NDMA to ensure conformity with the guidelines laid down by NDMA. The CRA, DMMD had not taken follow-up action with the NDMA. The State Disaster Management Rules have also not been prepared as required under the Act.

As the SDMP has not been approved, the vulnerability of the State to various disasters and the disaster preparedness measures etc., cannot be evaluated with reference to any parameters in the plan.

CRA, DMMD stated (December 2012) that the draft State Disaster Management Rules were under consideration of the Government.

#### **2.4.6.2 District Disaster Management Plans**

Under Section 31 (2) of the Act, the district disaster management authorities were to prepare the District Disaster Management Plans, after consultation with the local authorities and having regard to the National and State Disaster Management Plans.

The District Disaster Management Plans (DDMPs) of 32 districts of the State have been prepared. The DDMPs of the six<sup>46</sup> test checked districts contained instructions to the officials of various departments to mobilize men and material before the onset of monsoon with specific reference to floods. But,

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<sup>45</sup> Chennai, Cuddalore, Kanyakumari, Nagapattinam, Thoothukudi and Tirunelveli

<sup>46</sup> Chennai, Cuddalore, Kanyakumari, Nagapattinam, Thoothukudi and Tirunelveli

the vulnerability profile of geographical areas located within the districts has not been prepared and efforts to reduce the risk by disaster preparedness measures have not been spelt out.

CRA, DMMD stated (December 2012) that steps were being taken to appoint a consultant to study scientifically, the vulnerability of the districts to various disasters and to incorporate them in the DDMPs.

## **2.4.7 Formation of statutory authorities**

### **2.4.7.1 State Disaster Management Authority**

Under Section 14 (1) of the Act, every State Government shall establish a State Disaster Management Authority (SDMA) with the Chief Minister of the State as the Chairperson. Under Section 15 (1) of the Act, SDMA shall meet as and when necessary. SDMA was constituted in September 2008, but as per the particulars furnished (June 2012) by CRA, DMMD, it did not meet even once. Audit scrutiny revealed that building, dedicated staff and employees were not provided for SDMA. It was practically non-functioning to perform the statutory duties such as laying down the State policy and plan for disaster management and to co-ordinate implementation of the disaster related activities, though the State witnessed major disasters during 2008 - 2011, as stated in **Appendix 2.9**. The CRA, DMMD stated (June 2012) that three meetings were convened by the Chief Minister with the Secretaries of the line departments during emergencies between November 2011 and December 2011 and that these meetings could be considered as meetings of the SDMA.

The reply is not acceptable as these emergency meetings on the eve of monsoon in 2011 cannot be treated as formal meetings of SDMA, as all SDMA members including experts were not part of such meetings and there were no meetings prior to 2011.

### **2.4.7.2 State Executive Committee**

Under Section 20 (1) of the Act, the State Government shall constitute a State Executive Committee (SEC) to assist the SDMA in the performance of its functions. Under Section 22 (1) of the Act, SEC was to implement the National and State Disaster Management Plans and act as the coordinating and monitoring body for disaster management in the State and *inter alia*, advise the State Government regarding all financial matters in relation to disaster management.

The State Executive Committee was constituted in January 2009 with the Chief Secretary as chairperson and Secretaries to the Government in Revenue, Public Works, Highways and Home departments as members of the Committee. Under the Act, SEC was to co-ordinate and monitor implementation of the SDMP. However, the Act does not specify the periodicity of the meetings to be conducted by SEC.

The particulars furnished by CRA, DMMD revealed that SEC met only once in June 2009 and no meetings were conducted during the years 2010-11 and 2011-12. The CRA, DMMD stated (June 2012) that pre-monsoon preparedness meetings chaired by the Chief Secretary were held every year to review the preparedness measures taken by the line departments.

The reply is not acceptable as the duly constituted SEC met only once and the pre-monsoon meetings conducted by the Chief Secretary with the line departments cannot be treated as formal and well planned SEC meetings.

### **2.4.7.3 District Disaster Management Authorities**

Under Section 25 (1) of the Act, the State Government shall establish a District Disaster Management Authority (DDMA) for every district in the State. The DDMA was constituted by Government in January 2012, after a delay of five years since August 2007 when Section 25 of the Act came into operation. Under Section 30 (1) of the Act, the district authorities were to act as planning, coordinating and implementing body for disaster management and take all measures for the purpose of disaster management in accordance with the guidelines laid down by the National and State authorities. DDMA was to meet as and when necessary, but DDMA in five<sup>47</sup> out of the six test-checked districts did not meet even once. In Nagapattinam district, the meeting was held once in June 2012.

As a result, DDMA could not perform their statutory duties such as coordination and monitoring of implementation of the National Policy, National and State Plans and guidelines on Disaster Management issued by NDMA.

The CRA, DMMD stated (December 2012) that the District Collectors would be instructed to conduct the meetings of DDMA regularly to review the Disaster Management measures.

### **2.4.8 Resources and expenditure**

The Government of Tamil Nadu constituted the Calamity Relief Fund (CRF) in 1991-92. As stipulated under Section 48 (1) and 49 (2) of the Act and based on the recommendations of the Thirteenth Finance Commission, State Disaster Response Fund (SDRF) was constituted (February 2011) in lieu of the existing CRF, for meeting the expenditure towards immediate relief to the victims of cyclone, drought, earthquake, fire, flood, tsunami, hail storm, land slide, avalanche, cloud burst and pest attack. Contribution to CRF/SDRF was to be made by GoI and by the State Government in the form of non-plan grant in the proportions as fixed from time to time.

Details of receipts and disbursements under CRF/SDRF and expenditure on relief for the years 2007-08 to 2011-12 as furnished by the CRA, DMMD are given in **Table 2.19**.

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<sup>47</sup> Chennai, Cuddalore, Kanyakumari, Thoothukudi and Tirunelveli

**Table 2.19 : Receipt and disbursement under CRF/SDRF**

Year	Opening Balance	Receipts from			Total	Expenditure on relief adjusted against CRF/SDRF	Closing balance	Actual expenditure on relief
		CRF/SDRF <sup>@</sup>		NCCF*/NDRF*				
		Central share	State share					
(₹in crore)								
2007-08	NIL	172.88	57.63	0.00	230.51	230.51	NIL	464.32
2008-09	NIL	229.17	60.51	522.51	812.19	812.19	NIL	1416.91
2009-10	NIL	154.86	51.62	0.00	206.48	206.48	NIL	77.89
2010-11	NIL	220.14	73.38	48.67	342.19	342.19	NIL	1044.97
2011-12	NIL	231.15	77.05	817.17	1125.37	1125.37	NIL	1101.08
<b>Total</b>		<b>1008.20</b>	<b>320.19</b>	<b>1388.35</b>	<b>2716.74</b>	<b>2716.74</b>		<b>4105.17</b>

(Source: Appropriation Accounts of Tamil Nadu and Utilisation Statement furnished by the Principal Secretary and Commissioner of Revenue Administration to the Ministry of Home Affairs, GoI).

@ State Disaster Response Fund from 2010-11

\* National Calamity Contingency Fund (from 2007-08 to 2009-10) and National Disaster Response Fund (from 2010-11).

The State Government made budget provision on the expenditure side under the head “2245 Relief on account of Natural Calamities” for meeting expenditure on relief activities and adjusted the expenditure every year against the available accretions in the reserve funds of CRF/SDRF. During the five year period of 2007-12, the State Government spent ₹ 1,388.43 crore in excess of the accretion in the reserve funds.

As envisaged under Sections 48 (1) and 49 (2) of Act, though the State Disaster Response Fund has been constituted and is in operation, the other funds, viz., the District Disaster Response Funds, State Disaster Mitigation Fund and District Disaster Mitigation Funds have not been constituted so far.

The CRA, DMMD stated (December 2012) that necessary proposals would be sent to Government for constitution of State Disaster Mitigation Fund.

#### **2.4.8.1 Inadmissible expenditure from Calamity Relief Fund**

As per the GoI's scheme for constitution and administration of CRF, the CRF was to be used for providing immediate relief to the victims of cyclone, drought, earthquake, fire, tsunami, hail storm, landslide, avalanche, cloud burst and pest attack. Further, as per the norms of expenditure under CRF, expenditure on restoration/replacement of damaged infrastructure was to be met from Plan funds and not as part of CRF.

However, audit scrutiny revealed that out of the total expenditure of ₹ 77.89 crore incurred on calamity relief during the year 2009-10, a sum of ₹ 20.39 crore was incurred as expenditure for improvement of roads, construction and reconstruction of bridges under the head ‘Tsunami’ and another sum of ₹ 0.45 crore was incurred for setting up of automatic spinning units in tsunami affected districts. Tsunami hit the State in 2004 and expenditure of ₹ 20.84 crore for improvement of roads and construction of bridges etc., in 2009-10 were not of immediate relief and hence, not covered by the norms of expenditure under CRF.

The CRA, DMMD while accepting the audit findings stated (December 2012) that it was done as a special case as the damage due to Tsunami was of a huge magnitude.

The reply is not acceptable as expenditure towards laying of roads etc., is not permissible as a special case under CRF.

#### **2.4.8.2 Interest not remitted to the State Disaster Response Fund account**

Scrutiny of the savings bank pass book of Natural Calamities Relief Fund maintained by the Collector of Tirunelveli district revealed that ₹ 16.53 crore received from the State Government for relief measures against natural calamities, were remitted into the savings bank account, before distributing the amount to the line departments. As of March 2012, there was interest earning of ₹ 22.86 lakh during the period from June 2008 to December 2011 in the said savings bank account. This amount was not remitted into Government Account.

The CRA, DMMD stated (December 2012) that the Collector would be instructed to remit the unspent amount to Government Account.

### **2.4.9 Disaster preparedness of the State**

#### **2.4.9.1 Non-maintenance of the Early Warning Systems**

As per Section 30 (2) (xiv) of the Act, the State Government was to ensure establishment of adequate early warning systems upto the level of vulnerable communities.

Wireless communication network using Kenwood Two Radios and repeater stations was installed in Nagapattinam district to connect the district administration with 30 coastal villages at a cost of ₹ 19.75 lakh to handle emergency communication required during Tsunami and other natural disasters such as cyclone and floods in the district. The two way communication was a failsafe communication system for working independently without the help of existing network of various service providers.

Audit scrutiny revealed that all 30 early warning systems installed in March 2008 had become defunct and non-functional from February 2012 due to improper maintenance. As a result, the district administration faced difficulties to communicate with the people living in coastal villages to evacuate them to safer places during Thane cyclone (December 2011), as the landline telephones and mobile phones were not working properly. Similarly, 14 out of 59 early warning systems in Cuddalore district were not in working condition since September 2010.

To an audit query the CRA, DMMD stated (October 2012) that alternative proposal to install advanced early warning systems in about 439 coastal habitations in the State was at tender stage.

#### **2.4.9.2      *Functioning of the Emergency Operation Centres***

With a view to strengthening of the overall capacities for emergency/disaster response in the country, the Government of India directed (2007) setting up of round-the-clock control or emergency operation centres.

##### **(i)              *State Emergency Operation Centre***

According to NDMA guidelines on Incident Response System issued in July 2010, the Emergency Operation Centre (EOC) was to be an augmented control room having communication facilities and space to accommodate the various emergency support functions. The EOC was to take stock of the emerging situation and assist the Chief Secretary/Relief Commissioner in mobilizing the respective line department's resources, manpower and expertise. The EOC at the state level is located in the office of the State Relief Commissioner in Chepauk, Chennai. Telex, fax, computers with internet, VHF sets with one police man have been provided. A toll free public utility service has been installed in the office of the State Relief Commissioner for receiving and communicating information on various disaster related incidents to the general public. It has a conference hall with teleconferencing facility to link with NDMA.

But, the State EOC did not have adequate space to accommodate the representatives of Agriculture, Police, Fire and Rescue Services Departments, Indian Meteorological Department, Corporation of Chennai, District Collectorate and other important officials and experts in the field of disaster management as envisaged in the NDMA guidelines. One Senior Administrative Officer with required number of assistants and representatives of the various line departments were to be posted to man the State EOC as per the NDMA guidelines. Audit scrutiny revealed that no dedicated manpower was posted to the State EOC. Absence of dedicated manpower has the risk of hampering preparedness and rescue operations during disaster.

On this being pointed out by Audit (December 2012), the CRA, DMMD stated (December 2012) that action was being taken to strengthen the State EOC with dedicated manpower and required infrastructure.

##### **(ii)              *District Emergency Operation Centres***

The emergency operation centres which are hub of disaster management activities in the districts were constructed during the years 2006 to 2010 at a cost of ₹ 10 lakh (including ₹ 3 lakh for equipment and ₹ 1 lakh for furniture) in each district.

It was found during joint inspection by Audit team with the officials of the District Collectorates during May – October 2012 that the buildings meant for EOCs in the districts were occupied by other departments and the equipment for disaster management were either dumped or used by other departments as shown in the pictures (**Figures 2.8 and 2.9**) and the EOCs were not in a state of readiness.



**Figure 2.8:** Office of Commissioner of Disciplinary Proceedings functioning in the EOC, Kanyakumari



**Figure 2.9:** A concrete cutting machine found bundled in old record room of the Land and Survey Department in the district Collectorate of Kanyakumari.

The status of EOCs in five out of six test checked districts is detailed in the **Table 2.20** below:

**Table 2.20 : Status of EOCs in test-checked districts**

Sl. No.	District/ Month and year of construction	Offices functioning in the EOC building	Remarks
1.	Kanyakumari (July 2006)	Commissioner of Disciplinary Proceedings as depicted in <b>Figure 2.8</b> .	Equipment including computers, Xerox-cum-fax machine, printers, life jackets, a concrete cutting machine etc., were dumped in the old record room of the Land and Survey Section as depicted in <b>Figure 2.9</b> .
2.	Thoothukudi (May 2009)	District unit of Tamil Nadu AIDS Control Society	Communication equipment like computers were used by the office of Assistant Director of Panchayat in the district.
3.	Tirunelveli (February 2010)	EOC not yet occupied	EOC has not been occupied so far and the rescue tools and kits, computers and inverters for backup etc., handed over to EOC in December 2009 have not been even unpacked.
4.	Cuddalore (January 2007)	EOC not yet functional.	Information and communication equipment for disaster management were not installed in the emergency operation centre.
5.	Nagapattinam (June 2006)	EOC was being utilised by the newly formed Fisheries University	The disaster management tools were found dumped in the emergency operation centre and were not in a state of readiness.

Audit scrutiny further revealed that in all the test-checked EOCs, no manpower was sanctioned exclusively for the EOCs. During monsoon periods, policemen with walkie-talkie were accommodated in the telephone operator's room or in the disaster management cell, which was part of a section attending to other revenue works in the District Collectorate.

## **2.4.10 Earthquake preparedness and urban disaster risk reduction**

### **2.4.10.1 *Techno-legal regime for earthquake***

All State Governments/SDMAs were to adopt the model techno-legal framework for ensuring compliance of earthquake-resistant design and construction practices in all new constructions. As per the National Disaster Management Guidelines on Management of Earthquakes, the State Governments were to update the urban regulations by amending them to incorporate multi-hazard safety requirements by 30 June 2007.

Audit scrutiny revealed that amendments in the Tamil Nadu Town and Country Planning Act to provide for earthquake resistant standards have not been made in the State (October 2012), even though the State has been classified under seismic zone II and Chennai, the State capital is in seismic zone III with moderate to high risk.

The CRA, DMMD stated (December 2012) that the recommendations of a committee constituted for this purpose, were under consideration of Government.

### **2.4.10.2 *Earthquake vulnerability assessment***

As per the National Disaster Management Guidelines on Management of Earthquakes issued in April 2007, Rapid Visual Screening (RVS), which is a quick estimation with visual but technical information of structures to determine whether the structures are considered to be vulnerable to earthquake or not should be carried out by the State Government in the earthquake prone cities. This was to be followed by a Detailed Vulnerability Assessment (DVA). The vulnerability assessment exercises were to be repeated every 10 years to monitor the modification to the vulnerability profile of the built environment. The State Government was to identify and prioritize the life line Government and public structures, which were vulnerable to earthquake and retrofit them.

Audit scrutiny revealed that vulnerability assessment and retrofittings of the seismically vulnerable buildings in Chennai city were not done.

The CRA, DMMD stated (December 2012) that Rapid Visual Screening of Government buildings in Chennai, had been made by the Public Works Department to ascertain their vulnerability to earthquakes and that action subsequent to Rapid Visual Screening would be taken.

The reply is not acceptable to the extent that vulnerability assessment of the life line structures other than Government buildings were not done (December 2012).

## **2.4.11 Preparedness for Cyclone and Flood**

When the State gets copious rainfall during the north-east monsoon (October-December), the coastal districts are highly vulnerable to cyclonic storms.

Audit scrutiny of the DDMPs of the test checked districts relating to cyclone preparedness revealed that:

- All weather link roads that were to be laid down as per the NDMA guidelines have not been identified.
- The areas where saline embankments are to be constructed to prevent ingress of saline water associated with cyclonic storm surge as per NDMA guidelines were not identified.
- As per NDMA guidelines, mapping of the coastal wetlands, patches of mangroves and shelterbelts, identification of potential zones for expanding bio-shield based on remote sensing tools were to be done. But, this was not done.

During the period covered by audit, there were floods due to cyclone and heavy rainfall during northeast monsoon in the test checked districts. The pre-monsoon preparedness meetings conducted at the State and district level laid down elaborate instructions for carrying out relief measures. In the pre-monsoon meetings, the Public Works Department was directed by the District Collectors to be prepared with sandbags to strengthen embankments. Strengthening of embankments, anti-erosion measures, drainage improvement works, sea wall and coastal protection works by the State Government were also important preparedness measures for cyclone and heavy rainfall related floods.

#### **2.4.12 Preparedness for Fire safety**

The Director of Fire and Rescue Services Department (FRSD) is the nodal officer for management of major fire accidents. In order to mitigate fire accidents, Fire Licences/No Objection Certificates (NOC) are issued to the owners or occupiers of any premises which are used for any purpose that is likely to cause fire, as required under Section 13 of the Tamil Nadu Fire Service Act, 1985.

It was noticed by audit from the records of Director of Fire and Rescue Services that as of October 2008, NOCs were not obtained in 57,000 cases from FRSD. However, test check of records of FRSD revealed that only 1,048 licences were issued from the year 2009 to 2011 and that details of buildings for which fire licence/NOCs were to be issued as of October 2012, were not available with the FRSD.

FRSD plays a vital role in search and rescue operations in the case of all kinds of disasters. Shortage of manpower would lead to inadequacies in preparedness. Scrutiny of records in FRSD revealed that the posts of two Divisional Officers, 15 Leading Firemen, 374 Fire drivers and 1,272 Firemen aggregating 1,663 posts were lying vacant as on 1 June 2012, which constituted 25 per cent of the sanctioned workforce (6783). In the test-checked districts, 422 posts were lying vacant out of a total sanctioned strength of

2131 posts as on 1 June 2012, which constituted 20 *per cent* of the total sanctioned posts.

### **2.4.13 Manpower and Training**

As per Sections 16 and 29 of the Act, the State Government shall provide the State Authority and the District Authority with such officers, consultants and employees, as it consider necessary, for carrying out their functions respectively.

The State Government has not provided the State and District Disaster Management Authorities with adequate number of officers, consultants and employees. The authorities in the selected districts were not housed in separate buildings with adequate facilities to function. In addition, the works relating to Disaster Management in the test-checked districts were manned by only one assistant each and the manpower was grossly inadequate to handle the requirement of disaster preparedness in the district.

The Anna Institute of Management, Chennai has a Disaster Management Cell established in the year 1995, which was designated as a nodal agency for imparting disaster management training to the officers of various departments of the State. The Cell conducted training programmes, sector-wise, on various aspects of disasters as recommended by a high-powered Committee, constituted by the Government of Tamil Nadu. Since its inception, the Cell has so far conducted 296 disaster management training programmes benefitting nearly 6942 officials as of March 2012. Appropriation Accounts for the year 2010-11 revealed that ₹ 5 crore provided in the budget during the year 2010-11 for capacity development was not utilised, for which reasons were not communicated by the Department (July 2011).

The Fire and Rescue Services Department conducted mock drills at the District level for fire prevention and mock drills for rescuing flood affected victims. However, mock drills and community awareness for the other disasters like earth quake especially in the State capital were not contemplated or done.

### **2.4.14 On a Positive Note**

- 264 senior level officers of various departments of the State Government were imparted training at National Institute of Disaster Management on flood mitigation and management, disaster damage assessment, earthquake risk mitigation and management and training programme on early warning.
- As a part of public education and community awareness and in order to sensitize the people, puppet shows and street plays on disaster management issues were conducted in the State.

- Arrangements were made to keep adequate stock of rice, kerosene, dhotis and sarees in the test-checked districts. Directions to inspect the reservoirs, embankments, and other structures before the monsoons were issued to Public Works Department for flood preparedness.
- The Chennai Metropolitan Water Supply and Sewerage Board took steps (2011) for better monitoring of the situation arising out of monsoon and cyclone and assisted the officers involved in the operation and maintenance of vital installations such as sewage pumping stations and water distribution stations to avoid blockage of sewerage and to maintain quality of the drinking water to control outbreak of diseases.

#### **2.4.15 Conclusion**

The State Disaster Management Authority was constituted in September 2008 and the District Disaster Management Authorities were established in January 2012, but the SDMA and DDMA in five out of six test-checked districts did not meet even once and therefore could not perform their statutory duties. The State Executive Committee formed in January 2009 met only once. A draft State Disaster Management Plan prepared (May 2010) is yet to be approved by the State Disaster Management Authority. Disaster Management Rules have not been framed by the State Government. There was no dedicated manpower for the State Disaster Management Authority. Emergency Operation Centres which are the nerve centres of early warning system were non-functional and not in the state of operational readiness in the test-checked districts. Fourteen out of 59 early warning systems in Cuddalore district and all the 30 early warning systems existing in Nagapattinam district were not in working condition. The State has not constituted the Disaster Mitigation Funds at the State and Districts level and has not constituted the District Disaster Response Funds. Vulnerability assessment of the structures, prioritisation and retrofitting of the lifeline structures and infrastructure were not done in Chennai city which is in seismic zone III.

#### **2.4.16 Recommendations**

- The State and District Disaster Management Authorities need to be provided with adequate manpower and infrastructure for carrying out their statutory mandate. This would enable focussed and effective monitoring of the activities relating to disaster preparedness, relief, rescue and rehabilitation measures. These Authorities should meet frequently.
- The State and District Disaster Management Plans need to be prepared in accordance with the provisions of National Disaster Management Act.

- The Emergency Operation Centres should be made fully operational with adequate manpower and state of the art information and communication equipment.
- The Disaster Mitigation Funds at the State and district levels need to be constituted to finance the issues relating to disaster preparedness.
- Earthquake vulnerability assessment and earthquake preparedness measures need to be commenced and completed at the earliest.

The above points were referred to Government in November 2012; reply has not been received (December 2012).