

CHAPTER VII

***REVENUE
DEPARTMENT***

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Executive Summary

Background

Disaster management has moved from a reactive and relief-centric approach to a holistic and integrated approach covering prevention and preparedness measures in the pre-disaster phase; and mitigation, rehabilitation and reconstruction measures in the post-disaster phase. Andhra Pradesh is vulnerable to major natural disasters like cyclones, floods, earthquakes and droughts, as well as man-made disasters. We conducted a Performance Audit on disaster preparedness, covering the period 2007-08 to 2011-12, in five sampled districts (East Godavari, Khammam, Kurnool, SPS Nellore and Visakhapatnam). In addition to scrutiny of records at various offices, we also conducted verification of 126 cyclone shelters out of the 478 shelters in four test checked districts (except Kurnool).

Major Audit Findings

- Contingency plans for cyclones, floods and earthquakes had been prepared, and these listed out the detailed actions to be taken before, during and after the occurrence of the disaster. However, the status of district-level disaster planning in the five districts presents a mixed position. While in SPS Nellore and East Godavari districts, consolidated and comprehensive district disaster management plans were prepared every year and in timely fashion, in the other three districts, such plans were either not consolidated or not prepared in time.
- Shore stations and Early Warning Systems in East Godavari and SPS Nellore District were not functional. Most of the communication equipment (HAM radio, VHF sets and satellite phones) in four sampled districts was not in working condition. Cyclone kits were not procured in Visakhapatnam and SPS Nellore districts. Shelters meant for accommodating flood/cyclone victims were not properly maintained and no funds were provided by the Panchayat Raj Department for taking up repairs. Rescue boats with the Fisheries Department were in need of repairs/ replacement and no funds were provided.
- Financial management for disaster preparedness was deficient, with huge pendency of UCs and several instances of non-provision of funds in time, non-utilisation/delayed utilisation and irregular diversion of State Disaster Response Funds (SDRF).

Major Recommendations

- Annual District Disaster Management Plans should be prepared and consolidated in time. Early Warning Systems (EWS) for cyclones should be maintained properly and inspected periodically. Further, communication equipment and adequate quantity of cyclone kits should be available in the districts for relief and rescue operations during disasters.
- All shelters, which were unauthorisedly occupied by Government/private parties should be got vacated and maintained properly. Likewise, rescue boats not in fit condition, should be immediately repaired.
- Financial management of SDRF funds should be strengthened, and strict action initiated for non-utilisation/delayed utilisation of funds, as well as diversion of funds/irregular expenditure. Non-submission of UCs should be viewed seriously, and personal accountability of the concerned officials ensured for such non-submission.

7 Performance Audit on “Disaster Preparedness”

7.1 Disaster Management –Introduction

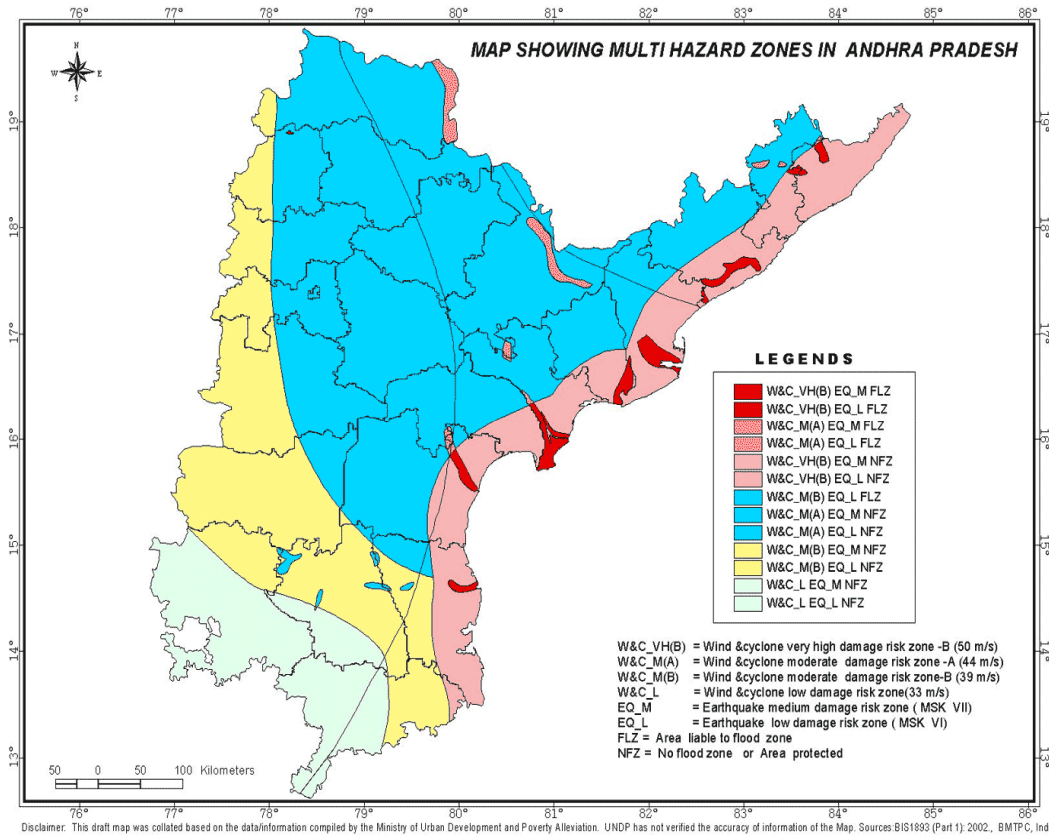
7.1.1 Disaster Management Act

Disasters are catastrophes, calamities or grave occurrences, arising either from natural or man-made causes, which result in substantial loss of life, human suffering, and/or damage to property/environment and whose nature or magnitude exceeds the coping capacity of the community of the affected area. Disaster management has moved from a reactive and relief-centric approach to a holistic and integrated approach covering prevention, mitigation and preparedness in the pre-disaster phase; and response, rehabilitation and reconstruction in the post-disaster phase.

In December 2005, the Government of India enacted the Disaster Management Act, 2005. The Act provides the legal and institutional framework for the effective management of disasters; under its provisions, the National Disaster Management Authority (NDMA) headed by the Prime Minister, State Disaster Management Authorities (SDMAs) headed by the Chief Ministers, and District Disaster Management Authorities (DDMAs) headed by the Collectors have been established. Further, the Act also provides for Disaster Management Plans at the national, State and District levels, as well as the creation of a National Disaster Response Fund and a National Disaster Mitigation Fund.

7.1.2 Andhra Pradesh – Vulnerability Profile

Andhra Pradesh (AP), with a 972 km long coastline, covers 274,000 square km of area on the east coast of India, and is vulnerable to major natural disasters like cyclones, floods earthquakes and droughts, as well as man-made disasters e.g. industrial/chemical hazards.



Vulnerability map¹ of Andhra Pradesh for major natural disasters

The vulnerability of AP to major natural disasters covers²:

- **Cyclones and Floods:** According to the available disaster inventories, AP has suffered the most from the adverse effects of severe cyclones. It has been estimated that about 44 percent of AP's total territory is vulnerable to tropical storms and related hazards, while the coastal region suffers repeated cyclones and floods. Further, Khammam district in the Telangana region, Kurnool in the Rayalaseema region along with three districts in Coastal Andhra Pradesh are affected by monsoon floods.
- **Earthquakes:** 34 per cent of Andhra Pradesh falls in Seismic Zone III³, which has the possibility of earthquakes up to MSK intensity VII⁴ or more. Major urban centres of the State with mushrooming apartments and commercial complexes are Hyderabad (Zone II) with population over 7.5 million, Visakhapatnam (Zone II) with population of over 2.0 million and Vijayawada (Zone III) with population over 1.8 million. Other important towns falling in zone III are Tirupati, SPS Nellore and YSR Kadapa.

¹ Source: Hazard map of Andhra Pradesh – mapsof.net/map/hazard-map-of-andhra-pradesh
² Source: Disaster Management Department. (www.disastermanagement.ap.gov.in)
³ Source: Categorized as per Seismic Zone map of India given in the earthquake resistant design code of India [IS 1893 (Part 1) 2002]
⁴ MSK (Medvedev-Sponheuer-Karnik) scale is an intensity scale for measuring the severity of earthquakes. The MSK scale has 12 intensity degrees from 'I-not perceptible' to 'XII-very catastrophic', with 'VII' corresponding to 'very strong'.

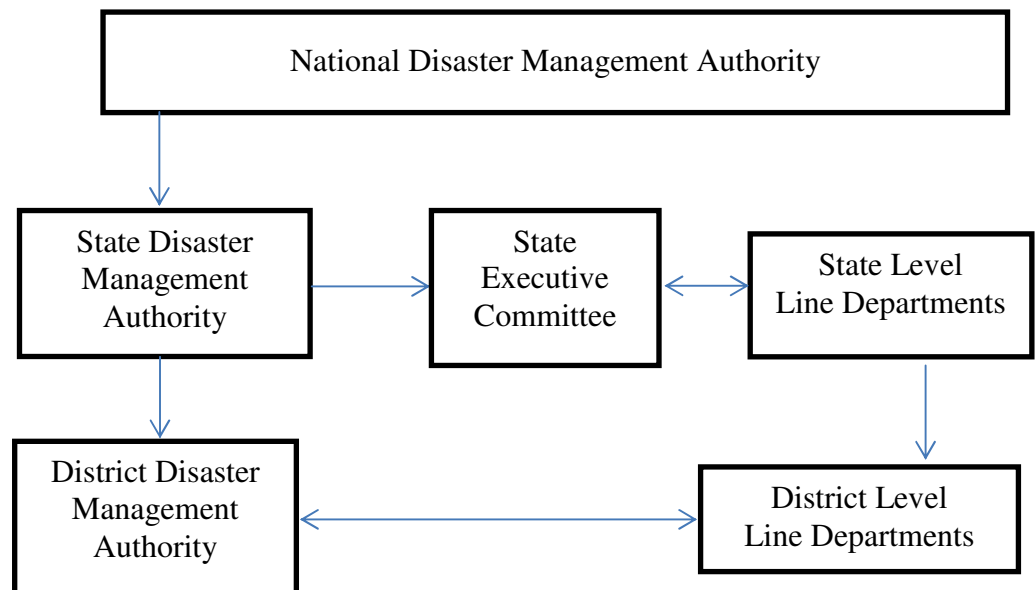
- **Drought:** Andhra Pradesh has historically been most severely affected by drought. The failure of monsoons has had a disastrous effect on the State's sizable agriculture for livelihood. Eight districts out of the 23 districts in AP are particularly vulnerable to drought viz., Anantapur, Chittoor, YSR Kadapa and Kurnool in Rayalaseema; Rangareddy, Mahabubnagar and Nalgonda in Telangana; and Prakasam in coastal Andhra. Together, these districts are home to about 30 million people and account for about 70 per cent of State wide crop production loss due to drought.

Cyclones generally occur during April/May and September to December, while floods occur during July to September. No specific periodicity of occurrence can be ascribed to forest fires, earthquakes and droughts.

The worst cyclonic disaster in Andhra Pradesh occurred in November 1977 in Krishna District (around Diviseema Taluka) with officially estimated loss of more than 10,000 lives. During the last decade there were 20 incidents of Cyclones/Floods causing a financial loss of ₹ 44,765.27 crore (includes cost of damages of 17.52 lakh houses and 50.74 lakh hectares of crops) and 1,021 human deaths.

7.1.3 Organisational arrangements for disaster management

Organisational Chart



A comprehensive institutional mechanism has been put in place by the Government of Andhra Pradesh (GoAP) for disaster preparedness and management. The nodal agency at the State level for disaster management is the Commissioner for Disaster Management & Ex-Officio Principal Secretary (CDM), who provides guidance and coordinates with other line departments for disaster preparedness work in accordance with the guidelines laid down by NDMA, and is responsible for preventive, relief and rehabilitation activities in the State.

At the District Level, the District Collector is responsible for overall coordination and implementation of disaster management at the district level. The Collector prepares the District Disaster Management Plan for the district, and monitors and ensures that the guidelines for prevention, mitigation, preparedness and response measures laid down by the SDMA are followed by all the line departments and the local authorities in the district.

Individual Line Departments (e.g., Panchayat Raj Department; Agriculture; Irrigation & CAD; Fire Services; Local Bodies; Power Discoms; Medical; Civil Supplies) discharge specific responsibilities relating to disaster preparedness within their jurisdictional area of operation.

7.2 Audit Approach

7.2.1 Audit Objectives

We conducted the performance audit with the objective of assessing the following:

- Whether the institutional and administrative arrangements for disaster management, as well as planning thereof, were adequate and effective;
- Whether early warning systems for natural disasters were adequate and effective;
- Whether communication and awareness programmes for target groups (including mock drills of disaster plans) were effective;
- Whether protective/preventive and preparatory measures for recurring disasters were adequate; and
- Whether allocation of funds was adequate, timely availability of funds was ensured, and funds were utilised efficiently and economically.

The main focus of the performance audit has been on cyclones and floods, given the State's vulnerability to these disasters.

7.2.2 Audit Criteria

The implementation of various components of disaster preparedness was evaluated with reference to the following criteria:

- Disaster Management Act, 2005
- National Policy on Disaster Management, 2009
- AP Disaster Management Rules, 2007
- Standard Operating Procedures for Disaster Management Manual published by GoAP.

7.2.3 Audit Methodology

In addition to State level issues, five districts⁵ were selected based on vulnerability profile of AP, prepared by Commissioner for Disaster

⁵ East Godavari, Khammam, Kurnool, SPS Nellore and Visakhapatnam.

Management, covering all the three regions (Coastal, Rayalaseema and Telangana) in the State for the Performance Audit on disaster preparedness covering the period from 2007-08 to 2011-12. We conducted field audit between June and September 2012, covering audit scrutiny of records of Commissioner for Disaster Management and Heads of Line departments at State level; and District Collector and other line departmental offices at the District levels. Our audit teams also conducted physical inspection of 126 cyclone shelters out of 478 shelters in four districts (excluding Kurnool).

7.2.4 Acknowledgement

We acknowledge the co-operation extended by the Commissioner for Disaster Management and other Departments of Government of Andhra Pradesh and their officials during the conduct of the Performance Audit. We held an Entry Conference on 7 June 2012 with the Commissioner for Disaster Management & Ex-Officio Principal Secretary to Government, Revenue (DM) Department along with other departmental officials, wherein the audit scope, objectives and approach was explained. We held an Exit Conference on 6 December 2012 with the Commissioner for Disaster Management & Ex-Officio Principal Secretary to Government, Revenue (DM) Department along with other departmental officials, wherein the audit observations were discussed in detail. The replies from the State Government are awaited. The responses furnished during the Exit Conference have been duly considered, while finalising the Report.

7.3 Audit findings

7.3.1 Institutional and Administrative arrangements for disaster management and planning thereof

7.3.1.1 State Disaster Management Authority (SDMA)

The State Disaster Management Authority (SDMA), which was constituted in 2007 under the provisions of the Central Disaster Management Act, is headed by the Chief Minister and includes other Cabinet Ministers as members. As per Rule 4(1) of AP Disaster Management Rules 2007 (Rules), the SDMA was required to meet at least once in three months. However, it met only twice between 2007-08 and 2011-12. No annual reports on its activities were prepared by the SDMA, though prescribed in the Rules.

7.3.1.2 State Executive Committee (SEC)

The State Executive Committee (SEC) was constituted in 2007 under the provisions of the Central Disaster Management Act. It is headed by the Chief Secretary to State Government, who is Chairperson, ex-officio; other members include Principal Secretaries/Secretaries of Finance; Panchayat Raj & Rural Development; Irrigation & Command Area Development, with the Commissioner for Disaster Management being the Member Convener. The SEC shall meet as often as necessary but at least once in three months as per Rule 8(6). However, only one meeting of the SEC was held in June 2008 till date.

7.3.1.3 District Disaster Management Authority (DDMA)

As per Rule 10 of the Andhra Pradesh Disaster Management Rules notified in November 2007, District Disaster Management Authorities (DDMAs) to be headed by the District Collectors were to be constituted. We observed in the five test-checked districts that while the DDMA's in East Godavari, Visakhapatnam and Khammam were constituted in November 2007, the DDMA's in Kurnool and SPS Nellore were constituted in April 2008 and May 2008 respectively. Further, as per Rule 11(1), the DDMA's were to meet at least once in three months each year. However, there was a shortfall of 65 per cent in DDMA's meetings in the test-checked districts during the last five years as shown in the following table:

Table 7.1 Shortfall in meetings of test-checked DDMA's

Sl. No.	Name of the District	Date of constitution	No. of meetings to be held, meetings held and shortfall thereof														
			2007-08			2008-09			2009-10			2010-11			2011-12		
			TH	H	S	TH	H	S	TH	H	S	TH	H	S	TH	H	S
1.	East Godavari	11/2007	2	0	2	4	0	4	4	0	4	4	1	3	4	0	4
2.	Visakhapatnam	11/2007	2	2	0	4	2	2	4	1	3	4	2	2	4	3	1
3.	SPS Nellore	05/2008	4	0	4	4	2	2	4	1	3	4	2	2	4	2	2
4.	Kurnool	04/2008	4	0	4	4	3	1	4	4	0	4	1	3	4	2	2
5.	Khammam	11/2007	2	2	0	4	0	4	4	1	3	4	1	3	4	1	3

(TH-to be held; H-held; S-shortfall)

A scrutiny of the minutes of the meetings held revealed that responsibilities of the Line departments and the critical areas for pre-preparedness and post disaster situations were broadly discussed, which justified the purpose of holding these meetings. Not holding of these meetings resulted in non-consideration of such vital issues on a regular basis.

7.3.1.4 Planning for impending disasters

The SDMA had prepared a State Action Plan in 2010 and sent it to NDMA in February 2010, which returned the plan with suggestions for better implementation. CDM has also prepared manuals/contingency plans on cyclones (date not available), floods (1995) and earthquakes (2002). As regards District-level Plans, no calendar was prescribed in the Rules for preparation and finalisation of District Disaster Management Plans. However, the plans are prepared before the onset of the cyclone season. Generally, cyclones occur during April/May and October/November and floods occur during South-West Monsoon from July to October.

- As an example, the cyclone contingency plan lists out, with admirable clarity and detail, the action to be taken immediately before, during and after the occurrence of a cyclone by every Department. However, the plan does not appear to have been updated in the light of subsequent

technological and other developments (e.g., easy availability of mobile phones, internet/e-mail etc.)

We observed that

- In SPS Nellore and East Godavari, consolidated and comprehensive District Disaster Management Plans were prepared every year during the period 2007-12 and in timely manner⁶. While the district plans in SPS Nellore district were prepared and submitted to SDMA, the district plans in East Godavari district were not submitted to SDMA during 2007-12.
- In Visakhapatnam, individual action plans for major disasters (i.e., cyclone, floods and drought) were prepared every year in time by the concerned line departments such as Revenue, Agriculture, Medical, Fisheries; Fire Services; and Local bodies etc., involved in disaster preparedness. However, these Departmental plans were not consolidated, and an integrated District Plan was not prepared and submitted to the SDMA for any of the years from 2007 to 2012.
- In Kurnool, the plan was prepared for 2009-10 in time. However the plan for 2010-11 was prepared and sent to the SDMA only in April 2011. Further the plan for 2011-12 was reportedly under preparation (as of September 2012).
- In Khammam, district plans were prepared only for 2008-09 and 2010-11 and submitted to SDMA. But, these were not prepared in a timely manner.

Thus, the status of disaster planning in the five sampled districts presents a mixed position. While in East Godavari and SPS Nellore district the plans for recurring disasters like floods/cyclones were prepared in time, in the other three districts, such plans were either not consolidated or not prepared in time. This indicates lack of monitoring and control system at SDMA level for the timely preparation and consolidation of the disaster management plans.

Audit scrutiny also revealed that despite being provided for in the Standard Operating Procedures (SOP) Manual for Disaster Management published by GoAP, the following lacunae were found:

- No mapping of roads in the vulnerable areas in East Godavari district was done by the Roads & Buildings Department though action plans were prepared by the DDMA's. Further, no measures were taken to identify vulnerable roads and alternative routes for the transportation and evacuation of the residents of vulnerable areas to safer places.
- For the purpose of identification of vulnerability in urban areas, the Master Plan of Kakinada town (headquarters of East Godavari district) prepared as long back as in 1977 was required to be revised every 20 years by the Municipal Commissioner with the approval of Director of Municipal

⁶ Specifically, before the onset of the cyclone season.

Administration. However, no revision took place till date. It was stated that the revision of Master Plan is under progress.

7.3.2 Early Warning Systems for natural disasters

7.3.2.1 Early Warning Systems for Cyclones

We found that after receipt of cyclone message/warnings from CDM, Hyderabad and the Cyclone Warning Centre, Visakhapatnam, the District Collectors immediately disseminate the same up to the mandal level through different modes of communication (SMS, e-mail, VHF sets etc.) and alert all the line departments concerned for preparedness work. However, we found the following deficiencies in the sampled districts:

- In East Godavari district, two shore stations⁷ established at Balusutippa and Antharvedi became non-functional due to breakdown of the communication system after the effect of Jal Cyclone during November 2010. The status remained the same till date (June 2012), and no funds were provided for its restoration, although a proposal in this regard was submitted by the Assistant Director of Fisheries, Amalapuram, East Godavari district to the Dy. Director of Fisheries, Kakinada on 02 November 2011 to take up the issue with the Commissioner of Fisheries, Hyderabad.
- In East Godavari District, 30 Early Warning Systems (EWS) procured by Project Director, District Rural Development Agency (DRDA) with UNDP funds were installed in December 2008 but became unusable due to repairs within one year of their procurement and were not in working condition from October 2009 onwards. The District Collector, who is responsible for maintenance of the equipment, did not take any action either to get the systems repaired or to get new ones installed at the needy places in the district.
- In SPS Nellore district, 30 EWS were installed in 2008. The installation report showed that 12 systems were with low power battery and these were installed at places⁸ where even power supply was not available, defeating the very purpose of their installation. The remaining 18 EWS, though in good condition, also became non-functional due to lack of maintenance. Thus, all the 30 EWS became non-functional. Further, we physically verified three sets kept at Indira Nagar SC colony; Utukuru P. Palem; and Pathapalem and found that they were either completely missing or their key parts were missing. Though the situation had been persisting for the last two years, as reported by the local residents, no action had been taken by the Revenue authorities. Also, no revenue

⁷ To create shore-to-vessel communication system and to disseminate cyclone/weather forecast and to receive distress/SOS calls during urgency to safe guard lives and vessels at sea.

⁸ Gangapatnam P.Palem, Karikadu, Kattuvapally, Kollapattu, Koridi, Kothapatnam, Madhavapuram, Meejuru, Mudivarthi SC Colony, Pathapalem, Srinivasasatram and Utukuru P.Palem.

authorities i.e., Tahsildars/Mandal Development Officers had noticed the same and reported these deficiencies to higher authorities. This indicates lack of monitoring by the concerned authorities for pre-disaster preparedness by the Revenue Department.

- Though a toll free number 1077 is functioning in the control rooms in all the Collectorates of the selected districts except Kurnool (where neither was a control room established nor was a toll free number in existence), this number could be accessed only through BSNL and Idea Networks, causing inconvenience to the public using other networks available for telecommunication in emergency during disasters. The District Collectors concerned promised to take necessary steps in this regard.

7.3.2.2 Early Warning Systems for Floods

We found the EWS for floods in all the test-checked districts to be adequate. Flood levels are being recorded by the offices of the Central Water Commission at various stations on an hourly basis. This data is collected during the flood season and analysed at Hyderabad using a computer simulated model of rivers to predict water levels for the next 24 hours. In turn, this information is communicated to the District Collectors concerned through wireless sets; HAM sets; Radio Sets; and Telephones for further dissemination.

7.3.2.3 Emergency Operation Centres at State and District Level

Emergency Operation Centres (EOCs) at State and District level are responsible for dissemination of warnings to all the line departments in the district. We observed in the test checked districts that the EOCs were equipped with latest technologies and communication facilities viz., telephones; computers with internet and fax; and wireless sets, with sufficient staff, and functioning satisfactorily round the clock during disasters.

7.3.3 Communication and awareness programmes for target groups (including mock drills of disaster plans)

We found that the Fisheries Department, in coordination with the Coast Guard and in association with District Fishermen Youth Welfare Association was conducting awareness meets/programmes in Visakhapatnam and East Godavari districts. However, in SPS Nellore district, no such programmes were conducted and the Fisheries department did not furnish any information in this regard. No awareness programmes were conducted in Kurnool and Khammam districts as there were no fishermen colonies. In East Godavari District, DD (Fisheries), Kakinada reported that most of the fishermen do not agree and cooperate for evacuation to safer places due to illiteracy and ignorance.

We also noted that publicity for inculcating awareness among the public for disaster preparedness was being given through organising photo exhibitions on post disaster events and publicity in local newspapers etc. Also, cyclone warnings were being circulated through fishermen societies.

Fishermen residing nearby seashore are generally well aware of the weather conditions, floods, cyclones etc., with their experience and information through media and other sources. Hence, in our opinion, this aspect does not appear to be a major risk factor for the fishermen.

We found that in all the five test-checked districts, the line departments viz., Revenue, Fire Services, Fisheries, Factories conduct mock drills every year as stated in their action plans. However, the number of mock drills to be conducted per year by them was not prescribed.

7.3.4 Protective/preventive and preparatory measures for recurring disasters

7.3.4.1 Communication equipment

We found that in four out of five sampled districts⁹, a majority of the communication equipment (which were procured between 1992 and 1998) was not in working condition due to repairs, which could affect both disaster preparedness and relief. Details are given below:

Table 7.2 Status of Communication Equipment

Name of the District	Equipment available			In working condition			Not in working condition		
	HAM Radio	VH F Sets	Satellite Phones	HAM Radio	VH F Sets	Satellite Phones	HAM Radio	VH F Sets	Satellite Phones
East Godavari	10	92	03	0	92	0	10	0	03
Visakhapatnam	08	66	02	01	38	0	07	28	02
SPS Nellore	22	55	03	0	55	0	22	0	03
Khammam	27	10	0	0	02	0	27	08	0
Total	67	223	08	01	187	0	66	36	08

Thus, out of 67 HAM Radios available in four districts only one was functional; and none of the eight satellite phones in these districts was in working condition. Despite availability of funds the non-functional communication equipments were not repaired/replaced in Visakhapatnam and Nellore districts by the DDMA's.

7.3.4.2 Cyclone Kits/Stores

We observed that

- In East Godavari district, 10 cyclone kits¹⁰ were procured in June 2010. Of these, 9 kits were allotted to needy places; and one kit kept in the Collectorate was lying idle though one highly vulnerable Mandal (Thondangi) needed the same. The Department, in reply, stated that the kit would soon be installed at Thondangi Mandal.

⁹ No such communication equipment was procured in Kurnool District, which is not along the coastline.

¹⁰ Comprising 35 items like life jackets, helmets, ropes, gas torch, rain coats, petromax lights, gloves, tapes, oxygen cylinder, first aid box etc.

- In Visakhapatnam district, although funds amounting to ₹ 70.50 lakh (₹ 50 lakh for procurement and maintenance of cyclone stores material and ₹ 20.50 lakh for maintenance and procurement of communication equipment) were provided by GoAP in June 2009, no cyclone stores material or any communication equipment were procured. It was replied that out of the amount of ₹ 70.50 lakh provided, an amount of only ₹ 5.60 lakh was utilised towards repairs and maintenance of existing VHF sets in the year 2009-10 and the balance amount had lapsed. GoAP had been addressed for revalidation of budget for the year 2010-11 but in vain, and no further funds were provided from 2010-11.
- Similarly, in SPS Nellore district, though funds amounting to ₹ 90.49 lakh (₹ 41.08 lakh for procurement and maintenance of cyclone stores material and ₹ 49.41 lakh for maintenance and procurement of communication equipment) were provided in June 2009, no cyclone kits/communication equipment were procured though the requirement for the kits was projected in the action plan by the Tahsildars. It was replied that due to administrative delays (non-receipt of relaxation of treasury control orders), the funds could not be utilised in time before lapsing of the budget. No further funds were provided from 2010-11 by the GoAP.

7.3.4.3 Cyclone Shelters

Cyclone shelters had been constructed between 1985 and 2001 in four out of the five test checked districts¹¹. However, we found that since no funds had been released by GoAP for renovation and repairs of the shelters during 2007-12, their condition was very poor and they were not in a usable condition. In East Godavari district, no funds were released despite proposal being submitted (21.09.2011) to Government. In Visakhapatnam, the Panchayat Raj (PR) Department, which was responsible for construction/maintenance of cyclone shelters, did not furnish any information on release of funds. We observed from the physical and financial reports furnished for the last five years that no expenditure was incurred on repair works of cyclone shelters. In reply to an audit query Superintending Engineer (PR), SPS Nellore district stated that though the funds were released for repairs of shelters but it was not sufficient.

We conducted physical inspection of 126 shelters out of a total of 478 in four districts and noticed that only 29 out of 126 shelters were usable and the remaining 97 were unusable, either requiring major or minor repairs or in a dilapidated condition. The usable shelters were occupied by government agencies or private persons. The deficiencies noticed in the condition and maintenance of the 126 shelters are summarised below:

¹¹ The fifth district, Kurnool, is not prone to cyclones.

Name of the District	No. of shelters constructed	No. of shelters visited by audit team	Condition of the shelters visited
East Godavari	168	22	<p>Insufficient accommodation; lacking basic amenities like drinking water, electricity, bath and toilets; unsafe due to leaky/damaged roof requiring major repairs.</p> <p>Two shelters were occupied by private persons; one each by Fair Price (FP) shop, Veterinary and Medical dispensary, GP/VRO office and library etc. Two shelters were located in low lying areas.</p>
Visakhapatnam	141	36	<p>Six shelters were in dilapidated condition, another 12 shelters required major repairs and were unsafe for living. Other shelters, though in usable condition, were lacking basic amenities.</p> <p>Two shelters were occupied by FP shops; one each by GP office, Veterinary dispensary and private milk centre; and two occupied by private families. Shelter at Gandivanipalem was occupied by BARC (Bhabha Atomic Research Centre) unit.</p>
SPS Nellore	161	60	<p>Shelter at Monapalem near sea shore, which was dismantled in 2000, was not rebuilt although 200 persons of the fishermen community were residing in that area. While five shelters were in dilapidated condition, the shelter at Ramdupalem was located within 100 metres from the sea coast and was in poor condition and unsafe for dwelling. The other shelters, though in usable condition, required major/ minor repairs, besides lacking basic amenities such as drinking water, electricity and bath/toilet facilities.</p> <p>Three shelters were occupied by FP shops; 12 by private persons; one each by GP office and private hospital; and two were occupied by PHCs. Shelter in the Collectorate was used by Government offices and SBI.</p>
Khammam	8	8	<p>Though each shelter was intended to accommodate 250 people, they could provide shelter for 80 people only. Shelter at VR Puram was used for residential purposes by MPDO and his staff. Two shelters at Jaggavaram village and one each at Kothur and Jeediguppa villages were in poor condition and lacked basic amenities like electricity, water and bath/toilet facilities.</p>

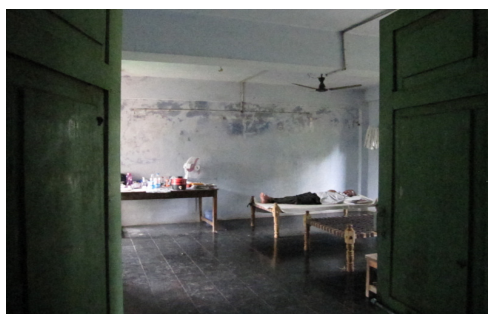
Photographs taken during the field visit by the audit teams to the shelters indicate the poor status/irregular occupation of these shelters.



Toilets at Konapapet shelter in East Godavari District



Shelter in dilapidated condition at Dibbavanipalem-2 in Visakhapatnam District



Shelter at VR Puram used as staff quarter in Khammam District



Shelter at G.Palem used as FP shop in SPS Nellore District

The Revenue Department and Panchayat Raj Engineering Division are collectively responsible for inspection of the status of the shelters and maintenance of the shelters through periodic review respectively, to ensure proper upkeep. It is evident from the above that there was no proper watch on the status of the shelters and thus, most of the shelters were not fit for accommodating the cyclone victims in the event of any disaster.

7.3.4.4 Rescue Boats

As regards the status of rescue boats, audit scrutiny revealed the following:

- Since cyclones are recurring disasters in East Godavari district that generally occur during October – November every year, the rescue boats are required to be kept ready prior to occurrence of the cyclones. However, none of the 12 rescue boats available were in usable condition due to repairs. Deputy Director of Fisheries, Kakinada, East Godavari District replied (June 2012) that proposals were submitted to District Collector for release of Rs.3.22 lakh to take up repairs to the rescue boats.
- In Visakhapatnam district, though 10 out of 43 Mandals were very close to the seashore (within 1 to 2 Km), only 9 rescue boats were available with the Fisheries Department for evacuation of 1.5 lakh fishermen community residing in 70 hamlets of these Mandals. Even out of these nine boats, two were not in working condition. Thus, the availability of boats is not commensurate with the population residing in vulnerable Mandals. It was

replied that floods occurred in the district as far back as in 1990 and thereafter there was no such incidence and also all the fishermen were having their fishing crafts at their village. The reply is not acceptable, as the administrative machinery should be prepared for any eventuality and responsibility devolves upon them to take up rescue operations during disasters without depending on the fishermen themselves. It was also stated that a proposal was submitted to GoAP for sanction of new boats in place of damaged boats.

The Fisheries Department offices in East Godavari and Visakhapatnam districts admitted that due to lack of sufficient equipments like rescue boats, lifesaving equipments, fishermen safety kits etc., the evacuation of humans and their belongings to safer places became hazardous and was consuming more time during disasters.

- In SPS Nellore district, the JD (Fisheries) reported that out of five rescue boats only one was not usable. However, during field visit, we noticed that two more boats at Gudur and Tada were also not usable as depicted below. Hence, a total of three out of five boats were not in working condition.



Boat at Gudur



Boat at Tada

Further in the same district, although four Distress Alert Transmitter Systems (DATS) were procured (July 2012), they were not allotted to any of the boat owners of fishermen society so far and kept idle with the Joint Director of Fisheries, SPS Nellore. It was stated that the same would be distributed very soon. Further these systems appeared to be inadequate for the 21 fishermen boats in the district.

- In Khammam district, no rescue boats and lifesaving equipment were available with the Fisheries Department. It was stated that during disasters, private boats were hired for rescue operations in the district.

7.3.4.5 Buildings in dilapidated condition

In the Greater Hyderabad Municipal Corporation jurisdiction, 144 buildings were identified in dilapidated condition out of which only five were demolished. Notices were issued to the remaining 139 buildings during 2004-12, but no action was taken till date, though 53 were in most dangerous condition and unsafe for living.

7.3.5 Allocation and timely availability; and economic and efficient utilisation of funds

Budgetary position: The following table indicates the budget received under State Disaster Response Fund (SDRF) and expenditure incurred thereof:

Table 7.3: Receipts and Expenditure under SDRF

(₹ in crore)

Year	Opening balance	Amount received			Total funds available	Amount utilised	Closing balance
		Central share	State share	NCCF			
2007-08	Nil	284.51	94.84	-64.52	314.83	307.05	7.78
2008-09	7.78	298.73	69.78	29.82	406.11	425.98	Nil
2009-10	Nil	313.67	104.56	685.81	1104.04	1536.49	Nil
2010-11	Nil	381.63	127.21	474.78	983.62	1052.36	Nil
2011-12	Nil	300.71	133.57	850.72	1285.00	1207.09	77.91

(NCCF: National Calamity Contingency Fund)

We found financial management for disaster preparedness was deficient, with several instances of non-provision of funds in time, non-utilisation/delayed utilisation of State Disaster Response Fund (SDRF), non-submission of UCs for SDRF/UNDP funds, as well as numerous cases of irregular diversion of SDRF and non-remittance/improper remittance of SDRF. Details of the above deficiencies are summarised below.

7.3.5.1 Delayed Provision of Funds

We found that on many occasions, funds were released by the SDMA with delays ranging from three months to one year from the date of occurrence of disasters, defeating the very purpose of establishing the SDRF. The delay in release of funds is tabulated below:

(₹ in crore)

Sl. No.	Nature & Date of disaster	Date of reporting of loss by Depts.	No. & Date of issue of GO releasing funds	Amount	Delay from date of disaster
1.	Hail storm April 2010	03.05.10 by Horticulture Dept.	315/28.09.10	19.36	5 months
		30.11.10 by Agriculture Dept.	389/11.12.10	3.43	7 months
2.	Drought in Kharif September 2009	12.10.09 by Agriculture Dept.	145/18.04.10	279.38	6 months
3.	Laila Cyclone May 2010	19.06.10 by MAU Dept.	312/18.09.10	84.39	3 months
4.	Laila Cyclone May 2010	11.06.10 by PR (R&B)	308/17.09.10	115.96	3 months
5.	Laila Cyclone May 2010	14.06.10 by AH Dept.	307/17.09.10	9.37	3 months
6.	Jal Cyclone Oct-Nov'2010	--NA--	316/05.12.11	259.88	12 months
			730/25.06.11	88.15	7 months
7.	Heavy Rains/floods - Dec'10	09.02.11 by Horticulture Dept.	157/06.06.11	35.94	6 months

In Visakhapatnam district during Kharif 2009, 42 Mandals were declared as drought affected in two spells (27 mandals in September 2009 and 15 mandals in December 2009) by the Government. As against the input subsidy requirement of ₹ 779.39 lakh, the District received (02.11.2009) only ₹ 439.17 lakh. Additional funds of ₹ 339.22 lakh were sought by the District Collector only in February 2010. But, due to non-receipt of detailed proposal with fresh enumeration list of farmers, no further funds were provided by the Government till May 2012.

7.3.5.2 Non-Provision of Funds

Audit scrutiny revealed that:

- Funds for maintenance/construction of shelters were not provided by the Government during 2007-12 in East Godavari district, although a proposal was submitted by the PR Department in April 2012 for repairs, renovation/construction of 99 shelters at a cost of ₹ 173.80 lakh. Similarly, no funds were provided by Government for repairs to the cyclone shelters in Visakhapatnam and Khammam districts.
- Funds for restoration of two shore stations sought (2 November 2011) by AD (Fisheries), Amalapuram, East Godavari district were not provided so far by the Commissioner of Fisheries, Hyderabad.

7.3.5.3 Non-creation of State/District Disaster Mitigation Funds

Audit scrutiny revealed that the State Disaster Mitigation Fund, required to be created under the Disaster Management Act, had not been created for the reason that constitution of National Disaster Mitigation Fund is awaited. Further, in the five sampled districts, District Disaster Mitigation Funds (DDMFs), required to be created under the Disaster Management Act, had also not been created in any of the five test-checked districts for the same reasons.

7.3.5.4 Non-utilisation/delayed utilisation of SDRF

We found in test-checked districts that the SDRF amounts were either not utilised fully or utilised belatedly, as indicated below:

Amount (₹ in lakh)	Details of non- utilisation/delayed utilisation	Department's response
600.00	Funds receivable towards capacity building (13 th Finance Commission grant in 2010-11) not released till March 2012 to the State.	It was stated that there was a delay in submission of plans/proposals and mismatch of funds among various components by the Government.
275.28	In Visakhapatnam district, as against ₹ 696 lakh sanctioned	It was replied that the balance amount was not drawn due to freezing of budget.

Amount (₹ in lakh)	Details of non- utilisation/delayed utilisation	Department's response
	by Government for relief under Sampoorna Grameena Rozgar Yojana - SGRY (SC) works in 2008-09, an amount of ₹ 420.72 lakh only was drawn and disbursed between June 2008 and October 2009, leaving a balance of Rs.275.28 lakh, depriving the relief to the victims of drought affected Mandals.	
50.00	The amount released in June 2009 towards procurement of cyclone kits in East Godavari district was utilised only in December 2010, by which time four more cyclones had already struck the district.	It was replied that the delay was due to observance of tender procedure.
---	In East Godavari district, more than 20 per cent of the SDRF funds released towards payment of input subsidy to the farmers whose crops were damaged due to cyclones/floods remained unspent every year continuously between 2006 and 2010	It was stated that due to delay in receipt of information and finalisation of list of beneficiaries with joint verification by Agriculture and Revenue officials, the input subsidy could not be disbursed completely. This indicates lack of coordination between officials in the Agriculture and Revenue departments at village and mandal level in preparation/finalisation of enumeration lists.
---	Though 14 Mandals in East Godavari district were declared as drought affected in 11/2011, no funds were provided by Government till 31-03-12. Further, although ₹ 11 crore was provided in April 2012, no disbursements were made to the affected farmers so far defeating the very purpose of providing SDRF.	It was replied that action was being taken to credit the input subsidy directly to the individual bank accounts of the farmers as per the latest guidelines.

Amount (₹ in lakh)	Details of non- utilisation/delayed utilisation	Department's response
822.07	In Kurnool district, out of ₹ 4,655 lakh released (2009-10) towards FDR (Flood Damage Repairs) works, an amount of ₹ 3832.93 lakh was utilised as of June 2012 and the balance of ₹ 822.07 lakh was lying with the Municipal Corporation.	It was replied that the balance amount would be utilised for restoration of permanent works for which tenders were already called for in April 2012. Due to non-availability of sand and fluctuation of rates the works were delayed. The reply is not acceptable since the unspent funds should be remitted to Govt.
90.00	Though ₹ 90 lakh was provided in 2007-08 for water supply schemes for the year 2007-08 to RWS, Visakhapatnam, the amount was utilised between 2007-12, i.e., over a period of 5 years and still there was a balance of ₹ 2.04 lakh available with the department.	It was replied that the balance amount would soon be spent.

7.3.5.5 Non-submission of Utilisation Certificates

As per information furnished by Commissioner, Disaster Management, ₹ 4709.53 crore was released from the SDRF to various departments during 2007-12. Although the guidelines stipulated submission of UCs for SDRF funds, the UCs for ₹ 4024.38crore¹² of funds released during 2007-12 (constituting 85.45 per cent of the funds released), had not been received, which reflects extremely deficient financial management.

The Commissioner for Disaster Management, GoAP, during the exit conference stated that audited UCs for ₹ 3829.32 crore were to be received, as of November 2012, from different Heads of Departments for the CRF/SDRF amounts released during the years 2005-06 to 2011-12, major among them pending from the Commissioner, Agriculture (₹ 1806.88 crore), Engineer in Chief (Panchayat Raj Department) (₹ 456 crore), Engineer in Chief (R&B) (₹ 440.16 crore), Commissioner (MAUD) (₹ 319.93 crore) and Engineer in Chief (RWS) (₹ 207.87 crore). It was also stated that the Commissionerate had been corresponding repeatedly with the various departments for submission of audited UCs.

¹² 2007-08 (₹ 205.67 crore); 2008-09 (₹ 258.97 crore); 2009-10 (₹ 1215.60 crore); 2010-11 (₹ 1078.74 crore); and 2011-12 (₹ 1265.40 crore).

Further, audit scrutiny in the test checked districts also revealed the following instances of non-submission of audited UCs:

Amount (₹ in lakh)	Audit Finding	Department's Response
7,101.22	In Kurnool district, the Collector drew ₹ 3101.22 lakh and ₹ 4000 lakh during 2007-08 and 2009-10, respectively, and disbursed to RDOs/Tahsildars/ DWMA/APSCSC Ltd. The audited UCs are still awaited.	It was replied that the audited UCs would soon be obtained from all the agencies concerned.
3,188.15	In Visakhapatnam district, the JD (Agriculture) drew ₹ 3188.15 lakh towards payment of input subsidy during 2007-12. Though an amount of ₹ 3004.05 lakh was disbursed and the unspent balance of ₹ 184.11 was remitted, the expenditure was not got audited by State Audit Department.	The Department promised to take early action in this regard.
202.50	In SPS Nellore district, the UCs for the expenditure out of the SDRF funds amounting to ₹.202.50 lakh released during 2008-12 and utilised for supply of drinking water during summer seasons by PH&ME Department were not furnished.	The Department stated that action would be taken to get the audited UCs from SPS Nellore Municipal Corporation and 5 Municipalities viz., Kavali, Gudur, Venkatagiri, Sullurpet and Atmakur.
150.46	As against ₹ 211.62 lakh provided to RWS, Visakhapatnam during 2007-12, audited UCs were still due for ₹ 150.46 lakh	It was replied that necessary action would be taken early.
149.50	In SPS Nellore District, the UCs for the expenditure incurred out of SDRF funds amounting to ₹ 149.50 lakh released in July 2009 and utilised for clearance of pending bills of PH&ME Department for supply of drinking water in Municipal Corporation limits relating to previous years were not furnished.	The Department stated that action would be taken to get the audited UCs from SPS Nellore Municipal Corporation and 5 Municipalities viz., Kavali, Gudur, Venkatagiri, Sullurpet and Atmakur.
102.00	UCs for UNDP funds amounting to ₹ 102 lakh released during 2007-12 were not received by the Commissioner for Disaster Management	It was replied that the audit of expenditure by State Audit Department was under process.

Amount (₹ in lakh)	Audit Finding	Department's Response
34.21	Audited UCs were not submitted by the EE, RWS, Nandyal for ₹ 34.21 lakh released during the year 2011-12 towards drought relief measures.	It was replied that the audit of expenditure by State Audit Department is under process.

7.3.5.6 Diversion of Funds and Irregular Expenditure

Audit scrutiny in the test checked districts revealed the following cases of diversion of funds towards inadmissible expenditure like office expenditure, payment of POL expenses, electricity charges, etc.

Amount (₹ in lakh)	Audit Finding	Department's response
275.80	In East Godavari district, an amount of ₹ 441.77 lakh was drawn on AC bill (April 2011) for supply of drinking water during summer, of which an amount of ₹ 275.80 lakh was spent, and a balance of ₹ 165.97 lakh remained unspent.	It was replied that the amount was spent as per the orders of the Government for supply of drinking water during summer. But, since the drinking water problem in summer was not a disaster, utilising the funds from SDRF for this purpose was not in order.
149.50	In SPS Nellore district, the SDRF funds amounting to ₹ 149.50 lakh released in July 2009 were utilised for clearance of pending bills of PH&ME Department for supply of drinking water in municipal corporation limits relating to previous years.	The Department did not furnish reply. But, as per Section 46 (2) of DM Act the SDRF amounts were to be used only for meeting the expenditure for providing immediate relief to the victims of cyclone, drought, earthquake, fire, flood, tsunami, hailstorm, landslide, avalanche, cloud burst and pest attack. Since the drinking water problem in summer was not a disaster, utilising the funds from SDRF for this purpose was not in order.
120.04	In SPS Nellore district, the SDRF funds amounting to ₹ 120.04 lakh released in	It was replied that the Government in

Amount (₹ in lakh)	Audit Finding	Department's response
	April 2008 were utilised for clearance of pending bills of Rural Water Supply department pertaining to previous years.	<p>G.O.Ms.No.29, Revenue (DM) Department dt.18.04.2008 released the funds for clearance of pending bills only.</p> <p>But, as per Section 46 (2) of DM Act the SDRF amounts were to be used only for meeting the expenditure for providing immediate relief to the victims of cyclone, drought, earthquake, fire, flood, tsunami, hailstorm, landslide, avalanche, cloud burst and pest attack. Since the drinking water problem in summer was not a disaster, utilising the funds from SDRF for this purpose was not in order.</p>
57.34	The District Collector, Kurnool diverted ₹ 57.34 lakh from the SDRF funds (2009-10) towards repairs to office, Government vehicles and other contingent expenditure of other departments in the district.	<p>It was replied that the amounts were disbursed as per the orders of the District Collector.</p> <p>The reply is not acceptable as the amounts were to be utilised for the purpose for which it was sanctioned.</p>
41.49	In East Godavari district, supply of food and catering expenses incurred in October-November 2010 (for 8 days) was not supported by authenticated bills/vouchers; payments were made by obtaining hand receipts from the suppliers.	<p>It was stated that since it was a part of immediate relief measures during calamity and food cannot be supplied through registered caterers/reputed hotels having TIN number/printed receipts etc. The reply is not tenable as in some cases, bills from registered suppliers were furnished by the Tahsildars (Kakinada Urban, Pithapuram and Inavilly). Further since the amounts</p>

Amount (₹ in lakh)	Audit Finding	Department's response
		involved were substantial, expenditure should have been supported by authenticated bills/ vouchers.
33.22	In East Godavari district, payment of ₹ 33.22 lakh towards electricity charges of the office, POL charges of office vehicles and levelling of Police Parade Ground were made out of SDRF funds.	It was replied that due to non-availability of sufficient budget, the SDRF amounts were utilised on reimbursement basis. However, we observed that no reimbursements were made so far.
26.50	In Kurnool district, an amount of ₹ 34.50 lakh was diverted from SDRF for payment of ex gratia to suicidal deaths of farmers in two spells during 2009-10, on reimbursement basis. Out of this, ₹ 8 lakh was only reimbursed in December 2011.	It was replied that necessary action would be taken for early reimbursement of the SDRF amounts diverted.
2.42	In East Godavari district, printing charges of farmers' leasehold cards and exhibition of drama on the life of Jyothirao Phule were met out of SDRF funds amounting to ₹ 2.42 lakh.	
1.50	Payment of ex gratia in respect of one suicide death of farmer in Kajuluru Mandal of East Godavari district amounting to ₹ 1.50 lakh.	

7.3.5.7 Non-remittance/improper remittance of unspent funds

It was also observed that in the following cases in the test checked districts, SDRF amounts were either not remitted to the Government account or remitted to the Departmental receipt head of account, which is improper.

Amount (₹ in lakh)	Audit Finding	Department's Response
30.62	In Visakhapatnam district, out of a total release of ₹ 211.62 lakh, the EE, RWS retained the unspent funds of ₹ 30.62 lakh relating to the years 2007-12.	It was replied that the unspent funds would also be utilised for the future works.

Amount (₹ in lakh)	Audit Finding	Department's Response
		The reply is not acceptable as the unspent funds were to be remitted to Government.
25.82	In East Godavari district, out of the amount of ₹ 5 crore drawn between August 2010 and November 2010 for relief measures during floods and Jal Cyclone the unspent balance of ₹ 25.82 lakh was not remitted to Government account till date.	It was stated that the unspent funds would soon be remitted to Government account.
20.57	Out of ₹ 78.22 lakh drawn by Joint Director (Animal Husbandry), East Godavari district on 05.01.2011, an amount of ₹ 57.65 lakh was spent and the balance of ₹ 20.57 lakh was remitted on 03.12.2011 to departmental receipts HOA (0403-800-81-003).	It was stated that the unspent funds were remitted to departmental receipts head as ordered by the Director of Animal Husbandry, Hyderabad. The reply is not tenable as remittance of SDRF amounts to departmental receipts head of account was not proper.

7.4 Conclusion

The Performance Audit revealed a mixed picture about the preparedness of the State Government for disasters. Regarding the institutional arrangements, the State Executive Committee and District Disaster Management Authorities, though formed in all the test checked districts, did not meet at the stipulated frequencies. We found that the State Disaster Management Plan (SDMP), which spells out the policies and structure for State Government in management of disasters is still in the draft stage, even after seven years of commencement of the Act. As regards district plans, in SPS Nellore and East Godavari districts, consolidated and comprehensive district disaster management plans were prepared every year and in timely fashion. In Kurnool and Khammam districts, district plans were not prepared in time. However, in Visakhapatnam district, individual action plans were prepared by the concerned Line departments, but were not being consolidated.

While the system for transmission of cyclone warnings/messages by the District Administration through various modes of communication was effective, the EWS equipment in the test checked districts were either non-functional or unusable. The Emergency Operation Centres (EOCs) at the State and District levels were fully equipped and functioning satisfactorily, although the toll free number (1077) was functional only with BSNL & IDEA networks.

Awareness of preparedness for major natural disasters was, in our opinion, not a major risk factor and mock drills were being conducted by the Line departments every year.

Cyclone kits were not procured in Visakhapatnam and SPS Nellore districts. Also, shelters meant for accommodating flood/cyclone victims were not properly maintained and no funds were provided by the Panchayat Raj Department for taking up repairs. As revealed during our site inspections, non-monitoring of use of these shelters lead to irregular occupation by various departments/persons. Rescue boats with the Fisheries Department were in need of repairs/replacement and no funds were provided.

We found that financial management for disaster preparedness was deficient, with several instances of non-provision of funds in time, non-utilisation/delayed utilisation of State Disaster Response Funds (SDRF), as well as numerous cases of irregular diversion of SDRF and non-remittance/improper remittance of SDRF. We also observed that UCs for ₹ 4024.38 crore (constituting 85.45 per cent of the SDRF funds released during 2007-12) were due from the departments.

7.5 Recommendations

We recommend that

- Commissioner for Disaster Management needs to ensure that District Disaster Management Plans are prepared and consolidated every year in time, well before the projected onset of recurring disasters like cyclones and floods.
- Early Warning Systems (EWS) for cyclones should be maintained properly and a drill for periodical inspection of all EWS equipment before the cyclone season should be put in place.
- The Commissioner for Disaster Management needs to ensure that all the communication equipment and adequate quantity of cyclone kits are available in the districts for relief and rescue operations during disasters; and the funds provided from Government are fully / timely utilised by the DDMAAs for procurement and maintenance.
- Shelters are meant to be available for use in times of cyclones & other disasters. All shelters, which were unauthorisedly occupied by Government/private parties (e.g. Panchayat Offices, Libraries, Dispensaries etc.), should be got vacated. Necessary funds must be provided to ensure repairs and maintenance of these shelters. There should be proper watch and ward and all the shelters need periodical inspection to ensure proper maintenance. Further, rescue boats not in fit condition, should be immediately repaired and for this purpose, necessary funds need to be provided by the Government / DDMAAs.
- Financial management of SDRF funds is deficient, needs to be substantially strengthened, and strict action should be initiated against the

concerned Departments / officials for non-utilisation/delayed utilisation of funds, as well as diversion of funds/irregular expenditure. The non-submission of UCs for more than ₹ 4,000 crore of SDRF fund is completely unacceptable. Given the nature of disaster management works, it is difficult in most cases to withhold future releases, pending non-submission of UCs for earlier releases. However, if UCs are not submitted within 3 months, the concerned officials should be held personally accountable.

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The

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