

## RESEARCH ARTICLE


 OPEN ACCESS

Received: 11.04.2019

Accepted: 22.11.2019

Published: 04.06.2019

**Citation:** Sowmya R, Nagaraj H. (2019). The Role of Government in Disaster Management and Risk Reduction in South India. *Geo-Eye*. 8(2): 17-26. <https://doi.org/10.53989/bu.ge.v8i2.3>

**Funding:** None**Competing Interests:** None

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Published By Bangalore University, Bengaluru, Karnataka

**ISSN**

Print: 2347-4246

Electronic: XXXX-XXXX

# The Role of Government in Disaster Management and Risk Reduction in South India

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## Abstract

*Disaster management is a systematic response to a disaster. The main approach of the management is assessing disaster risk and taking preventive measures has also become a part of disaster management. In present day's disaster management has been an important to frequent natural disaster ranging from earthquake, floods, droughts and other disaster management worth while to be considered. The major types of disaster such as geological, water and climate, biological, nuclear, and industrial disasters etc...*

*The role of government plays an important role in disaster management. Recently India has experienced large number of natural disasters. In recent years natural disaster are also occurs in some southern part of India such as Andhra Pradesh, Telanagana, Karnataka, Tamil Nadu and Kerala. Natural disaster causes the most damage and consequently the socio-economic conditions of the regions and thus most affected areas will become the most vulnerable regions. It is the responsibility of their governments to maintain all cause nouns and to provide social and economic security to such disaster affected areas. Thus the role of the central Government, the state government and local governance plays a very important role in disaster management and risk reduction planning. Government should have proper plan and financial support for most vulnerable regions. Otherwise those affected areas from natural disasters will be facing many problems and it is difficult to planning and manages the vulnerable situations.*

**Keywords:** Disaster management; vulnerable; risk reduction; planning

## INTRODUCTION

In India have several unique features like physical as well human features and India is vulnerable, in varying degrees, to a large number of disasters. According to National disaster Management Authority "India is More than 58.6 per cent of the landmass is prone to earthquakes of moderate to very high intensity; over 40 mil-

lion hectares (12%) of its land is prone to floods and river erosion; close to 5,700 kms, out of the 7,516 kms long coastline is prone to cyclones and tsunamis; 68% of its cultivable area is vulnerable to droughts; and, its hilly areas are at risk from landslides and avalanches. India is also vulnerable to Chemical, Biological, Radiological and Nuclear (CBRN) emergencies and other man-made disasters.

Occurrences of Disasters differ in terms of their nature and extent of impact. The different types of Disasters such as earthquakes and landslides occur suddenly but are restricted in their impact in terms of time and space. Cyclones and floods occur with some element of warning, but their occurrence is confined in duration. Drought extends over a longer period frame and its adverse impact on the economic activities and the life of an area is more lasting. So in any part of the World disaster prone regions should have proper Disaster Management Plans.

### Objective

- To highlight the role of the different level of government organizations in contributing to disaster management and risk reduction.
- Discuss the challenges faced by governments in implementing disaster management and risk reduction.

### Data Source and Methodology

For this study the data has been collected from different government organizations and some statistical data has been collected from government official websites. GIS has been used for generate the map layer.

### Study Area

The Indian landmass is located between the East and the West Asia and it is the southward extension of the Asian Continent. India is Lying entirely in the Northern hemisphere and the main land extends between latitudes 8°4'N and 37°6'N and longitudes 68°7'E and 97°25'E. India is a multifaceted country with large diversity of topography, natural features, cultures, traditions, people, languages, economic features and others. India is further classified into six zones namely North Zone, South Zone, East Zone, West Zone, Central Zone and North East Zone based on their climatic condition, geographical and cultural features.

For this present study south zone of India has been selected. South Zone is home to scenic beaches. All these regions are different from rest of Indian states with their culture and languages. South India is located in the Peninsular Deccan Plateau and it is flanked by oceans on three sides namely by the Arabian Sea in the West, the Indian Ocean to the south and the Bay of Bengal to the east. South India also includes two mountain ranges namely The Western Ghats and the Eastern Ghats. Many rivers flow through South India they are Godavari, Krishna, Kaveri and the Tungabhadra, being an important source of water for this region.

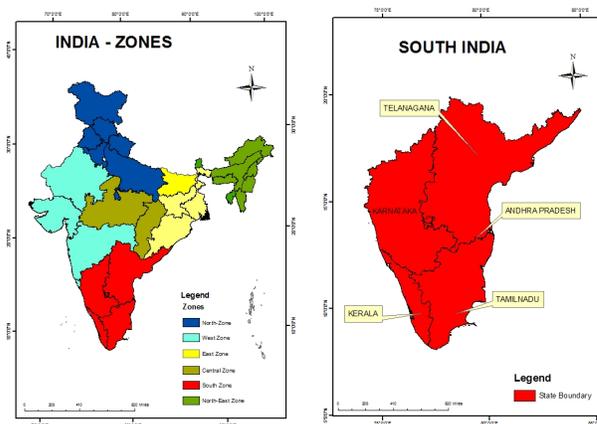


Fig. 1. Geographical location of study area

### Disaster Management in India

Disaster management is actually a dynamic process, which involves planning, organizing, leading and controlling. It includes immediate response, prevention, mitigation, recovery, preparedness and it is a combined effort of all authorities of States and the Centre. India has federal system of government. The Indian Constitution has been decentralized the powers for good administrative management in each level.

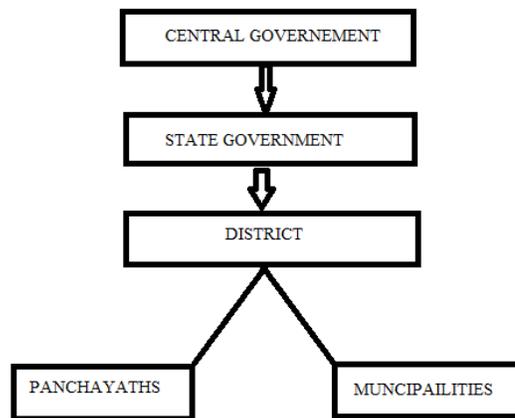


Fig. 2. Frame work of federal Government system

The Government of India has framed the Disaster Management Act in 2005, to provide for the effective management of disasters. Main work of this Act for drawing up and monitoring the implementation of the disaster management plans, ensuring measures by various wings of the Government for prevention and mitigation of the effects of disasters and prompt response to any disaster situation. NDMA is mandated to deal with all types of disasters whether it is natu-

ral or man- made and it is formulate the guidelines, facilitate training and preparedness activities in respect of emergencies. Natural and man-made disasters will also engage the attention of NDMA in partnership with the stakeholders concerned. Resources available with the disaster management authorities at all levels, which are capable of discharging emergency support functions, will be made available to the nodal Ministries/Agencies dealing with the emergencies at the times of impending disasters.

The main objectives of the NDMA are promoting a culture of prevention, preparedness and resilience at all levels through knowledge, innovation and education. Encouraging mitigation measures technology, Establishing institutional and techno legal frameworks to create an enabling regulatory environment, Ensuring efficient mechanism for identification, assessment and monitoring of disaster risks, Ensuring efficient response and relief with a caring approach towards the needs of the vulnerable sections of the society, undertaking reconstruction as an opportunity to build disaster resilient structures and habitat for ensuring safer living. Promoting a productive and proactive partnership with the media for disaster management.

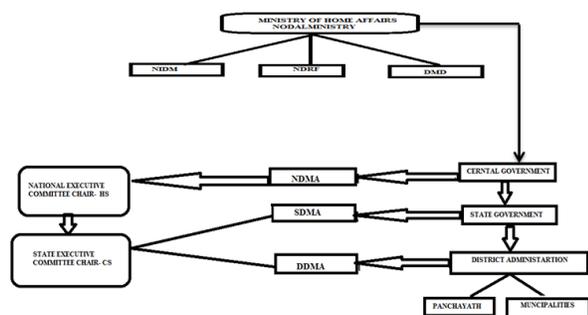


Fig. 3. Legal frame work of natural disaster management act- 2005

*Role and Responsibilities of Government in different level of administration with reference to Disaster Management and Risk Reduction*

The country has age-old integrated administrative machinery for management of disasters at the national, state, district and sub-district level. The basic responsibility of all these level are undertaking rescue, relief and rehabilitation measures in the event of natural disaster is that of concerned state governments.

*Central Government at National Level*

The Central Government introduced the Disaster Management Bill in the winter session of parliament in 2005. The central government supplements the efforts of the states by providing financial and other logistic support.

Many Committees were assigned for disaster management. The main committees are:

- NCMC- National Crisis Management Committee
- CMG- Crisis Management Group.
- NDMA- National Disaster Management Authority.
- NCAP- National Contingency Action Plan: It outlines the action to be taken by various central ministries and departments, determines focal points in the administrative machinery.

In the central level there are two main committee are working on disaster management. They are

1. **National Emergency Management Authority:** It is the authority is to coordinate disaster management activities and ensure adequate preparedness at all levels in order to meet disasters..
2. **National Institute of disaster Management:** It was set up in the year 2003. It will help to develop training modules at different levels and also help to development of national level information based on disaster management policies, formulation of disaster management code and consultancy to various states in strengthening their disaster management system.

Other than these many technical Organizations are also working on disaster management at Central level. They are as follows:

- **IMD- Indian Meteorological Department:** Monitors meteorological information and continuously communicates with disaster managers for disaster preparedness. It gives early warning to the regions mainly is to maximize the number of people who take appropriate and timely action for the safety of life and property.
- **CWC- Central Water Commission:** It provides flood forecasting and warnings The flood forecasting network of the CWC covers all the major flood-prone inter-state river basins in the country.
- **ISRO- Indian Space Research Organization :** Provides the satellite based near real time information support to Central Ministries / Departments and State Ministries / Departments, prior during and after major natural disasters and also provides capacity building in use of Space technology inputs in Disaster Management Support.
- **BMPC- Building and Material Promotion Council:** It work towards a comprehensive and integrated approach for promotion and transfer of potential, cost-effective, environment friendly, disaster resistant building materials and technologies including locally available materials from lab to land for sustainable development of housing.
- **BIS- Bureau of Indian Standards:** Has laid down the standards for construction in seismic zones, popularly known as Building Codes.



- **DRDO- Defense Research and Development Organization:** DRDO's technologies can be easily adapted towards disaster management solution by various stakeholders.

In central level there are ten search and rescue teams have been trained. eighty six specialist search and rescue teams consisting of 45 personnel including doctors, para-medicals, structural engineers etc., are being trained and equipped. Fourteen Regional Response Centers are being set up in different parts of the country to respond to any hazard or calamity in the neighboring states.

A National Disaster Response force will be set up to tackle situations arising from different types of disaster comprising force, Indo-Tibetan border police and the border security force and this force would be positioned at eight locations in different parts of the country.

#### *State Government at State Level*

The Government of India is working with state government to cover the department of relief and rehabilitation into department of disaster management with an increased area of responsibility including disaster preparedness. The Disaster Management Act 2005 provides for state disaster management authority to be constituted by the state government. States have a State Crisis Management Committee (SCMC) for reviews the action taken for response and relief and gives necessary guidelines for any disaster management. At the state level disaster response, relief and rehabilitation activities are handled by department of relief and rehabilitation.

A Calamity Relief Fund (CRF) has been set up in each state as per the recommendation of the eleventh finance commission. 20 percent contributed by the respective state and balance by the central government. The size of the state fund is determined on the basis of vulnerability of the state to different natural calamities and the magnitude of expenditure incurred by the state on relief operations.

#### *District Administration at District and Sub- District Level*

Disaster Management Act 2005 provides for setting up of a district disaster management authority in each district by the state. The district level is the main focal point for disaster management activities at the filed level. The district collector has to maintain district and sub-district level of disaster management with the district and state government as well as the nearest units and armed forces, central police organizations and other relevant central government organizations.

The main organizations are:

- Ministry of Communication,
- Water Resource and Drinking water,
- Surface Transport, who could support the efforts of the district administration in the rescue and relief operations.

A contingency plan for the district for various disasters is formulated by the collector. The disaster management plan would facilitate the preparedness, rescue, relief and rehabilitation activities. It outlines the institutional framework with clear cut roles and responsibilities for various agencies at the district level and below for different types of disasters.

#### *Sub-District Level*

A district is generally subdivided into sub-divisions and Tehsils or Talukas. The head of a sub-division is the sub-division officer (SDO), next level of administration is the village level. Under the UNDP assisted Disaster Risk Management Programme in these two levels. each Taluka and villages are have a Disaster Management Plan and Disaster Management Committee which draws up the plan consists of elected representatives at these levels. The Disaster Management Teams at the village level will consist of members of voluntary organizations such as Nehru Yuva Kendra and other non-governmental organizations as well as able bodied volunteers from the village. The teams are provided basic training in evacuation, search and rescue etc. The Disaster Management Committee will review the disaster management plan at least once in a year.

#### *Role of Government in Disaster Risk Reduction*

The role of the government in disaster risk reduction is being increasingly recognized and stressed in international discussions. The role of government in dealing with disaster risk reduction has been recognized as a key factor to build resilient communities and therefore the UNISDR has specifically addressed the 2010-2011 world disaster risk reduction campaign to local governments under the theme of "Building resilient cities". Therefore it is well understood that any level of governments have a significant role to play in contributing to the building of disaster resilient cities to avoid or limit the adverse impacts of disasters.

UNISDR notices there are three major roles of governments in implementing disaster risk reduction which includes,

1. To play a central role in coordinating and sustaining a multi-level, multi stake holder platform to promote DRR in the region or for a specific hazard.
2. To effectively engage local communities and citizens to disaster risk reduction activities and link their concerns with government priorities.
3. To strengthen their own institutional capacities and implement practical DRR actions by themselves.

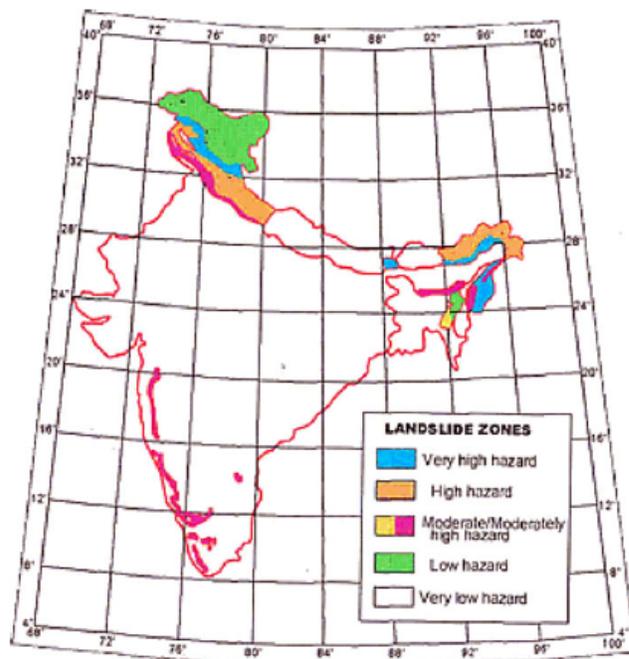
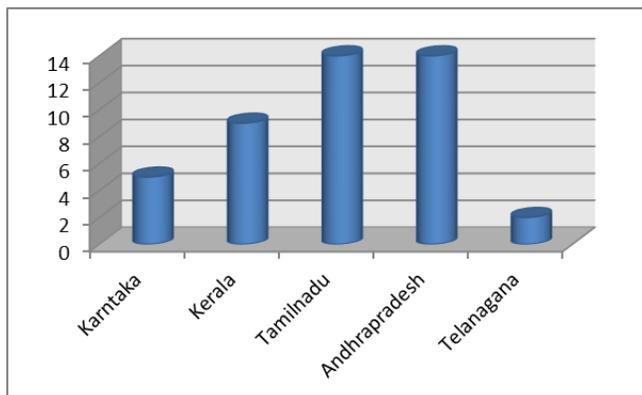
#### **Major Natural Disaster Events Distributions in South India are as follows**

From Cyclone.



state	Major cyclone events (1990-2019)
Karntaka	5
Kerala	9
Tamilnadu	14
Andhrapradesh	14
Telanagana	2

Source: Indian Meteorological Department

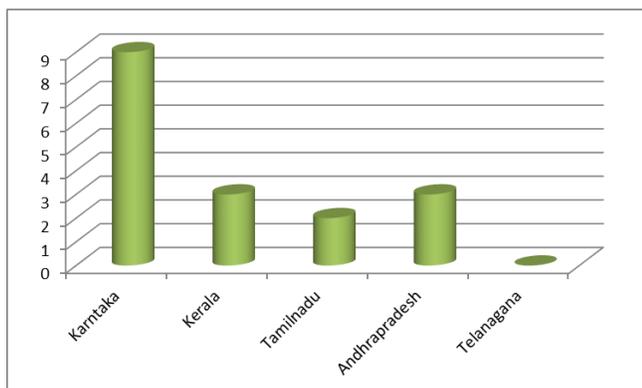


Source : Geological Survey Map of India

State	Major Landslide events (2008-2019)
Karntaka	9
Kerala	3
Tamilnadu	2
Andhrapradesh	3
Telanagana	0

Source: Geological survey of India

From Landslides.



### Disaster Management and Risk Reduction in South India States

There are five states belong in southern zone of India namely Karnataka, Kerala, Tamil Nadu, Andhra Pradesh and Telanagana. Each state have State Disaster Management Authority (SDMA) for manage the disaster situations under Disaster Management Act 2005. These authorities are following the Disaster management Act guidelines. All these states responsibility and their working progress are as follows:

#### Disaster Management and Risk Reduction in Karnataka State

Karnataka is one of the 26<sup>th</sup> states include in the ongoing Government of India and UNDP Disaster Risk Reduction Programme to strengthen the SDMA and DDMA's in the state to undertake disaster risk reduction activities. Karnataka state has the distinction of being the first in the country to establish institutional mechanism to provide science and technology and to monitor, advise the disaster risk mitigation plans inputs by setting up "Drought Monitoring Cell" (DMC) way back in 1988. It has adopted a proactive approach towards monitoring the Natural Disasters by employing Science & Technology based State of the art tools and providing Alert & Early Warning, Forecast & Advisories to various Response Players from a single platform. The activities of DMC has been strengthened, broadened and renamed as "Karnataka State Natural Disaster Monitoring Centre (KNSDMC).Karnataka

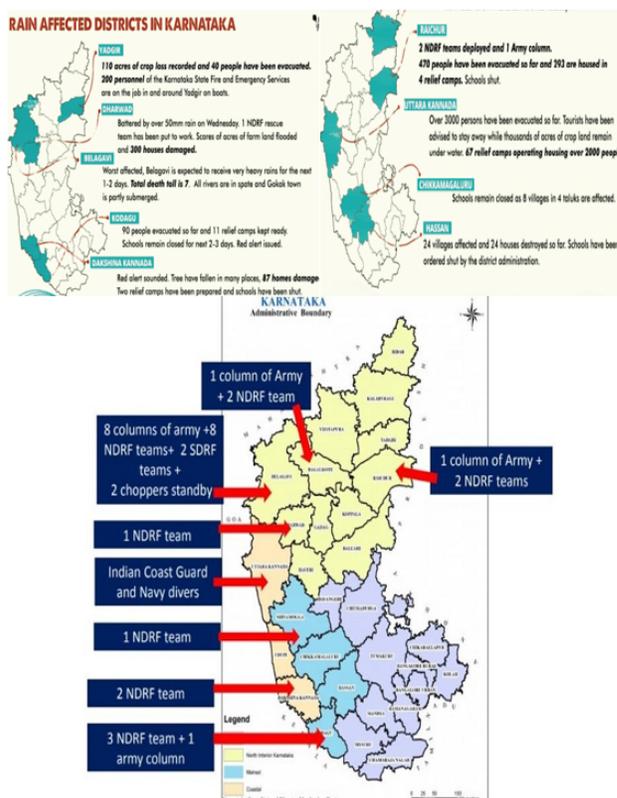
State Natural Disaster Monitoring Centre located in Bangalore. According to KSNDMA reports Karnataka State is vulnerable to both Hydro-meteorological & Geological Disasters. Out of this disaster 80% of the Geographical area is prone to Drought, 24% of the Geographical area is vulnerable to Cyclone and Storm Surges, Hailstorm is frequently occurring in most of the Interior parts of the State, 22% of the Geographical area is prone to moderate Earthquake Risks and 30% of the area is vulnerable to Land Slides.

Karnataka State has been experiencing one or more Hydro-Meteorological Disasters successively every year. Has adopted a proactive approach towards monitoring the Natural Disasters by employing S&T based State of the Art tools and providing Alert & Early Warning, Forecast & Advisories to various Response Players from a single platform.

KSNDMC is monitoring and assessing the impact of Drought using Weather Data, Soil Moisture & Agricultural crop Status, Satellite products, Surface & Groundwater Status on Standard Weekly basis during each Season. KSNDMC conducts Mass Awareness Programmes through conducting Workshops at Disaster prone area, Mock Drills, Community gatherings & other related Training programmes in co-ordination with Civil Defense Personnel & Home Guards. Many help desks has been working under KSNDMC like Varuna Mithra 24x7 help desk :it is helping the Farmers to plan their Agricultural activity from Sowing to Harvesting. Farmers are able to - Reduce the crop loss & increase the crop yield, farmers either reduce the loss or increase their Income by Rs. 15,000 / Hect / Season. KSNDMC has established 14 VSAT Enabled Solar Powered Permanent Seismic Monitoring Stations (PSMS) to monitor Local, Regional & Tele-seismic activity. KSNDMC has employed various Dissemination Systems to send Disaster related Information through Alerts, Advisories & Early Warnings to all the Government Executives & Communities at Real time.

Karnataka has worst affected by flood in 2019 due to heavy rainfall in Maharashtra state the more amount of water released by dams.

Year	Flood Affected Districts	Total loss
2019	7 districts of Northern Karnataka	1,410 kms of road,211 bridges,22 water supply,2,571 electrical poles



### Disaster Management and Risk Reduction in Kerala State

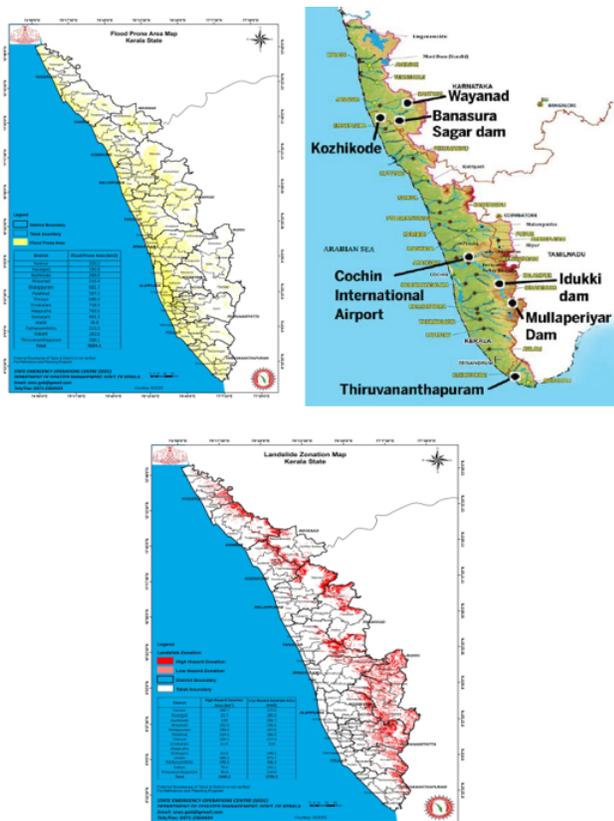
Kerala state is vulnerable to a multitude of hazards and is categorized as a multi-hazard prone state. Kerala state experiences various kinds of disasters of a recurrent nature that results in loss of life, livelihood and property and disruption of economic activity besides causing immense hardship to the affected population. The main objective of the Kerala Disaster Management Policy are to develop ensure policy, institutional, techno-legal frame works for disaster management in the state, to build capacities and promote changes in the administrative system, procedures and personal that would facilitate efficient and effective pre and post disaster management activities.

Kerala has worst affected by flood in 2018 due to unusually high rainfall during the monsoon season. It is the worst flood in Kerala after the great flood of 99 that took place in 1924. one-sixth of the total population of Kerala had been directly affected by the floods and related incidents Over 483 people died, and 14 are missing. About a million people were evacuated, mainly from Chengannur, Pandanad, Edanad, Aranmula, Kozhencherry, Ayiroor, Ranni, Pandalam, Kuttanad, Malappuram, Aluva, Chalakudy, Thiruvalla, Eraviperoor, Vallyamkulam, North Paravur, Vypin Island and Palakkad chellanam. The Indian government had declared it a Level 3



Calamity, or “calamity of a severe nature”. Government of Kerala has been declared all 14 districts of the state were placed on red alert.

### Critical Flood Locations of Kerala State



Source: KSNDMC, Kerala

Kerala Government envisages policy institutional and techno-legal frame works in the state to form the basis of disaster management to facilitate the activities in different phases of a disaster and to create an enabling regulatory environment and compliance regime. State Government of Kerala has been adopted Disaster Management Rule in the year 2007 and District Disaster Management Plan has been adopted in the year 2008 under Disaster Management Act 2005.

KSNDMC has been working in three phases of disaster management and risk reduction. They are:

1. Pre- disaster phase it includes prevention, mitigation and preparedness
2. Disaster response phase – it is during disaster
3. Post- disaster phase it includes recovery, rehabilitation and reconstruction.

KSNDMC has constituted new concepts under recovery policy framework for building a green Kerala. Such as (i) Nava keralam (New Kerala), (ii) the concept of ‘build back better and faster’. And it mainly prepared framework on four pillars are as follows:

- Pillar 1: Integrated water resources management (IWRM)
- Pillar 2: Eco-sensitive and risk-informed approaches to land use and settlements
- Pillar 3: Inclusive and people centered approach
- Pillar 4: Knowledge, innovation, and technology

The Post Disaster Assessment has identified several innovative ideas across sectors for the greening of Kerala as it starts building back better and faster viz. Integrated Water Resource Management, Housing, Land, and Settlements, Cultural Heritage, Agriculture, Livestock, and Fisheries, Water, Sanitation and Hygiene. And also plan to manage the environment under cross cutting themes such as Environment and Climate Change, Employment and Livelihoods.

As the state government undertakes its recovery programme it is important that an integrated policy framework for implementation of recovery is formulated with allocation of financial resources and adequate capacity for implementation of recovery. These pillars should guide all decisions taken with respect to the recovery programmes. It is also important that the Government of Kerala brings together all the stakeholders and enables the private sector, NGOs, and Kerala’s Diaspora to join the recovery efforts.

KSNDMC will give some immediate recommendations are as follows below:

- Use the current momentum and get political and state commitment that a system-based IRWM approach will be adopted. This will ensure that administrators and civil servants have political support in IWRM.
- Organize a two-to-three day long IWRM workshop with stakeholders, sharing findings of this report and seeking comments and commitments on integrated watershed management, room for the river principles, living with water, and eco-engineering.
- Start collecting, digitizing, and validating all relevant hydrological, topographical, bathymetric, and remote sensing data, as a prerequisite to a hydrological crash programme.
- Ensure enforcement, including licensing for land use in flood-prone areas, at the state and panchayat levels.
- Undertake village-level campaigns to live with water, including improvement of basic flood and drainage infrastructure, accompanied by a communication campaign. Link with the programmes /schemes of national and local missions.
- Start village- and district-level training in integrated watershed management to restore good water absorption and erosion protection in the upper watershed.

- Prepare terms of reference (ToR) and start initial local implementation of a hydrological crash programme.
- Prepare ToR for, and start local implementation of, a comparative study on IWRM legislation.
- Formulate ToR for a master plan for the Kuttanad Basin.
- Seek financing at the state and national levels and assess the potential for international support. Link up for financing with the National Hydrology Project.

### Disaster Management and Risk Reduction in Tamil Nadu State

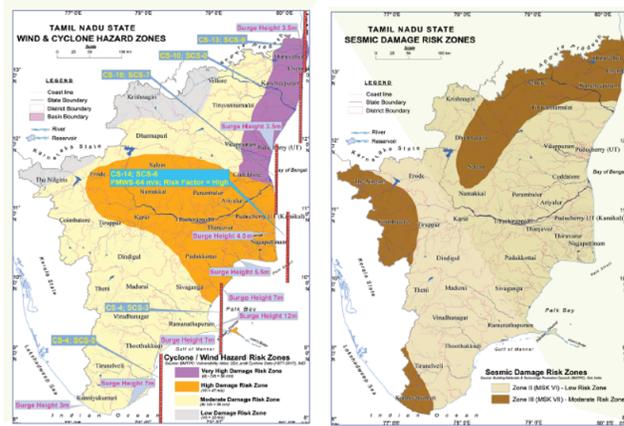
The State Disaster Management has been prepared, as per the Disaster Management Act 2005 and also relied on the NDMA Guidelines on State Disaster Management Plan. The Plan was developed based on an elaborate consultative process with the DDMA's, Departments of Government, civil society and other multi-stakeholders.

The geographical setting of Tamil Nadu makes the State vulnerable to natural disasters such as cyclones, floods and earthquake-induced tsunami. About 8% of the State is affected by five to six cyclones every year, of which two to three are severe.

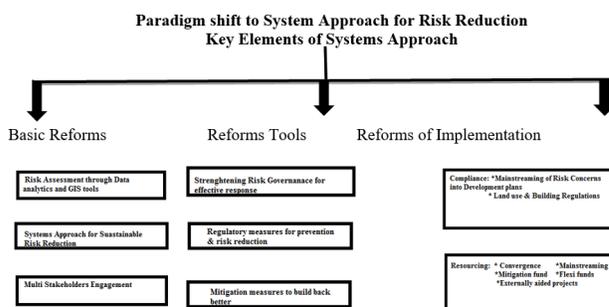
The Tamil Nadu State Disaster Management Authority has been renamed as Tamil Nadu Disaster Risk Reduction Agency (TNDRRA) after will be referred as TNDRRA. The Government of Tamil Nadu is adopting Incident Response System (IRS) in the State to ensure the unification of efforts of all the stakeholders to ensure immediate response during disasters to protect people & their properties.

The Government of Tamil Nadu has initiated number of studies to assess the Hazard and Vulnerability Risk Analysis of (HVRA) various disasters. The HVRA study for Thiruvallur District has been completed by the Disaster Management Cell, Anna Institute of Management, Chennai during 2014. The HVRA study for Cuddalore District is under progress. The State has plans to take up HVRA studies based on systems approach in all other river basins covering the entire State. The State has done Hazard Vulnerability Risk Assessment of the most frequently recurring hazard i.e. flooding. The Mapping of vulnerable areas at firka level (with respect to Rural) and ward level (with respect to urban) has been prepared with vulnerability analysis for floods.

In order to achieve the priorities and goals set forth under the Sendai Framework, the systems approach will focus on some key areas such as 1) Natural Resources Management 2) Comprehensive Flood Risk Management through Integrated Development of River Basins 3) Sustainable Development of different ecosystems to secure the ecosystem services of Disaster Mitigation, 4) Sustainable Agriculture Development and 5) Social Inclusion, 6) Disaster resilient power transmission infrastructure.



Source:TSDMA-IMD



#### GIS Tools

The completed Major Projects are as follows:

- Tsunami Rehabilitation
- Multi-Hazard Resistant Houses
- Livelihood support for the fishermen
- Livelihood support for the fishermen
- Reconstruction of Public Infrastructure
- Strengthening Fisheries Infrastructure
- Multi-Purpose Evacuation Shelters

#### Planning for the year 2030

1. Better Understanding Disaster Risk
2. Strengthening Disaster Risk Governance
3. Investing in Disaster Risk Reduction Structural Measure.
4. Enhancing Disaster Preparedness for effective response and Build Back Better Disaster Preparedness
5. Plan for Non Structural Measures
6. Plan for Build Back Better

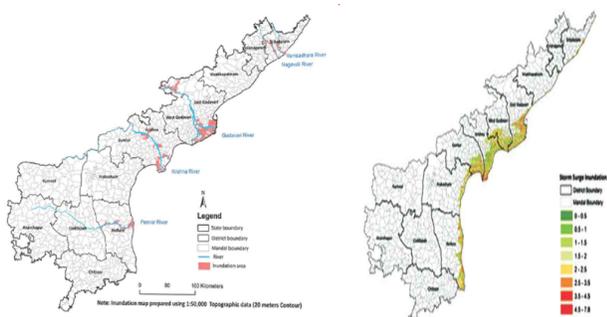


## Disaster Management and Risk Reduction in Andhra Pradesh State

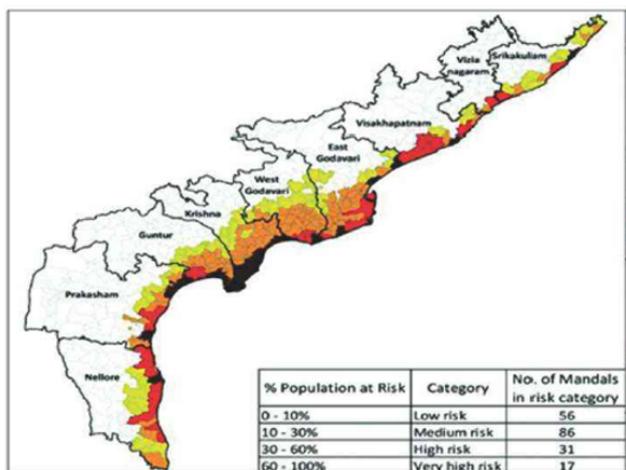
In Andhra Pradesh the occurrence of cyclones and floods is more frequent and the scale of losses is far greater from them than any other natural calamities. Both cyclones and floods cause severe deaths and death damage to individual and community assets impacting State's economy.

Government of Andhra Pradesh took major work in preparing thirteen districts disaster management plan, fifteen sectoral plans and eleven city disaster management plans and these are approved by respective departments and district administrations.

### Flood Inundation major rivers and Flood Affected Area



### Cyclone Affected regions



## Andhra Pradesh State Disaster Management Authority (APSDMA)

Andhra Pradesh Government established the APSDMS as an autonomous society that came into effect from 2003 under

administrative control of planning department to promote or causes to promote awareness and preparedness, advice and trains the community and stakeholders.

Planning for Hazard, Vulnerability and Risk prone areas of the state:

1. Plan land use of the state keeping in view of hazard, Vulnerability and risk.
2. Ensure development schemes of the state are undertaken with regard to hazard, risk, vulnerability and micro zonation facets.
3. Ensure the program scheme or project is facilitating with the provision for adequate funds of disaster risk reduction.
4. Apply science and technology and engineering inputs to improve infrastructure including dams and reservoir, building design, construction etc..

Government has been prepared the plan in respect of disaster preparedness. These are as follows:

1. Ensure that appropriate policies and guidelines are developed
2. Ensure that the state administration and local authorities take into consideration the guidelines laid down by APSDMA while planning its activities.
3. Facilitate timely procurement of materials, equipment and services in connection with the disaster management and ensure their quality.
4. Ensure preparation, implementation timely updating of disaster management plans by respective state departments, local authorities, communities and stakeholders.

## 5. Disaster Management and Risk Reduction in Telangana State

Telangana is the 29th State of India, formed on the 2nd of June 2014. Telangana is exposed to natural hazards such as Droughts, Heat waves, Urban Flooding and Hailstorms and human induced hazards such as Industrial and Fire Accidents. Based on DM Act-2005 and national guidelines, the State decided to prepare the Telangana State Disaster Management Plan 2018. State has been initiated various programs to hazards and reduce risk, Hazard specific action plan and mitigation measures to Urban / Flash Floods, Thunderstorms, Heat waves, Drought, and Human induced disasters such as Industrial, Chemical, Biological.

The State Disaster Management Plan provides for overall direction, while setting out the States'

goals. In the area of capacity development, efforts are being started and in progress to mainstream

Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into development plans



Over time, various institutional mechanisms will be created and the process of strengthening

Institutional mechanisms and capacities are being started and are in progress. The State will be holding series of capacity building programs to strengthen State Disaster Management Authorities (SDMAs) and District Disaster Management Authority (DDMAs).

The State appreciated the efforts of all the stakeholders (Revenue –Disaster Management, Dr. MCRHRD Institute, Hyderabad and UNICEF India, Hyderabad) in this process. The TS-SDMP is based on Sendai Framework for Disaster Risk Reduction 2015 and Child Centric approach to address risk reduction and towards a planned Build Back Better (BBB) programme.

## Conclusion

The amount and the severity of natural disasters have increased in recent decades with serious

Implications to the entire world. This has increased the degree of uncertainty faced by governments and policy makers with the existing system and recognized the need of proactive strategies for disaster risk reduction in order to increase the community's resilience. Disaster risk reduction needs to be achieved through a combined effort of various stakeholders and community groups with a proper coordination and leadership. This present study reveals that the south Indian States Governments have a key role to play in disaster risk reduction initiatives as they are rooted at the ground level where disasters occur and are more close to the local community. Even though there is a growing concern among researchers and practitioners on the role of local government in leading disaster risk reduction initiatives, several incidents have been reported on the inadequate contribution of governments in taking the lead of disaster risk reduction initiatives.

Different levels of governments are facing number of challenges in implementing disaster risk reduction at local level. The successfulness of the local government strategies in disaster

risk reduction is directly linked to the capacity of the local governments in implementing the disaster risk reduction strategies. Therefore in order to implement successful disaster risk reduction it is important to address the challenges faced by local governments and to empower the local government with necessary financial and other required resources with proper level of authority in making decisions which require reformation of the existing governance structure.

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