



SURENDRANAGAR MUNICIPAL CORPORATION

DISASTER MANAGEMENT PLAN 2026-27



MUNICIPAL COMMISSIONER

MESSAGE

Surendranagar is one of the fastest growing and developing cities. The citizens are disciplined, progressive, and hardworking. There are ample resources in and around the city for human's social and health well-being. But when disaster struck the daily work of the Citizen not only hinders the progress of a city but a state and a nation. Due to climate change and global warming, India is more prone to disasters. Cyclones, heavy rainfall, and floods are the ones which affect Surendranagar city the most. Among other risks Arv of earthquake, heat waves and Industrial Chemical Disasters. Every available resource is allocated for the best of disaster by the Surendranagar Municipal Corporation. More emphasis is given on planning. prepared and training activities of the cities, as prevention is better than cure! Help from every citizen and organization is expected in terms of disaster management activities. The emergency responds teams, Fire brigade, police, heath department, and sanitation department play a key role in fighting any mashup which strikes the city. It is the perseverance of the citizens which leads to the betterment of Ahmedabad city. I am thankful to the creators of this document which will provide clear plans and information for overcoming disasters.



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PREFACE

Municipal corporations face a challenge of administrating the rapid urban growth. High rise buildings, densely populated areas, narrow roads, slums, schools, electrical systems, surrounding industrial areas, etc. are some of the traits of the urbanization. The objective of disaster management would be to implement a plan with the following criteria.

With given information including maps, disaster history, current population and economic data, available disaster management plans, development plans, and disaster organization, Analyse information about hazards, vulnerability and development to identify opportunities or situations where prevention, mitigation and preparedness measures might be applied to reduce risk and improve response. Determine the role of the various agencies/organizations in implementing disaster management programs and activities. This project will enable the readers to understand the various aspects of disaster management.

As per NDMA Guideline this will facilitate the stakeholders involving while preparing this document by providing insight into various aspect of Disaster and its preparatory strategies at the grassroot level and necessary mitigatory and response action steps to be undertaken. Again it will be fruitful to many department as well as authorities to mobilize and co-ordinate during any kind of disaster situation which will be a great aspect to help and protect the society and people.

ACKNOWLEDGEMENT

The process of updating this City disaster management started in MARCH-2026 and was having a consolidated team management for data collection from all departments/officials as well as stakeholders followed by series of consultation from senior officials and members of disaster management committee of surendranagar Municipal Corporation. As various department suggested about updating numerous thing happened past years and previous year eye witnessed live scenario.

We thank departmental authority who was associated while preparing this plan in collaboration with Gujarat state disaster management authority, Gandhinagar for all timely support by positioning their officers.

We thank the corporation as well as the district authorities for their timely engagement in providing updated information for the details of the report. Also we gratefully acknowledge the support of various departmental authorities and stakeholders for engaging in such handful of exercises to update such plan for any future seriousness..

CHAPTER-1

Introduction

1.1 Need of the plan

Preparation of Disaster Management Plan is one of the mandatory provisions under the Gujarat State Disaster Management Act-2003 and the National Disaster Management Act-2005. With respect to the above mentioned provisions, Gujarat State Disaster Management Authority and Relief Commissioner have issued guidelines for the preparation of Sity Disaster Management Plan.

- i. As per THE GUJARAT STATE DISASTER MANAGEMENT ACT, 2003 under CLAUSE 26. Sub section (1), (2), (3), (4) & (5) Of CHAPTER X - FUNCTIONS OF LOCAL AUTHORITIES, Each department of the Government in a district shall prepare a disaster management plan for the Corporation shall ensure that such plans are integrated into the Disaster Management Plan for the whole of the corporation and submit a copy of the Sity Disaster Management Plan, and of any amendment thereto the Authority and the Commissioner.
- ii. Under the provision of the DISASTER MANAGEMENT ACT, 2005, under Clause 30 Section (2), subsection (i) & Clause 31 Section (1) of CHAPTER IV Sity Disaster Management Authority, without prejudice to the generality of the provisions of sub section (1), the district authority may (i) prepare a Disaster Management Plan including District Response Plan for the district, and there shall be a Disaster Management Plan for every district of the state.
- iii. Similarly the entire municipal corporation needs to have their own disaster management plan for respective city or municipal corporation limit.

The City Disaster Management Plan of Surendranagar Municipal Corporation for the Year:

Contains Chapters-. The sections provide detailed information of the following points:

1. Need of the plan and objective of the plan
2. Brief Introduction about surendranagar City
3. Concept of Disaster Management
4. Disaster Preparedness: Role & Responsibilities; Early Warning systems and Disaster Management Trainings.
5. Hazard, Risk & Vulnerability Analysis of Surendranagar City.

6. Miscellaneous essential services.
7. Emergency Response Centre (ERC).
8. Disaster Response: Key contact personnel and response resources.

1.2 What is a disaster ?

A disaster is an event that disrupts the life of the people in that area and causes loss of life and property. □

★ The UN (United Nations) defines a disaster as follows.

A sudden, large-scale, unfortunate disaster that disrupts the basic structure and normal life of human society. According to the duration of the disaster, it can be divided into two categories as follows. □

- A slow-moving disaster □
 - A sudden disaster. □
 - Gujarat State Disaster Management Act , 2003. □
 - Disaster means an actual or potential natural or other natural or other occurrence in any part of the State which causes or threatens to cause all or any of the following: □
 - Damage or loss to property both immovable and movable or □
 - Extensive loss of human life or injury or illness to persons: or
- Damage or degradation of the environment and any of the effects specified in sub-sections (1) to (3) are beyond the ability of the affected community to cope with using its own resources and thereby disrupt the normal functioning of the community.

1.3 Objectives of Disaster Management Plan.

- □ Disaster management activities , law and order controls. □
- Risk monitoring and control.
- Dissemination of alert received.
- Coordination of disaster response.
- Guidance in relief and rescue operations.
- Reporting on information, decision making and its classification.
- Resource inventory in times of disaster as well as ease of access to required resources. □ To properly manage all the steps and operations taken to respond to the disaster and to obtain all the information about it efficiently.
- Coordinating disaster response measures and between concerned departments and seeking assistance and co-operation from outside agencies.
- Planned operations in times of disaster.
- To rescue the people caught in the calamity and give them full protection.
- Understanding the disaster and controlling it.
- To prevent damage to goods and to take measures to avoid damage to the surrounding environment.
- Rescue work , giving treatment to the injured.
- Evacuate the affected to a safe place,
- To identify the affected person , inform their families and help them as per their need.
- A record of the causes of the disaster , preservation of news and assistance to the investigator.

A comprehensive and effective disaster management plan containing basic information has been prepared so that all possible preventive measures can be taken quickly during natural calamities and the system and people can feel close at the time of crisis and the confidence of the people is increased and the atmosphere of fear is removed. In this plan, disaster profile of Surendranagar district , resource inventory and departmental S.O.P. has been included.

1.4 Concept of disaster management.

- Implementation and planning of disaster risk mitigation or mitigation measures.
- To minimize the destructiveness or consequences of a disaster.
- Preparedness for Contingencies and Disasters.
- Assessment of disaster impacts.

Crisis relief , rescue and disaster rehabilitation and reconstruction. Disaster management is a continuous process , with all types of risk management and authority thinking about disaster management , planning and efforts. All forms of risk management involve planning, considering and taking steps to avoid or mitigate all potential risks affecting the district . Empowerment means empowering citizens with education , training and support. Such an authority does not transfer the entire responsibility of disaster preparedness to any individual but is a last ditch effort to ensure that each individual has the necessary tools and assistance to mitigate or limit the impact of the disaster. Situational stabilization is complemented by measures and capacity-building to reduce the extent or potential effects of a disaster, as well as approaches that make the recovery process faster and less expensive.

1.5 Disaster Management Approach.

- The Government of Gujarat has a holistic approach towards disaster management. Disaster mitigation is divided into two broad areas.
- Relief and rehabilitation focusing on the planning and action needed to mitigate the effects of an immediate disaster or to accelerate the response during the slow onset of a disaster.
- Preparedness and prevention focus on plans or measures to prevent or eliminate the effects of hazards or impending disasters,
- The overall approach to disaster management is based on 6 (six) steps.
- Accurate assessment of risk and sensitivity.
- Planning and adequate allocation of resources.
- Capacity building and training.
- Provision of adequate toilets.
- Assignment of disaster management roles and responsibilities.
-

1.6 Mitigation,Preparedness and Prevention.

- Mitigation , preparedness and prevention measures are to be taken in advance of a disaster to reduce the likelihood of a disaster (risk minimization) or to reduce the extent of expected losses from a potential disaster (susceptibility reduction). Desensitization is given more priority than hazard minimization. A district can have up to four systems (1 or 4) to reduce risk and vulnerability. □ Long term planning for mitigation , preparedness and prevention in the district.
- Regulations particularly enforcement of construction and safety regulations and land use plans. □ Activities to review and evaluate development plans and identify ways to mitigate threats and vulnerabilities.
- Capacity building and identification of threats and vulnerabilities at community level, including provision of warning , relief and contingency assistance.
- Responsible for development plans and activities related to mitigation,preparedness and prevention using the system mentioned above with the dymc.
- Based on the interim assessment of risk and vulnerability , the district will focus on the following areas for mitigation , preparedness and prevention.
- Re-establishing the supply system of life essentials. (Water,Electricity and Communication)health care, facilities , schools and roads.

- Alleviation of sensitivity in predisposed areas.
- Reduce sensitivity to cyclones.

Improvement of disaster preparedness near industrial sites.

1.7 National Disaster Management Authority (NDMA)

Disaster are woven with men in context of present time indian government taking this subject matter very seriously in august 1999 formed one high powered committee and after Gujarat earth quake of 2001, disaster management plan was accepted as mitigation mechanism. On 23rd december 2005, disaster management act.2005 was enacted by indian government and form of national disaster management authority (NDMA) under chieftain of prime minister was done as per it and decision was taken of making for proper disaster management form of state disaster management authority under chieftain of chief minister for states various tacks are to be done for facing to disasters by NDMA in which risk reduction, rehabilitation like as matters are comprised above all necessary guidelines in regards to natural and men created calamities in national disaster management act 2005 have been given in.

1.8 Disaster Risk Reduction Post-2015.

there has been a significant shift from the approach of Managing Disasters to Managing Risk. The three landmark global agreements viz. the Sendai Framework for Disaster Risk Reduction 2015-30 (SFDRR), Sustainable Development Goals (SDG) and the Paris Agreement (CoP21) set the stage for future global action on Disaster Risk Reduction (DRR), sustainable development and climate change.

1.9 Sendai Framework of Actions for Disaster Risk Reduction 2015 -2030

The Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR) was adopted at the Third United Nations World Conference on Disaster Risk Reduction held in Sendai, Japan in March 2015. The SFDRR is document which outlines four priorities for action to achieve 7 targets, which in turn would lead to one outcome that is – substantial reduction of disaster risk and losses in lives, livelihoods, health, economy of persons, businesses, communities and countries. India is a signatory to the Sendai Framework for a 15 - year, voluntary, non – binding agreement which recognizes that the State has the primary role to reduce risk, but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders.

• The Four priorities of actions are :-

1. Understanding Disaster Risk
2. Strengthening Disaster Risk Governance to Manage Disaster Risk
3. Investing in Disaster Risk Reduction for Resilience
4. Enhancing Disaster Preparedness for Effective Response and to 'Build Back Better' in Recovery, Rehabilitation and Reconstruction

• The seven global targets are :-

- A. Substantially reduce global disaster mortality by 2030, aiming to lower the average per 100,000 global mortality rate in the decade 2020-2030 compared to the period 2005-2015

- B. Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 in the decade 2020-2030 compared to the period 2005-2015
- C. Reduce direct disaster economic loss in relation to global gross domestic product(GDP) by 2030
- D. Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030
- E. Substantially increase the number of countries with national and local disaster risk reduction strategies by 2030
- F. Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this
- G. Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030

1.10 Sustainable Developmental Goals

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by all United Nations Member States in September 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. The 17 SDGs are integrated- that is, they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth –all while tackling climate change and working to preserve our oceans and forests. In order to make the 2030 Agenda a reality, broad ownership of the SDGs must translate into a strong commitment by all stakeholders to implement the global goals.

1.11 Paris Agreement on Climate Change Action and Disaster Risk Reduction (CoP 21)

The CoP 21 or the Paris Climate Conference held in December, 2015 led to a new international climate agreement, applicable to all countries, aiming at “holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change”. The Paris Agreement recognized the need loss and damage associated with the effects of climate change. The agreement identified areas of cooperation central to DRR and called for investments to address the underlying risk drivers associated with rising greenhouse gas (GHG) emission levels and to inspire innovation and low-carbon growth.

The City Disaster Management Plan (CDMP) has tried to envisage coherence across the city Efforts for DRR, sustainable development, and the actions in response to climate change.

1.12 Prime Minister's 10 Point Agenda towards Disaster Risk Reduction

The Prime Minister, Shri Narendra Modi, listed a Ten –Point Agenda in his inaugural speech at the Asian Ministerial Conference on Disaster Risk Reduction 2016, held in New Delhi in November 2016

(AMCDRR), which has also been incorporated in the CDMP. The key elements consist of the following :

1. All development sectors to imbibe principles of Disaster Risk Management
2. Work towards risk coverage for all-starting from poor households to small and medium enterprises to multi-national corporations to nation states.
3. Encourage greater involvement and leadership of women in disaster risk management
4. Invest in risk mapping globally related to hazards such as earthquakes based on widely accepted standards and parameters.
5. Leverage technology to enhance the efficiency of disaster risk management efforts.
6. Develop a network of universities to work on disaster issues.
7. Utilise the opportunities provided by social media and mobile technologies.
8. Build on local capacity and initiative. Response agencies need to interact with the communities and make them familiar with the essential drill of disaster response.
9. Ensuring that disaster learning is well documented.
10. Bring about greater cohesion in international response to disaster.

1.13 Gujarat State Disaster Management Authority – GSDMA

Our state often becomes victim of disaster sometimes such disaster are terrible that local lives of people of state and total planning due to this disaster is disturbed this is experience of all of us policy above disaster management and restitution and rehabilitation have been determined by Gujarat state by passing Gujarat state disaster management act 2003 and 5th of month April of year 2003 was published in Gujarat gazette on 8th February 2001 form of Gujarat state management authority has been done vast project of multi faceted reconstruction, restitution re-habilitation for getting erected affected areas of earth quake after Kutch earth quake by taken in to account with help by world bank, Asian development bank and international organizations, Indian government, state Government, voluntary institutions etc. and difficult tasks being praisable of all the world has been shown being completed in only period of two-three years. Disaster risk management programme was handed by support of united nation development programme by GSDMA maximum group of people by programming like a disaster management plan, awareness, competence exceeding (Trainings) up to rural level under of it one being equipped against disasters.

CHAPTER-2

HAZARD, RISK AND VULNERABILITY ANALYSIS

2.1. Introduction to HVCRA

The core of an effective Disaster Management Plan lies in understanding what can cause harm (Hazard), who or what is exposed to harm (Vulnerability), what resources are available to fight it (Capacity), and what is the overall likelihood of damage (Risk). For Surendranagar Municipal Corporation (SMC), this analysis forms the scientific baseline for disaster mitigation, preparedness, and response strategies.

The relationship between these elements is defined by the standard disaster risk formula:

$$\text{Risk} = \frac{\text{Hazard} \times \text{Vulnerability}}{\text{Capacity}}$$

2.2. Hazard Analysis

Hazard analysis involves identifying all potential natural and human-made disasters that could disrupt the Surendranagar Municipal Corporation area. Based on historical data and geographical location, the primary hazards for Surendranagar include:

A. Natural Hazards

- Floods / Flash Floods: Due to its proximity to the Bhogavo River and heavy localized rainfall, certain low-lying areas of the city face severe urban flooding and waterlogging.
- Droughts: Surendranagar falls under an arid to semi-arid zone. Severe water scarcity during deficient monsoons impacts the city's drinking water supply and socio-economic stability.
- Earthquakes: The region falls under Seismic Zone III (Moderate Damage Risk Zone), making structurally weak buildings vulnerable to earthquakes.
- Heatwaves: During summer, temperatures frequently cross 42°C–45°C, posing severe health hazards to outdoor laborers and vulnerable populations.

B. Man-Made / Technological Hazards

- Chemical & Industrial Accidents: Being close to major industrial hubs (like Wadhwan GIDC), there is a persistent risk of chemical leaks, hazardous waste mishaps, and industrial fires.
- Transportation Accidents: Surendranagar is a major railway junction and is well-connected by highways. Major road/rail accidents or hazardous material transit leaks are potential risks.

- **Urban Fires:** Densely populated commercial areas, traditional markets, and slums with poor electrical wiring pose high fire risks.

2.3. Vulnerability Analysis

Vulnerability indicates the predisposition of the city's population, infrastructure, and environment to suffer damage when a hazard strikes.

A. Physical & Infrastructure Vulnerability

- **Low-lying Settlements:** Slums and unauthorized colonies near the Bhogavo riverbanks are highly vulnerable to flooding.
- **Aging Infrastructure:** Old residential buildings in the core city areas lack structural resilience against earthquakes and fires.
- **Congested Road Networks:** Narrow lanes in old commercial markets restrict the movement of emergency vehicles like fire tenders and ambulances.

B. Socio-Economic Vulnerability

- **Socio-Economically Weaker Sections:** Daily wage earners, slum dwellers, and migrant workers lack the resources to bounce back quickly after a disaster.
- **High-Risk Groups:** Children, the elderly, pregnant women, and persons with disabilities (PwDs) require special attention during evacuations.

C. Environmental Vulnerability

- **Groundwater Depletion:** Over-exploitation of groundwater resources exacerbates the city's vulnerability during drought periods.

2.4. Capacity Analysis

Capacity refers to the strengths, resources, and institutional mechanisms available within the Surendranagar Municipal Corporation to mitigate, prepare for, and respond to emergencies.

Category	Available Capacity / Resources
Institutional & Administrative	• Established Disaster Management Cell under the Municipal Commissioner.

Category	Available Capacity / Resources
	• Coordination with District Collectorate and State Disaster Management Authority (GSDMA).
Physical Resources	• Fire stations equipped with water bowzers, emergency rescue tools, and trained personnel. • Designated temporary shelter homes (Municipal schools, community halls). • Earthmoving equipment (JCBs, dumpers) for debris clearance.
Public Health Capacity	• Civil Hospital and urban health centers capable of handling mass casualties. • Availability of ambulances and tie-ups with private hospitals for emergency surge capacity.
Community Capacity	• Local NGOs, NCC/NSS volunteers, and community leaders trained in basic first-aid and search & rescue.

2.5. Risk Matrix & Assessment

By combining the probability of a hazard with its potential impact on vulnerable assets, the risk levels for Surendranagar Municipal Corporation are prioritized below:

Hazard Type	Frequency / Probability	Potential Impact	Risk Level	Priority
Urban Floods	High	Moderate to High	High	Priority 1
Industrial / Fire Accident	Moderate	High	High	Priority 2
Heatwave & Drought	High	Moderate	Medium	Priority 3
Earthquake	Low	High	Medium	Priority 4

2.6. Conclusion & Way Forward

This HVCRA profile indicates that Urban Flooding and Industrial/Urban Fires pose the most immediate risks to Surendranagar.

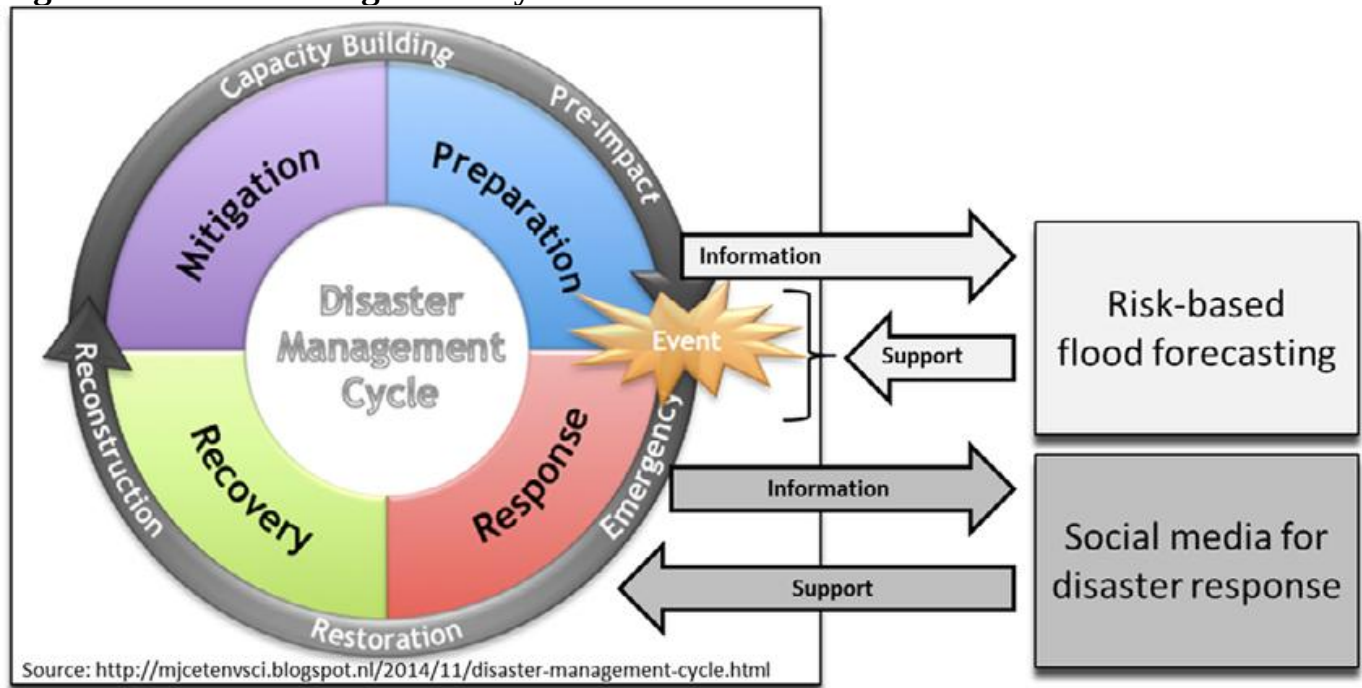
- Action Plan: Future urban planning, drainage remodeling along the Bhogavo River, strict enforcement of building bylaws (National Building Code), and regular mock drills must be prioritized to bridge the gaps identified in this analysis.

Disaster management

It means a continuous and integrated process of planning, organizing, coordinating and implementing measures which are necessary or expedient for—

1. Prevention of danger or threat of any disaster;
2. Mitigation or reduction of risk of any disaster or its severity or consequences;
3. Capacity-building;
4. Preparedness to deal with any disaster;
5. Prompt response to any threatening disaster situation or disaster;
6. Assessing the severity or magnitude of effects of any disaster;
7. Evacuation, rescue and relief;
8. Rehabilitation and reconstruction.

Figure- Disaster Management Cycle



Hazard Management and Citizen Empowerment

The concepts of all hazard management and empowerment provide the foundation for disaster management plans and efforts. All hazards management involves considering, planning for and taking actions to avoid or mitigate, all possible hazards, which may affect the district.

Empowerment means that each citizen is enabled through education, training and support, to be able to address all hazards and disasters, which may threaten their lives or livelihoods. Empowerment does not transfer full responsibility for dealing with disasters to the individual, but strives to ensure that each individual has the means and support needed to avoid or limit the impact of disaster.

The district and subsidiary plans seek to limit vulnerability and reinforce the resilience of communities in the face of hazards and disasters. Addressing vulnerability generally takes place before a disaster through actions to reduce the opportunities for the disasters to occur. Reinforcement of the resilience occurs through actions to reduce the scale or potential impact of a disaster, and building capacities and systems that facilitates (shorten and make less costly) the recovery process.

The Disaster Management Act, 2005 is a key document which provides guidelines for disaster management in India. The Prime & Chief Minister's Office, Ministry of Home Affairs, National Disaster Management Authority, State Disaster Management Authorities, National Institute of Disaster Management, Indian Meteorological Department and Department of Space are key institutions for disaster management in India.

According to the DM Act, 2005:

“District Plan” means the plan for disaster management for the district prepared.

“Local authority” includes panchayati raj institutions, municipalities, a district board, cantonment board, town planning authority or jila Parishad or any other body or authority, by whatever name called, for the time being invested by law, for rendering essential services or, with the control and management of civic services, within a specified local area.

- **Stakeholders and their responsibilities**

The Institutional framework for operationalization of the DM plan at the District level is conceived in terms of integration of both rural and urban areas and by recognizing the interdependence between line departments, district and state level authorities. The constitution of the District Disaster Management Committee will be as per the Gujarat Disaster Management Act 2003.

- **Authorities and Responsibilities**

The requirement for district and subsidiary plans is set by the GSDMA under the authority of the Gujarat State Disaster Management Act of 2003. The Act authorizes the collector to secure cooperation and assistance from other parties in efforts to avoid or reduce the impact of disasters.

The Collector (Specifically) and Government authorities (generally) are responsible for managing hazards and disasters that affect a district, with support from GSDMA, the Relief Commissioner and other public and private parties as may be needed. The roles, responsibilities and obligations of the Collector and other key parties are set out in detail in the Act and are considered as part of this plan. Here, the case would be Municipal Commissioner and other departments of the corporation to coordinate and cooperate with the district administration for achieving better disaster management.

- **Warning, Relief and Recovery**

Warning, Relief and Recovery actions are intended to eliminate the loss of life and property and reduce hardship as a result of disasters. Plans and SOPs at corporation level should provide a seamless mechanism of warning, relief and recovery assistance to avoid or reduce losses and hardship.

The focal point for early warning, relief and recovery is the District Collector, who directs and coordinates these efforts within the district. The Collector is also responsible for coordinating warning, relief and recovery with similar activities in neighbouring districts and with the GSDMA and Revenue Department.

The Collector is further responsible for developing long term relief, recovery and rehabilitation plans during the course of a disaster. These plans will include steps to reduce disaster impact in the future and be coordinated with the GSDMA in terms of policy and implementation.

- **Plan Review and Updating**

City Disaster Management Plan is prepared and reviewed by the Municipal Commissioner in collaboration with the line departments and other organizations in the corporation. The plan reviewed annually (in the Month of May) and in special case periodically too and updated:

1. When significant changes in the nature of any hazards,
2. Lessons learnt following any major disaster or
3. When there is any significant change to organization or responsibilities of primary members of the task forces defined in the plan.

- **Financial Arrangements**

With respect to the updating of the CDMP the expenditure shall be booked either from the grant provisions of GSDMA under the CDMP Updating head and time to time guide lines of GSDMA or as per the directions of Municipal Commissioner. There are other provisions which are utilized in different kinds of relief measures as per the directions released from Central Government, State Government and so the Collector & DM viz. the funds like Calamity Relief Fund (CRF), Mayor relief fund which is utilized for the affected people / nature / cattle death in case of the natural calamities, NCCF, CM Relief Fund, PM Relief Fund etc.

- **Scope of the Plan**

The City Disaster Management Plan for Surendranagar Municipal Corporation has been prepared for its execution by various departments and agencies of the district and other Non-governmental Agencies expected to participate in disaster management process. This plan provides for Vulnerability Assessment and Risk Analysis, Preventive Measures, Mainstreaming disaster management concerns into Developmental Plans, Preparedness Measures, Response Mechanism, and Partnership with Stakeholders, Financial Arrangement, Roles and Responsibilities of the various agencies interlinks in disaster management and the scope of their activities. An elaborative inventory of resources has also been formalized.

2..7 Capacity Building Plan.

Following measures can be taken for capacity building in disaster management. training ☐ Mockdrill and simulation exercises ☐ Public awareness ☐ Model work documentation Training Needs Analysis changes individual and collective knowledge , skills and behaviour. There is an effect in emotional and cognitive aspects, so that individual and group work becomes better. For this training needs should be identified in advance and training and capacity building should be planned accordingly. Reviewing current training. Work analysis (new or improved system) Identifying training needs. Summary of training requirements. Determining alternative arrangements for training. To analyze the cost-benefit of training.

☐ Training to be done for various departments Training programs should be organized for the officers and employees of various departments after identifying their training needs. From this process the topics and procedures for training can be derived. Each department should list and schedule training programs to strengthen disaster preparedness at its level. From the experiences so far the following training programs can be made for each department. ☐ Training offered for disaster management Concept , requirement , law , policies , procedures etc. of disaster management. ☐ In which police , fire safety , health , revenue , village development , forest department etc. can join. Training on skill development program schedule for departmental staff. ☐ Minimum standards of emergency relief and response. Maintenance and use of equipment and machinery.

CHAPTER-3

Specific Prevention and Mitigation Measures

■ Prevention and Mitigation Plan

3.1. Introduction

Prevention and Mitigation structural and non-structural measures aim to reduce the long-term risk and impacts of disasters within the Surendranagar Municipal Corporation (SMC) area. While *Prevention* focuses on avoiding the risk altogether, *Mitigation* accepts the hazard potential and works toward reducing the vulnerability of the community and infrastructure.

3.2. Structural Mitigation Measures

Structural measures involve physical constructions, engineering works, and infrastructural modifications to hazard-proof the city.

A. Flood & Urban Waterlogging Mitigation

- **De-siltation of Bhogavo River Bed:** Annual deepening and widening of the Bhogavo riverbed before the monsoon season to maximize water-carrying capacity and prevent bank overflow.
- **Construction of Retaining Walls:** Building and strengthening reinforced concrete retaining walls along vulnerable, low-lying riverbanks near urban settlements.
- **Stormwater Drainage Remodeling:** Upgrading the city's drainage network, clearing choke points, and separating domestic sewage lines from stormwater drains to eliminate severe waterlogging in commercial centers.
- **Check Dams and Recharge Shafts:** Maintenance of peripheral check dams to regulate sudden inflows of water during heavy flash floods.

B. Fire & Industrial Safety Infrastructure

- **Upgradation of Fire Stations:** Equipping the SMC fire department with modern high-rise hydraulic platforms, foam tenders (for chemical fires), and specialized personal protective equipment (PPE).
- **Decentralized Water Hydrant Systems:** Installing dedicated underground fire hydrant points in congested traditional markets and narrow-lane residential zones.

C. Earthquake & Cyclone Resilient Infrastructure

- **Retrofitting of Critical Buildings:** Structural strengthening (retrofitting) of essential lifeline buildings such as the SMC head office, fire stations, municipal schools, and public hospitals.
- **Enforcement of National Building Code (NBC):** Strict screening of structural design stability certificates before granting building permits, ensuring compliance with Seismic Zone III regulations.

3.3 Non-Structural Mitigation Measures

Non-structural measures focus on policy, regulatory frameworks, soft interventions, awareness, and capacity building.

A. Land Use Planning & Zoning Regulations

- **Hazard-Risk Zoning:** Mapping and restricting permanent residential or commercial construction inside high-risk floodplains along the riverbed.
- **Encroachment Clearance:** Regular removal of unauthorized slums and commercial extensions that block natural drainage channels and emergency evacuation routes.

B. Heatwave Mitigation (Cool Roofs & Green Cover)

- **Urban Green Ribbon Initiative:** Massive tree plantation drives along major transit roads and open plots to combat the "Urban Heat Island" effect during harsh summers.
- **Cool Roof Policy:** Promoting solar-reflective white painting on the roofs of municipal buildings, low-income housing schemes, and public shelters to drop indoor temperatures by 3 TO 5

C. Institutional Capacity & Public Awareness

- **Regular Mock Drills:** Conducting joint disaster response drills involving the National Disaster Response Force (NDRF), State Disaster Response Force (SDRF), local police, and medical teams.
- **Community Awareness Campaigns:** Utilizing local media, radio, and school programs to educate citizens on emergency safety rules (e.g., Do's and Don'ts for chemical leaks, heatwaves, and earthquakes).
- **Early Warning Systems (EWS):** Integrating mass SMS alert systems, public sirens, and digital display boards to broadcast immediate weather or industrial hazard warnings to the public.

3.4 Sector-Specific Mitigation Matrix

The following matrix highlights the responsible departments within SMC for implementing specific mitigation strategies:

Hazard	Specific Mitigation Measure	Type	Responsible Department / Agency
Floods	Stormwater drain cleaning & River training	Structural	Engineering Dept. / Public Works Department (PWD)
Fire / Chemical	Mandatory Fire NOC audits for businesses	Non-Structural	SMC Fire & Emergency Services / GIDC Safety Cell
Earthquake	Strict structural layout checks	Non-Structural	Town Planning & Building Permission Dept.
Heatwave	Setting up public drinking water booths (<i>Parabs</i>)	Structural	Health & Water Supply Department

Investing in specific prevention and structural mitigation reduces the future financial burden of relief and rehabilitation for SMC. A proactive approach transforms Surendranagar into a resilient urban center capable of sustaining environmental and technological shocks with minimum disruption to life and economy.

■ **3.5 Disaster Preparedness:**

The Idea of protective city planning suggests decentralization and isolation of vulnerable facilities from the rest of the city. The following are the typical ingredients indicate the broad scope of an urban risk reduction programme.

- The preliminary process includes hazard mapping, vulnerability assessment, resources identification and loss estimation
- Training key officials through on the job training, mentor training and workshops.
- Development of City disaster management plan as a part of District as well as state DM Plan and should have proper DM Information system module.
- Protecting lifeline resources such as key infrastructure, media resources book, schools, shelter places, communication network, key economic asset etc.
- Developing and Implementing disaster mitigation measures is a demanding task in developing nations because such measures are relatively high investments inputs such as flood response and mitigation system, early warning system etc.
- Organising community vulnerability reduction programmes to aware and prepare measures through public education system like radio, news paper and awareness.

CHATER-4

Pre-preparation for response Search & rescue

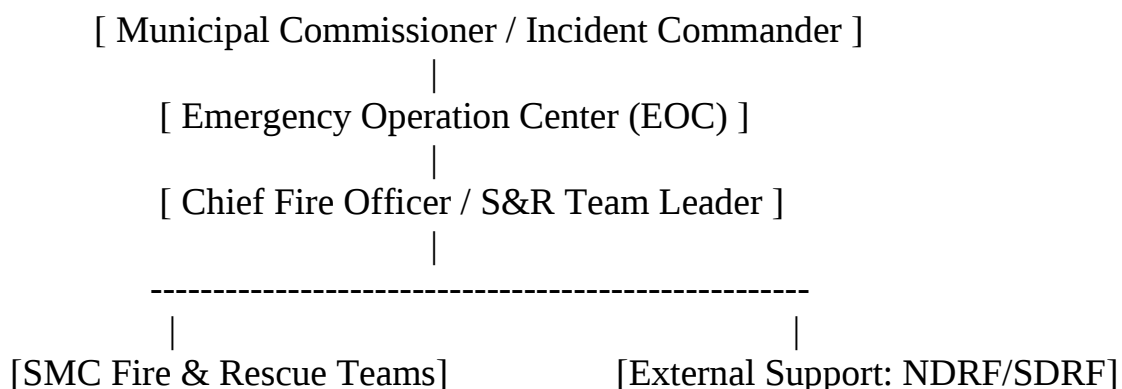
4.1 Introduction:

Search and Rescue (S&R) is the most critical operational component immediately following a disaster strike. The primary objective is to minimize the loss of life by locating, stabilizing, and extricating trapped individuals from collapsed structures, flooded areas, hazardous environments.

"Pre-preparation" ensures that response teams, equipment, and communication channels are fully functional *before* an event occurs, eliminating chaos and reducing the "Golden Hour" response time.

4.2. Institutional Framework for Search & Rescue

The Surendranagar Municipal Corporation (SMC) operates its S&R activities through a coordinated command structure led by the Fire & Emergency Services Department.



- Incident Command: The Chief Fire Officer of SMC acts as the operational lead for all rescue missions under the direct supervision of the Municipal Commissioner.
- Coordination with External Agencies: For mega-disasters (like severe regional floods or major structural collapses), SMC coordinates directly with the District Collector to requisition the National Disaster Response Force (NDRF) or State Disaster Response Force (SDRF).

4.3. Key Pre-Preparation Measures (Pre-Disaster Phase)

To ensure immediate mobilization, SMC undertakes the following systematic readiness tasks throughout the year:

A. Resource Mapping & Inventory Maintenance

- Equipment Database: Maintaining an updated inventory of all specialized rescue
- machinery (inflatable boats, wood/concrete cutters, life jackets, dewatering pumps, and hydraulic jacks).

- Technological Checkups: Bi-weekly testing, servicing, and fueling of all rescue vehicles and emergency generators to ensure zero mechanical failures during a crisis.
- **B. Deployment of Early Warning Mechanisms**
- Trigger-Based Activation: Upon receiving heavy rainfall or flood alerts from the Indian Meteorological Department (IMD) or irrigation department regarding the Bhogavo River, S&R teams are placed on High Alert (Standby Mode).
- Pre-positioning: Moving rescue boats and manpower closer to known low-lying flood hotspots (such as slums near the riverbanks) *before* water levels rise.

C .Resource Directory & Emergency Contacts

- Maintaining an active directory of heavy machinery owners, private crane operators, deep-sea divers, and local swimming clubs in Surendranagar to pull in additional resources if municipal capacity is overwhelmed.

4.4Operational Search & Rescue Protocols (Response Phase)

When an emergency occurs, the S&R operations follow a standardized sequence:

Step 1: Rapid Scene Assessment (Reconnaissance)

The first responding unit assesses the safety of the site (checking for secondary hazards like live electricity lines, gas leaks, or unstable walls) before deploying rescue personnel.

Step 2: Localization & Search

Using physical search techniques, acoustic calling, or specialized thermal imaging tools (where available) to locate trapped individuals in collapsed structures or submerged locations.

Step 3: Access & Stabilization

Trained personnel secure the extraction path. Basic on-site first aid (triage, neck stabilization, stopping severe bleeding) is administered by rescue teams before moving the victim.

Step 4: Safe Extrication & Evacuation

Victims are safely moved using stretchers, ropes, or boats and immediately handed over to the waiting SMC Health Department / Ambulance teams for transit to the Civil Hospital.

4.5Equipment Inventory Required for S&R

The following standard equipment profile must be readily available within the SMC command center:

S&R Category	Essential Equipment Required	Current Status / Target
Water Rescue (Floods)	Inflatable Rubber Boats (IRBs) with OBM (Outboard Motors), Life Jackets, Life Buoys, Mega-phones, Floating Ropes, Underwater Torches.	Dedicated Flood Rescue Kit
Collapsed Structure (Earthquake)	Hydraulic Combi-tools, Concrete Cutters, Chain Saws, Air Lifting Bags, Shovels, Search Cams.	Urban Search & Rescue (USAR) Kit
Fire & Chemical Rescue	Self-Contained Breathing Apparatus (SCBA) packs, Fire Proximity Suits, Chemical Gas Leak Detection Kits, Extension Ladders.	Fire & Tactical Rescue Kit

4.6 Capacity Building & Community-Led S&R

- Since local communities are always the first responders on the ground, SMC emphasizes decentralized rescue training:
- Aapda Mitras: Utilizing state-trained community volunteers (*Aapda Mitras*) embedded within vulnerable wards to manage initial rescue operations before official fire tenders arrive.
- Inter-Agency Mock Drills: Conducting bi-annual simulated rescue exercises with the Police, Civil Defense, and local health workers to maintain seamless team coordination

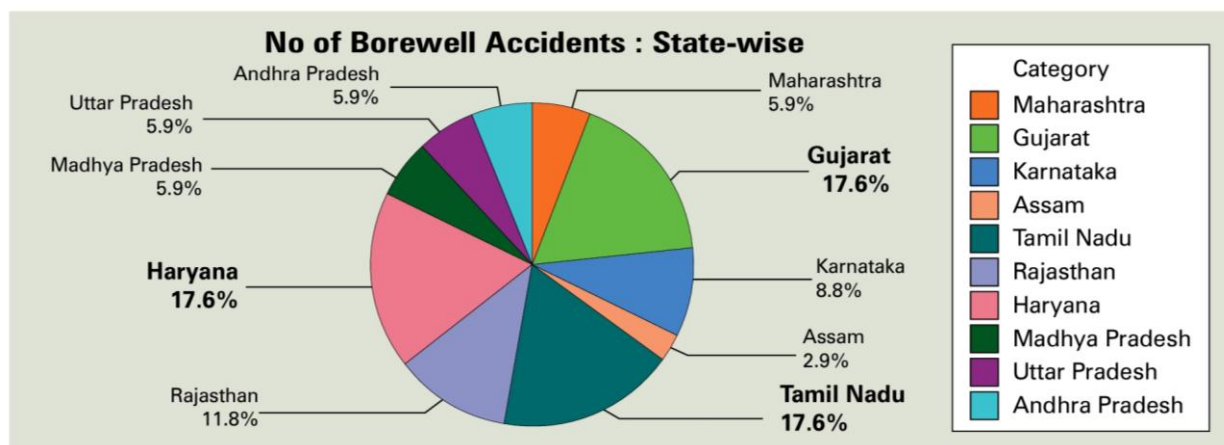
CHAPTER-5

Standard operating procedure on borewell incident response

5. 1. Introduction:

India is the biggest user of ground water in the world which is drawing around 230 cubic kilometre per year. There are approximately 27 million bore wells in India. Due to water scarcity, low rain falls, drought and depletion of underground water, large number of bore wells are dug. When the water gets dried, the motor along with casing pipe are removed and outer surface of bore well is not properly covered or sealed. Reports say that since 2009, more than 40 children fell into the bore well. On an average 70% of the conventional child rescue operation fails. India recently has witnessed some of the most tragic but helpless incidents which touched us deeply and forced us to look after the matter seriously. As the statistics suggest in the consecutive years starting from 2006, still more than 33 deaths occurred while stuck in bore well. The most mournful fact in that figure is that 92% of that victim is under the age of 10. The children were playing around the bore well unaware of the fact that the bore well was waiting for them in the form of a death trap. After slipping in the rotten congested pitch-black environment, they were waiting for the help to come. But the lack of oxygen and deadly atmosphere has taken their life slowly before the rescue team can reach them. The incident of losing lives trapped in Bore well was highlighted in 2006 where a 5-yearsold child named Prince was rescued after a tough combat which lasted 49 hours. Another incident in Indore took place in the same year where a child name Deepak stuck in the pit hole and died for the lack of oxygen. After that, there were number of incidents happened in the various parts of the country of falling of child in a Bore well, where depth of Bore well varies from 50 feet to 250 feet. In rural regions of the States, bore wells are widely used due to lack of water supply or unavailability of ponds, rivers etc. Almost all Government programmes seek to supply water through tube wells. With the falling water level, most of these tube wells are abandoned and are usually left uncapped and open. A survey sponsored by the Ministry of Water Resources in 2008 discovered that 85 percent of rural, 50 percentage of urban drinking and industrial needs, and 55 percent of irrigation needs were met through bore wells. Incidents of bore well deaths will stop only when consistent water supply where needed is ensured.

The state wise data of bore well incident is given below in the pie-chart.



2. AIM: Maharashtra Gujarat 17.6% Karnataka 8.8% Assam 2.9% Tamil Nadu 17.6% Karnataka Assam Tamil Nadu Rajasthan Haryana Madhya Pradesh Uttar Pradesh Andhra Pradesh The aim of this SOP is to lay down guidelines for NDRF Bns for responding to bore well emergencies.

3. PURPOSE: The purpose of this SOP is to establish the procedure for the response of the SAR team(s) of the Bns of NDRF in the States/UTs for bore well incident. The SOP prescribes guidelines and assigns responsibility for adopting various executive actions to ensure prompt response during incident.

4. OBJECTIVES: This SOP shall be used to formulate NDRF action plans and procedures for launching specialized Rescue response which should be instrumental in saving precious lives. The objective of this SOP is to establish operating procedures for addressing all aspects of managing during bore well incident. These are as follow: a) Guidelines for troops for rescue operation during the bore well incident. b) Achievement of best result through well planned rescue operations. c) Reducing reaction time of the teams in responding to such incidents. d) Coordinating and collaborative instructions during bore well incident.

5. SCOPE: To define a 'Standard Operating Procedure' for bore well incident response in the country. The SOP applies to all elements of the Command while performing bore well incident response operations. This SOP is a guideline and shall be subject to be reviewed periodically.

6. ROLE AND RESPONSIBILITY DURING BORE WELL INCIDENT

6.1 Role: Bore well incident preparedness provides a platform to design effective, realistic, coordinated planning and reduces duplication of efforts. The SOP unifies support for all functional areas to support a disaster requiring a coordinated response. The expertise of NDRF in strengthening the coordination amongst the various stakeholders is also very instrumental and important for effective response. Incidents of children falling into bore well/well are increasing in various parts of the country due to lack of awareness of people and do not follow the guidelines issued by Hon' Ble Supreme Court. NDRF has not sufficient equipment to carry out the bore well rescue operation. However, NDRF responds in bore well incidents to rescue the precious life.

6.2. Responsibilities: a) Executives/Supervisors/Commanders: It shall be the responsibility of all the Executives/ Supervisors/ Commanders at all levels of the chain of the command of NDRF who are involved in the bore well incident response to ensure that all aspects of this SOP are adhered to. b) Responders: It shall be the responsibility of all the responders to know, understand and follow the directions of the SOP in the letter and spirit.

7. DEECISION OF Deployment:

7.1 SAR team(s) of NDRF shall be mobilized:

- A) On the request of the incident States/UT Govt., or
- b) On directions of Central Govt. Authorities (NCMC, NEC, NDMA)

7.2 The procedure of making requisition for services of NDRF is given below:

- A) The State Govt. is required to make a telephonic request to Control Room, HQ NDRF for sending SAR team(s) for disaster response followed by a written requisition through fax/email/dak on the prescribed Performa duly filled up in all respects to the HQ, NDRF-New Delhi.
- B) Under exigencies, on getting the direct request from the State Authority, Commandant of the local BN after due appreciation of the situation shall mobilize his SAR team(s) for the bore well incident response without wastage of time and simultaneously seek formal approval from the HQ, NDRF-New Delhi.
- c) In case, the Govt. of the bore well incident State/UT makes a direct requisition to the Central authorities (NCMC, NEC, NDMA), the SAR Team(s) of NDRF will be mobilized by the DG, NDRF as per the directions of Central authorities.
- d) Following authorities of the State Govts. /UTs can place requisitions for the team (s) of the NDRF during disaster: i. The Chief Secretary/Principal Secretary Disaster Management /Relief Commissioner or higher authority of SDMA. ii. Collectors/DCs/DMs of the DDMA can request for the response of the NDRF Battalion which falls in jurisdiction of local district.
- e) Finally, deployment of SAR team(s) of NDRF at the bore well incident site shall be executed under the directions of the DG, NDRF in the quickest possible time after having receipt of the requisition from the States/UTs and the same shall be intimated to the NDMA/MHA.

8. EXECUTION OF BORE WELL DISASTER RESPONSE:

India pre-dominantly being an agricultural economy relies on monsoon rains to fulfil the needs of irrigation as well for various other needs like industrial, household etc. But the erratic nature of monsoon rains and its unequal distribution has led to severe water shortage across the country. With increase in cultivable land and increase in population the demand for water is rising day by day. This has led to use of underground water by digging mechanical bore wells which are fast replacing traditional wells. With water level deepening due to unhindered extraction of water, surpassing the recharge rate, such bore wells are getting deeper day by day. This has given rise to the phenomena of infants and children falling into such bore wells.

NDRF teams have responded successfully to various Bore well / well rescue incidents. The details of operations carried by NDRF are as attached Appendix- 'F' Response to such incident is completed in five phases viz.

- i. Preparedness Phase
- ii. Activation and Mobilization Phase
- iii. Operation Phase
- iv. Deactivation and Demobilization phase
- v. Post Operation Phase

8.1 Preparedness phase:

Following preparation level is expected from all the battalions of NDRF at any given time for launching bore well incident response.

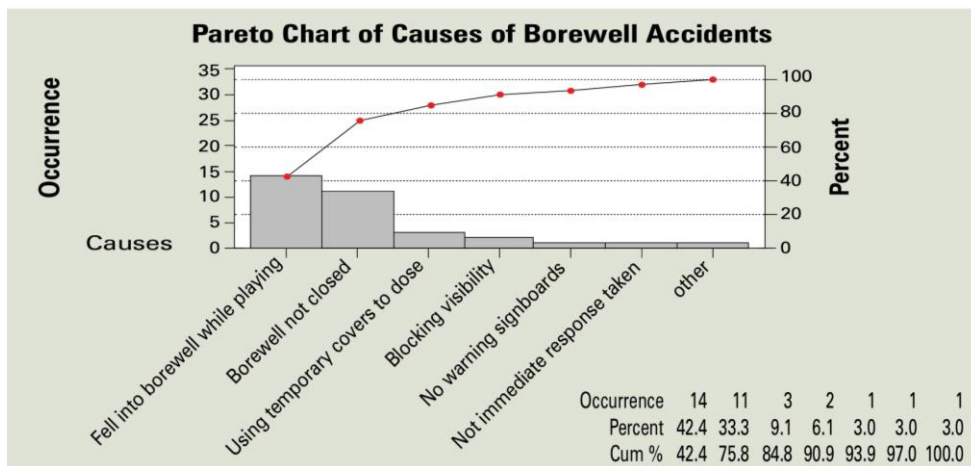
- i. Training of rescuers regarding bore well rescue equipment.
- ii. Practices of different methods and approaches in different situation/work site.
- iii. Practices of vertical and horizontal shoring of vertical wall of ditch
- iv. Community Awareness- Pre-Bore well incident preparedness also includes awareness programmes for community. These programmes are conducted to focus on creating an awareness among the community. Keeping in view that Bore well incidents are increasing in various parts of the country, all NDRF units have been directed that while conducting various community awareness programmes, our teams should also spread awareness about Bore well and safety measures to be taken to avoid recurrence of such incidents.

During the awareness, the villagers are advised to take following safety measures

- The simplest solution is to seal the mouth of the hole the moment it is not in use.
- Erection of barbed wire fencing or any other suitable barrier around the Bore well.
- Placing a big flat stone to cover the hole of Bore well or construction of cement/concrete platform.
- Capping of well assembly by welding steel plate
- In case of pump repair, the tube well should not be left uncovered
- Filling of mud pits and channels after completion of construction/repair work
- Filling of abandoned bore well by clay/sand/boulders/pebbles/drill cuttings etc. From bottom to ground level.
- Do's and Don'ts for the bore well incident are attached as Appendix 'G'
- Guidelines regarding bore well safety measures by Supreme court are attached as Appendix 'H'

In addition to above, to prepare ourselves, it is also necessary to discuss various aspects about borewell incidents in detail.

8.1.1. Main Causes of Bore well Accidents:



8.1.2. Bore well- Death Trap:

- Unused Bore well are kept open
- Children of different age went around due to curiosity
- Children falling in the bore well
- Confined space
- Hypoxia, unavailability of water and food

8.1.3 Classification of Bore well

Bore wells are also classified according to yield as under:

- i. High Capacity Bore well (HCB): Bore wells of casing pipe diameter 10 or 12 inches and depth >80m with design yield in the range of 20,000 gph to 45,000 gph.
- ii. Medium Capacity Bore well (MCB): Bore wells of casing pipe diameter 8 inches and depth >80m with design yield in the range of 10,000 gph to 20,000 gph.
- iii. Low Capacity Bore well (LCB): Bore wells of casing pipe diameter 6 inches and depth 30m to 50m with design yield in the range of 1500 gph to 5,000 gph.

8.1.4 Types of Bore well

Distinguished by the diameter of the bore hole.

8.1.4.1 Bore wells

- Low yielding groundwater sources are found relatively close to the surface, usually under 30 m (100 ft)
- Bore wells are constructed using a rotary bucketauger.
- Usually completed by perforating the casing or using a sand screen with continuous slot openings.
- One advantage of bored wells is the large diameter of the casing, from 450-900 mm which provides a water storage reservoir for use during peak demand periods.

- A disadvantage is of utilizing a shallow groundwater aquifer and water shortages may occur following long dry periods in summer. It is also more susceptible to contamination from surface land-use activities.

8.1.4.2 Drilled wells

- Smaller in diameter, usually ranging from 100-200 mm,
- Greater depths than bored wells, up to several hundred meters.
- The producing aquifer is generally less susceptible to pollution from surface sources because of the depth
- Also, the water supply tends to be more reliable since it is less affected by seasonal weather patterns

8.1.4.3 Most commonly used types of drilling methods

- Water Jetting - Shallow bores in alluvial formations
- Augur Drilling - Shallow bores in alluvial formations
- Calyx Drilling - Shallow bore wells in both hard rock and alluvial formation
- Percussion Drilling – Deep bores in boulder formation
- Rotary Drilling - Most common method used for drilling large and deep bores in alluvial formations.
- Down the Hole Hammering (DTH) Drilling – Most common method for drilling large and deep Bore well in hard rock formations.

8.1.5 Challenges in bore well rescue:

- Tender and small age of victims
- Remoteness of bore well locations
- Lack of supportive infrastructure
- Confined space
- Low visibility
- Law and order issues
- Operation against time
- Weather condition
- Fallen derbies on child during rescue.
- Lack of immediate oxygen supply.

8.1.6 Rescue Methods/Techniques:

As of now there is no scientific or reliable method is available, only manual rescue method is used to save the child fell into the bore well, where a big hole is dug beside the bore well to the depth of the child stuck. But this process requires large amount of human resources such as rescuers, heavy machinery such as tractors, JCBs etc., even if there is a little delay in accumulating these resources reduces the chances of the child being saved alive. If in case, there is a huge rock at certain depth in a bore hole results in re-initiation of whole process. This process consumes more time, in

such cases the chances of Saving children alive is very little. If the child is closer to the surface a rescuer gets in and pulls them out. However, if the child has fallen to greater depths, a camera is sent into the hole and then a parallel bore is dug. From there another The horizontal bore is dug. Quiet often the rescue succeeds but not always. A lot Geology is involved and rescue plans must be fast and precise. But even with the best geophysical instruments, it is not easy to estimate the type and size of rock that blocks access to the point where the child is stuck. Moreover, drilling through rock can make the entire Bore collapse.As on date the simplest solution should be to seal all the holes the momentThey are not used. Sadly, this negligence and ineptitude devours a child.

8.1.6.1. Bore Well Rescue Techniques:

i. Vertical and Horizontal drilling: -

In this method a parallel hole is dug adjacent to the bore well depending on geology of the area and once the vertical digging reaches the depth at which the child is stuck a horizontal hole is drilled to reach the child and before reaching near stuck child and cover the bore well hole through pointed Iron rod or wood beneath the child. To ensure that less time is wasted in horizontal drilling, the vertical hole drilling should always be planned in a manner that it is slanting towards the bore-well, instead of being perpendicular to earth and parallel to the bore-well. This makes it easier to extricate the child by reaching about 3 feet underneath the child at a distance of 1-2 feet from bore-well. This saves a lot of time in horizontal drilling and subsequent earth removal. This requires proper centering while drilling to ensure that we at exact place where the child is stuck. This is just suggestion based on the successful operations conducted by NDRF in the past. However, this is not sacrosanct and drilling technique may be adopted as per the ground reality and the depth where victim is trapped. The success of such operations also depends on the nature of soil and rock structure.

ii. Techniques adopted by NDRF:-

Based on the past experiences by NDRF teams, some of the techniques adopted during such incidents may be one or combination of the following techniques:-

- a. Rope rescue
- b. Magic ball
- c. Umbrella tool
- d. Cloth bucket
- e. Cameras (with LED Light along with minimum 100 ft. wire and display)
- f. Pendant jhula
- g. Robotic machine(with camera & audio)
- h. Iron Rod in “L/J/U” shape (Dada ji ki chhadi with Iron Rod)
- i. Aluminum wire with hook
- j. Life Jacket of plastic sheet with wire

8.2 Activation and mobilization phase:

After receiving of information or call for help from the authenticated source this phase activates. Team has to obtain all information about incident through controlroom/ops officer in charge:

- i. Incident type, place, date and time.
- ii. Depth and dia of bore well and location of trapped victim.
- iii. Nature of soil (Rocky, Sandy or soft soil etc,)
- iv. Incident site condition, whether confined or in open area, in case of confined area nearby adjacent houses and its distance from incident site.
- v. Availability of heavy equipment like JCB, Pokeland for digging.
- vi. Availability of ambulance, doctors, oxygen cylinder oxygen flow pipe.
- vii. Any other agency involved.
- viii. Availability of lighting facilities.

On the basis of above information team will pack/load additional required equipment

like shoring materials, Iron plate, Wooden sheet & Iron pole etc. Team comdr should be in constant touch with civil administration for latest on site development.

8.3 Bore well Rescue Operations phase: On arrival at the incident site,

- i. Team shall establish base of operation & secure the scene.
- ii. Consult with local authorities and gather all required info/data.
- iii. Team comdr will assess the situation/condition of victim, availability of heavy equipment, depth at which victim trapped.
- iv. Officer in charge/team commander will assess the nature and condition of soil with the help of irrigation department specialist/engineers.
- v. In case of confined space, officer in charge/team commander will also evaluate the condition of adjacent building/construction with the help of civil engineer and representative of civil administration before execution of approach strategy to trapped victim.
- vi. Additional requirement of shoring material.
- vii. Additional requirement of equipment.
- viii. On site availability of medical staff ambulance etc.
- ix. Confirm and update all info obtained in the activation/mobilization phase.
- x. Make/fix strategic, planning and priorities to approach and safe evacuation of victim.
- xi. Assign tasks to rescue squad.
- xii. Reassess the situation and make necessary adjustments.
- xiii. Keep providing psychological support to victim as well as the family members.
- xiv. If the victim is conscious, seek his help to pull with improvised equipment (Loops, Rice Ball etc.)
- xv. Gain access to the victim by break/breach/dig or any other way as accordance with situation.
- xvi. When using parallel digging method, safety precautions for the rescuers must be ensured.
- xvii. Make sure that the endeavor of approach, the walls of borewell do not collapse and remain intact parallel digging should be far enough in case of loose soil.
- xviii. When the pipe of the bore well has already been removed do not use improvised rescue umbrella, the sticks may get hooked with the bore well wall.
- xix. Extricate and stabilize the victim, provide ventilation.
- xx. Send the victim for higher medical care immediately.

8.4 De-Activation Phase :

- a) The clearance from State and districts must be taken after termination of Ops.
- b) Request administration for early filling of dug earth.
- c) The Bns shall collect feedback, needs improvement and make brief report for submission to NDRF HQ within 15 days after termination of operations.
- d) The Bn shall thoroughly check all TEAs used during Ops and report of breakage/loss/theft and malfunction shall be brought to the notice of NDRF HQ.
- e) The Chief Medical Officer shall ensure to conduct medical examination of all the rescuers after arrival from the operational area and shall give prescription and shall take action, as required.
- f) Bns shall conduct Post Trauma Stress Disorder (PTSD) and stress related classes on regular basis of Bn People. Where required help of the psychiatrics shall be taken from the nearest medical authorities.

8.5 Post Operation Phase:

A suggested format for submitting the post operation report is attached as Appendix 'E'. During this phase.

- i. De-briefing should be done.
- ii. Check teas thoroughly.
- iii. Lesson learnt and things to improve.
- iv. Proper documentation should be done.
- v. Case study must be prepared.

9 Administration And Logistic Arrangements:

9.1 The unit Commandant, DC(Ops) and other supervisory officers will coordinate the administrative and logistic arrangements with the distt. Administration and other stakeholders, even before the team reaches the site.

9.2 Any additional requirements of equipment and stores has to be coordinated in advance.

9.3 Timely replenishment of essential stores be arranged so that the rescue efforts continue non-stop.

9.4 Equipment, Tools, Communication stores & other misc. stores: The equipment, tools, communication stores and other misc. stores which are Required to be carried by a SAR teams are suggested at Appdx A'.

9.5 List of personal belongings of responders:

The personal belongings which are required to be carried by the members of the SAR Team members is suggested at Appdx 'D'.

9.6 Media Management:

Media and other people who do not have a direct role in the rescue work should be kept at a safe distance. Periodical briefing by the incident commander/team commander can be done to maintain the flow of information. However, it should be ensured that such information is restricted strictly to ongoing/concluded rescue efforts only.

9.7 Following points should be kept in mind by the SAR team members in the mind:

- a) Always wear PPE during Operation.
- b) Work in Buddies.
- c) Always follow safety instructions.
- d) Drink plenty of water
- e) Be optimistic and have patient.
- f) Work professionally.
- g) Update the teams and squads about incident response.
- h) Follow local protocol.
- i) Follow the SOP.
- j) Victims and bystanders.
- k) Handle equipment with safety and follow manuals.
- l) Behave gently.
- m) Share your plan of rescue with team members.
- n) Convey frequently what is going on and the next step.

10 Conclusion:

This SOP has been prepared with the objective that all the required and approved procedures are followed in the rescue operations and all the processes and activities continue uninterruptedly and simultaneously so that the entire tasks are completed in prescribed schedule. This SOP also aims at fixation of accountability at all the stages. Efforts have been made to make this SOP exhaustive. In case of any ambiguity and for more clarifications of instructions on any issue, the Unit shall issue separate orders and instructions. This SOP shall be revised regularly as and when the procedures mentioned here are reviewed or becomes obsolete with ti

CHAPTER-6

Brief Introduction about Surendranagar city

6.1 HISTORY:

Nestled in the heart of Gujarat, where the land embraces the legacy of Kathiawar region, lies the city of Surendranagar—a place where history and commerce intertwine. Once the regal seat of the Wadhwan princely state, this city now pulses as a vital hub for the trade and processing of agricultural bounty. It forms part of the broader Wadhwan urban sprawl, echoing with stories of its princely past. In the wake of state integration, the district was once known as Jhalawad, but today it bears the name Surendranagar—proudly holding its place as the former stronghold of the British Political Agent, and a living testament to the layered history of the region.

Surendranagar carries within its soil the echoes of a rich and storied past. It stood witness to the stirring winds of the freedom movement, shaping its destiny over the span of decades. In 1864, guided by the foresight of Colonel Howey, this land was chosen as the site for the Wadhwan Civil Station. Soon after, Colonel Kitties, the Political Agent of Kathiawar, secured the land under a permanent lease, marking the beginning of its transformation. With the establishment of the Wadhwan Camp—locally known as Kanp—as the headquarters of the Jhalawad Provincial Agency under the Western India States Agency, the region began to hum with new purpose. Drawn by the promise of opportunity, people from neighboring villages arrived in growing numbers, seeking livelihood and bringing with them the spirit of settlement. Thus, a city began to rise from the dust of the plains.

The arrival of steam engines in May 1872 turned this budding township into a vibrant junction, where four railway lines—Viramgam, Dhrangadhra, Rajkot, and Bhavnagar—converged, breathing life into trade and travel. Commerce flourished, and the city pulsed with energy as more souls came seeking fortune and stability. In 1946, Maharaj Surendrasinhji of Wadhwan was entrusted with this growing settlement, and it was he who bestowed upon it the name Surendranagar. With the integration of princely states in 1948, this city ascended in stature to become the district headquarters, carrying forward its legacy into the modern age.

The city of Surendranagar traces its origins back to the year 1854, when it was first established under the name Wadhwan Camp, or more formally, the Wadhwan Civil Station. In its early days, it served as a prominent center of British administration, housing the headquarters of the Political Agent of Kathiawar. A new chapter unfolded in 1946 when the reins of governance were passed to the Raja of Wadhwan, Shri Surendrasinhji. In honor of the ruler, the city was renamed Surendranagar in 1947—a name that would soon echo with pride across the region.

Surendranagar's spirit was deeply intertwined with the tides of India's freedom struggle, its soil bearing witness to acts of courage and resistance. Often hailed as the gateway to Saurashtra, the city stood not only as a geographical threshold but also as a symbol of resilience and transition. The district of Surendranagar was officially formed on 1st May 1960, marking its place in independent India's administrative landscape.

The Birth of a New Era: Surendranagar Municipal Corporation

On the 1st of January, 2025, a new dawn broke over Surendranagar as it rose to the stature of a Municipal Corporation. This transformation from the Surendranagar-Dudhrej-Wadhwan Municipality marks not just a bureaucratic milestone, but a profound moment in the evolution of urban self-governance. It is a declaration of intent—a promise to its people of more efficient governance, enriched civic services, and a vision of integrated and sustainable urban development.

This shift is emblematic of the city's aspirations to reimagine its future through a modern, responsive, and empowered administrative framework. What once began as a cluster of towns has now matured into a collective voice yearning for advancement, equity, and excellence. This proposal seeks to explore the layers of this metamorphosis—its motivations, its challenges, and the luminous horizon it aims to reach.

A Vision Rooted in Transformation

The elevation to Corporation status is not a mere change of nomenclature; it is a bold reorientation of purpose. It speaks of a deliberate resolve to equip the city with the tools and autonomy it needs to address the pressing demands of a rapidly expanding urban population. It is a shift in philosophy—from reactive management to proactive planning, from basic provision to strategic innovation.

1. A Leap in Civic Amenities

At the heart of this transformation lies the ambition to elevate the standard of civic life. With a Corporation's structured accountability, vital services such as water supply, waste management, public health, and infrastructure can now be rendered with greater precision, consistency, and care.

2. Infrastructure as a Catalyst

The new Corporation heralds an era of ambitious infrastructural renewal. With increased autonomy and better access to funding, Surendranagar is poised to undertake projects that

modernize its roads, utilities, and public spaces—laying down the physical foundations of a smarter, more resilient city.

3. Fueling Economic Prosperity

The change also signals a gateway to economic vibrancy. As a Corporation, Surendranagar becomes a magnet for private investment, entrepreneurship, and innovation. It is an invitation to industries and visionaries to co-create a thriving urban economy.

4. Responsive and Agile Governance

With decentralized authority comes the gift of swifter decisions and seamless coordination among departments. The Corporation model fosters governance that is nimble, locally attuned, and deeply accountable to the citizens it serves.

5. Upgrading the Urban Fabric

Surendranagar's transformation empowers it to prioritize and expedite long-overdue infrastructure upgrades. With expanded capabilities, the city can resolve legacy issues while shaping a livable and competitive urban environment.

6. Empowering the People

Perhaps the most profound change lies in the empowerment of the people. The Corporation model enshrines participatory governance, granting citizens a voice in shaping their urban destiny. It builds a civic culture rooted in belonging, ownership, and collective responsibility.

7. Building Capacity for the Future

This transformation demands growth not just in infrastructure, but in human capacity. Administrative staff must be trained, systems modernized, and a culture of transparency and efficiency fostered to truly embody the Corporation's promise.

8. Stewardship of Public Finances

With great autonomy comes great responsibility. Effective financial management is critical—requiring thoughtful planning, prudent budgeting, and innovative revenue models to ensure fiscal health and service excellence.

9. Strengthening Community Bonds

A successful Corporation thrives on trust. Transparent communication, inclusive decision-making, and sustained community engagement are the cornerstones of a governance model that places the citizen at its heart.

The transformation of the Surendranagar-Dudhrej-Wadhwan Municipality into a Municipal Corporation is more than an administrative evolution—it is a testament to the city's courage to grow, adapt, and dream. It sets in motion a vision of a more vibrant, empowered, and sustainable urban future—one where every resident has a stake in the city's destiny, and where governance becomes a shared journey toward progress.

6.2 SURENDRANAGAR CITY MAP :

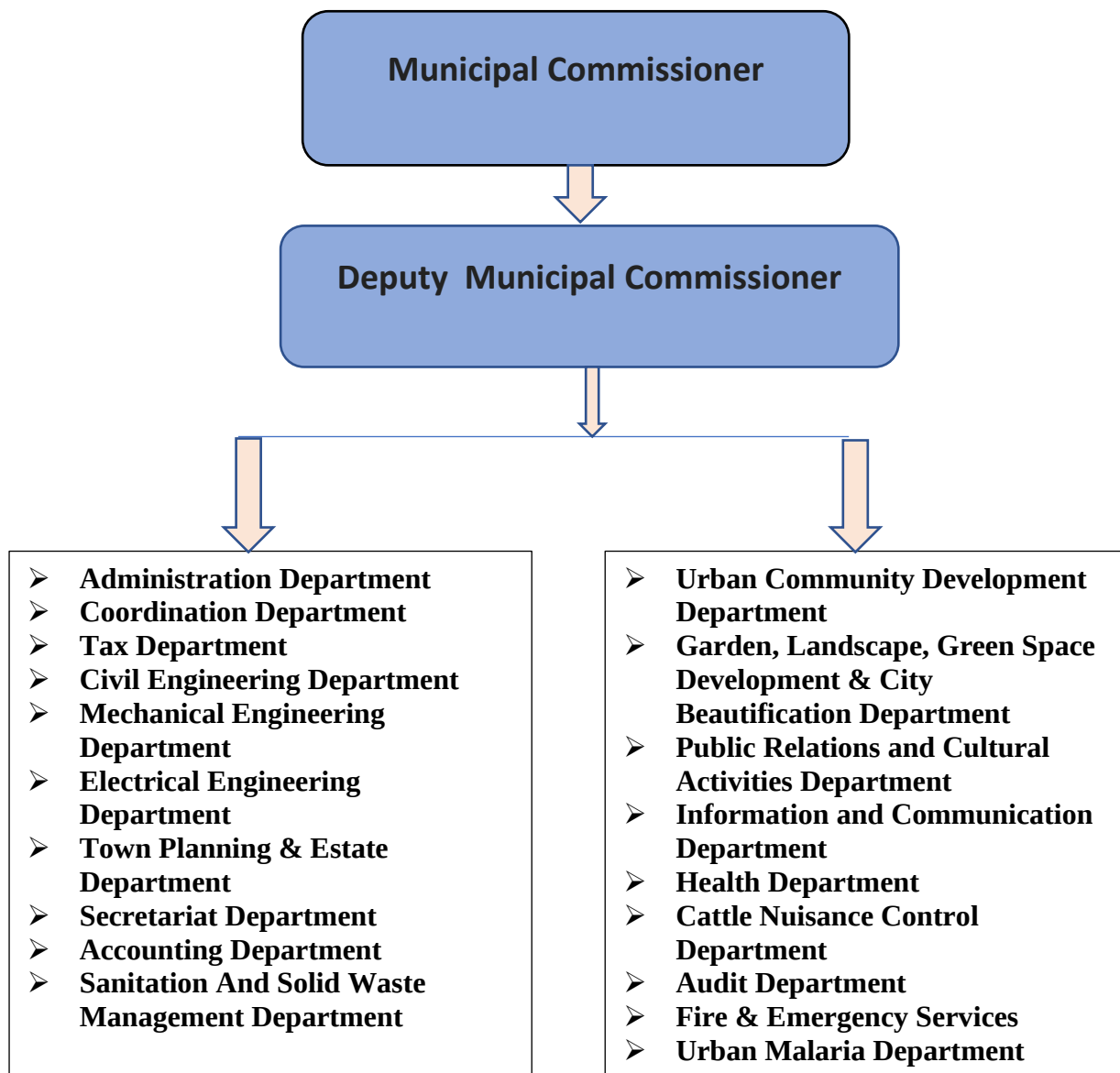


Surendranagar District of Gujarat is situated between 22°00' to 23°05' North altitude and 69°45' to 72°15' East longitudes.

6.3 Important Information of Surendrangar City

The total population of the city	387500 (Approx Population As Per Census (2024), Projected)
The total area of the city	124.97 Sq Km
Sex Ratio	930
Total wards of the city are	13
Administrative Zones	2
Average rainfall	Year –Year-2023-651 mm/2024-1264 mm.
Places worth visiting in the city	Trimandir – Surendranagar Hawamahar – Wadhwan Vateshwar Van Dholidhaja Dam River Front Surendranagar Dudhrej Temple Ranakadevi Temple Madhav Vav
Nearest Railway	Surendranagar Junction Railway Station
Nearest Airport	Surendranagar International Airport
Villages	1. Villages: Khamisana, Kherali, Malod, Mulchand, and Chamaraj 2. City: Surendranagar-Dudhrej-Wadhwan
Mayor	Rakeshbhai Rathod
Deputy Mayor	Smitaben Raval
Standing Committee Chairman	Nikhilbhai champaneri
Municipal Commissioner	Shri J.K.jadav
District Collector	Shri G.H.Solanki
Deputy Commissioner (North Zone)	Shri Gautamkumar K. Makwana
Deputy Commissioner (West Zone)	Shri ravikanta patel
District Development Officer	Shri K.S.Yangnik
Superintendent of Police	Shri premsukh Delu

6.4 Administration



- The Surendranagar Municipal Corporation is divided into 13 administrative wards to manage local services. These 13 wards span across two major geographic zones: the North Zone and the South Zone, which are separated by the Bhogavo River

■ Ward officer list municipal corporation Rajkot

No	Name	Ward No.	Mobile	Main Ward Office Address
1	Shri Bhaveshbhai Mori	01	77779448707	Behind Vadvala Temple, Khodugam Road, Dudhrej
2	Shri Jaybhai Patel	02	9574073945	Krushnanagar Society, Krushnanagar Pani Taki
3	Shri Sanjaybhai	03	7698768030	Gamtal Pani Tanki, K.C.I Karkhana Pase, Handloom Road.
4	Shri Sumitbhai Solanki	04	7820008910	Gamtal Pani Tanki, K.C.I Karkhana Pase, Handloom Road.
5	Shri Ashokbhai Mir	05	9638961898	New Meghani Taki, Aanand Bag, IPS School Road.
6	Shri K.D.Rana Shri Dipakbhai Makvana	06	8200032915	Bhaktinandan Taki, Bhaktinandan Circle Pase, 80 Foot Road.
7	Shri Parthbhai Bhatt	07	7016969057	Bhaktinandan Taki, Bhaktinandan Circle Pase, 80 Foot Road.
8	Shri hirenbhai Rathod	08	8780074870	Krushnagar Pani Taki, Krushnagar Society .
9	Shri pratikbhai shah	09	8200432622	Kharavad pani taki ,kharavad
10	Shri ajaybhai dhiyad	10	7405321031	Ratanpar pani taki, ratanpar
11	Shri ramdevsinh sindhav	11	9725555855	Ratanpar pani taki, ratanpar
12	Shri vikrambhai garasiya	12	8141495938	Dholi pol pani taki, dholipol
13	Shri chavda bhargavbhai	13	9662592401	Dholi pol pani taki, dholipol

Chapter-7

Disasters during monsoon in the city

7.1 Low level Areas of the City (Ward Wise Information)

Areas Name
City Area
On The Banks Of The Ratanpar River
On The Banks Of Joravarnagar
Ambawadi pase mafatiyaparu
Adarsh Society Near Mafatiyapuru
Nathbawa Society Area
Area Near vadival plot
Bhogavo River Bank Area
Nava talav khadovalo area
Area Next To Gandwada Lake
Residential Area On Rivers/Shore/Shoreline And Water Drainage :
Miyanawad
Ghanchiwad
Popatpara
Kumbharpara
Ratanpar Milchali
Mafatiyapara

7.2 Information on slum area in the city

No.	Area Name
1	Sudhara Plot
2	Joravarnagar Railway Station- Maccchonagar
3	Joravarnagar Vankla Nala
4	Desalbhagat Vav
5	Ambawadi Pase Mafatiyaparu
6	Adarsh Society Near Mafatiyapuru
7	Nathbawa Society Area
8	Area Near Vadival Plot
9	Bhogavo River Bank Area
10	Nava Talav Khadovalo Area
11	Area Next To Gandwada Lake

7.3 Detail of dams and ponds near the city.

➤ **Dholi Dhaja Dam :**

Dholidhaja Dam is an important earthfill dam located near Dholidhaja village in the Surendranagar district of Gujarat, India. Built across the Bhogavo River, a tributary of the Bhadar River, it serves as a crucial water source for irrigation and drinking purposes in the region.

Historical & Functional Significance

The dam helps in water storage for agricultural activities in the drought-prone Surendranagar region. It supports local villages and farms by providing a reliable water supply, especially during dry seasons. The reservoir created by the dam also attracts migratory birds, making it a minor spot for nature enthusiasts.

➤ **Bhogavo Riverfront:**

Developed along the Bhogavo River, this urban riverfront features walking paths, picnic tables, and children's play areas. It is less crowded and provides a serene environment for morning and evening walks.

24. Sorthiawadi Chowk

25. Beside Mavdi Chowkdi Overbridge 26. Railnagar Under Bridge

Chapter-8 Response system

1. Introduction to Response System

The Response System outlines the institutional and operational framework designed to react swiftly and efficiently to any disaster in the Surendranagar municipal area. The primary objective is to minimize response time, optimize resource utilization, and ensure well-coordinated multi-agency relief and rescue operations.

The system operates under the internationally recognized Incident Command System (ICS) framework, tailored to local municipal governance.

2. Institutional Framework & Command Structure

The Response System is driven by a clear chain of command to avoid confusion during an emergency.

A. Incident Commander (IC)

- Designation: The Municipal Commissioner of Surendranagar acts as the Incident Commander.
- Role: Overall in-charge of the disaster response. Authorizes emergency funds, mobilizes resources, and requests district/state assistance (like NDRF or SDRF) if needed.

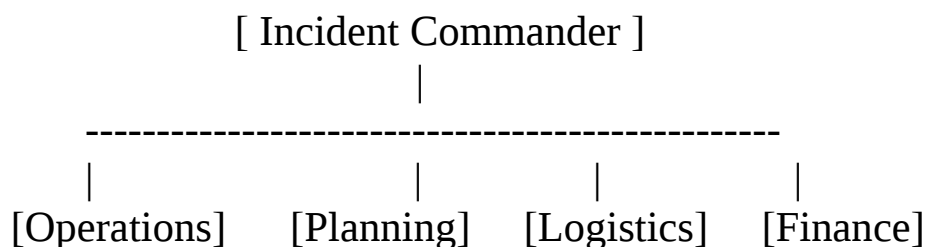
B. Crisis Management Committee (CMC)

A high-level committee chaired by the Incident Commander, including:

- Deputy Municipal Commissioner (Operational Chief)
- Chief Fire Officer
- City Engineer (PWD & Water Supply)
- Chief Medical Officer (CMO)
- Representative from local Police and Revenue Department

3. Core Components of the Response System

The response framework is divided into four main functional sections:



1. Operations Section

This section executes the actual physical response on the ground.

- Search and Rescue (SAR): Led by the Fire and Emergency Services team to rescue trapped or stranded citizens (especially during floods or building collapses).
- Medical Response: Setting up on-site triage, deploying ambulances, and managing emergency wings at designated hospitals.

- Evacuation Team: Moving citizens from high-risk zones (e.g., low-lying areas near the Bhogavo River) to safe shelters.

2. Planning Section

This section provides data and analytical support to the Incident Commander.

- Information Collection: Gathering real-time data on damage, weather updates, and resource requirements.
- Resource Tracking: Keeping a live inventory of available vs. deployed manpower and machinery.
- Action Plan: Developing short-term operational plans for the next 12 to 24 hours.

3. Logistics Section

This section provides all necessary personnel, facilities, and materials.

- Supply Chain: Arranging food packets, clean drinking water, medicines, and blankets for relief camps.
- Transportation: Providing trucks, JCBs, boats, and fuel for rescue operations.
- Communications: Maintaining satellite phones, VHF networks, and alternative power backups (DG sets) for the Emergency Operation Centre (EOC).

4. Finance & Administration Section

- Emergency Procurement: Quick processing of funds for purchasing urgent relief material without standard bureaucratic delays.
- Compensation & Documentation: Recording expenses, tracking personnel hours, and documenting claims for post-disaster compensation.

4. Response Activation Protocol (Trigger Mechanism)

The response system is activated based on a 3-tier trigger mechanism:

Trigger Level	Situation Scale	Action Required
Level 1 (L1)	Minor/Local: Localized emergency (e.g., small fire or waterlogging in one ward).	Managed by the respective Ward Office and Fire Department. EOC monitors.
Level 2 (L2)	Medium/City-wide: Disaster affecting multiple wards (e.g., heavy flooding from Bhogavo River, major industrial chemical leak).	Full activation of the Emergency Operation Centre (EOC). Municipal Commissioner takes direct command.
Level 3 (L3)	Catastrophic: Disaster beyond the capacity of the Municipal Corporation.	Immediate escalation. The District Collector is notified, and State/National forces (SDRF/NDRF/Army) are requested.

5 Media and Communication Response

To prevent panic and counter rumors, a Public Information Officer (PIO) is designated within the Response System.

- Only verified information approved by the Incident Commander will be shared with the media and public.
- Regular bulletins will be issued through official social media handles, local radio, and press briefings.

Important contact phone numbers for reporting to the State Government during heavy and excessive rains, dam overflows, flood emergencies, cyclones.

No	Office Name	Phone No	Fax No/Mobile
1	Collector Office, Disaster Management Cell	02752 283400/02752 284300	-
2	Relief Director, State Control Room, Gandhinagar	23251611, 23251612	9978406087
3	Relief Commissioner, State Control Room, Gandhinagar	9904902525	9978407674
4	Department of Urban Development and City Housing, Gandhinagar	23251001	23252309
5	Director (How. & Emergency Comm.), State Project Officer, D.R.M., Programme, G.S.D.M.A.	23259218	997840706
6	State Emergency Operational Centre, Toll-free number 1070	079 1070, 23251902/07/ 08/14	23251912/16 Satellite phone no. 881621467711
7	Ashok Das IMD, surendranagar	02812451296	9968686423
8	Zilla Panchayat	2477008	2479128
9	Police	100,	
10	Executive Engineer Road and Building District Panchayat	2455014	
11	irrigated	2443205	2453501
12	G.E.B		
13			
14	weather account	2451296	
16	airport	2453307, 2453313, 2234122, 2227916	
17	S.T	2235025, 2235026	9999853184
18	District Manager B.S.N.L.	2378800	
19	Deputy Conservator of Forests	2479004	2459688
20	Fire & Emergency Services	02752-282250/101/112	2226185

Chapter- 10

Fire & Emergency Services Vehicle Information

➤ Surendranagar fire station

Contact -02752-282250/101/112



VEHICLE DETAILS

	VEHICLE TYPE	VEHICLE DEATAILS	VEHICLE NUMBER
1	QRV	200 l. water 50 l. foam cap. Vamvan	GJ-13-GG-0728
2	fire tender	2000 l. water cap. 12,000 l. water cap	GJ-13-GG-0714
3	Fire Bowser		GJ-13-G-7039
4	Fire Bowser	12,000 l. Water Cap.	GJ-18-GB-6297
5	Fire Bowser	12,000 l. Water Cap.	GJ-13-GG-0504
6	Fire Bowser	18,000 l. Water Cap. 5000	GJ-13-GG-0560
7	Fom tender	5000L. Water 1000 l. Foam Cap.	GJ-13-GG-0965
8	Turn table leder	2500 l water cap.27 m	GJ-18-GC-0188
9	RESCUE TENDER	All types of rescue equipment Also hydraulic cutter/sprayer, air lifting bag, portable generator, light mast, internal water camera, tree cutter, RCC cutter V. 10,000	GJ-18-GB-8484
10	Boom Tower	10000L WATER CAP. 2000 FOM CAP.	

11	PICK UP WITH FOM TROLLY		GJ-18-GB-3407
12	BULLET	2 Water Mixer Extinguisher 2	GJ-18-GB-9642
13	BULLET	2 Water Mixer Extinguisher Oxygen	GJ-18-GB-9606
14	EMBULANCE WITH AC	-	GJ-13-GG-0799
15	EMBULANCE	-	GJ-13-AW-4372

Staff details

1	Devang A. Milk thistle	Fire Officer	9033959555
2	Terrestrial H. Pandya	Sub - Fire Officer	6353616979

1	Jayabhai D. Rawal	Leading Fireman	9428720999
2	Divyaraj Singh R. Jadeja	Leading Fireman	9998803499
3	Bhagirath Singh Y. Zala	Leading Fireman	8488878378
4	Rahul B. Dodia	Driver Cum Pump Oh .	9904314123
5	Gopal S. Baraiya	Driver	9979683062
6	Ashok Singh A. Parmar	Driver	9909125870
7	Vipul Singh S. Parmar	Driver	9913595441
8	Babulal P. Madhavi	Driver	9726506792
9	Vijay Singh G. Parmar	Driver	9879745355
10	Yuvraj Singh G. Parmar	Driver	9909811685
11	Sanjay G. Chauhan	Driver	9724144432
12	Rameshbhai J. Vaghela	Driver	9979475374
13	Nectar N. Kalotra	Driver	8735880888
14	Sahidbhai A. Ghorl	Driver	8200369294
15	Karan Singh M. Solanki	Driver	7777999351
16	Mayur Singh D. Parmar	Driver	9328350999
17	Chetan Bhusadiya	Driver	-
18	Forest Wag	Driver	-
19	Lalji Dodia	Driver	7383233888
20	Ramiz Makrani	Driver	-
21	Hitesh Meeting	Driver	9664750070
22	Dharmaraj Singh B. Parmar	Driver	9879826900

23	Abundant D. Paranaliya	Fireman	9737279374
24	Mukesh S. Sakarya	Fireman	9726226627
25	Dharmaraj M. Sagar	Fireman	9904639191
26	Shaktiraj Singh H. Parmar	Fireman	9016447998
27	Vishwajit B. Solanki	Fireman	9016373888
28	Chetan K. Bhargamdia	Fireman	9712073431
29	Ocean Tamaliya	Fireman	9624624454
30	Govind K. Makwana	Rescuer	9510009752
31	Yuvraj Singh Makwana	Telephone Operator	-

Wadhwan Fire Station



Contact number - 02752-241196

Vehicle details

Rank	Vehicle type	Vehicle details	Vehicle number
1	Mini fire tender	2000 liters of water.	GJ-13-GG- 0530
2	Fire Bowser	12,000 liters of water per person.	GJ-13-G-7039
3	Ambulance	Oxygen with AC	GJ-13-V-4392
4	Ambulance	Regular	GJ-13-GG-0362

Staff details

NO.	NAME	DESIGNATION	MO.NUMBER
1	Siddharaj V. Rever	Leading Fireman	9327182228
2	Ranjitsinh N. Rathore	Driver	9725750297
3	Maheshbhai R. Parmar	Driver	9904555375
4	Mehulsinh M. Rathod	Driver	9173349333
5	Balwant Singh Gohil	Driver	9662723442
6	Navghansinh P. Dodia	Driver	9904912888
7	Yuvrajsinh R. Dodia	Driver	8780939993
8	Jamiat Khan M. Pathan	Driver	9033950575
9	Prashantbhai J. Bhatt	Driver	9173051334
10	Narendra Singh Rathore	Driver	9726505116
11	Farooqbhai Chauhan	Driver	8866378678
12	Praveenbhai Makwana	Driver	7984321848
13	Mukeshbhai Solanki	Driver	9924675322
14	Shoaib M. Niatar	Fireman	9974025050
15	Ajitsinh S. Mori	Fireman	8530986094
16	Dharmendrasinh J. Limbad	Fireman	7878567166
17	Karansang R. Bard	Fireman	9727369051
18	Rameshbhai Baraiya	Fireman	7487814722

CHAPTER-10

Contact Information

10.1 Officers of Surendranagar Municipal Corporation

Rank	Department Name	Department officer	Mobile number
1	Municipal Commissioner	Shri J.k Jadav	9978499589
2	Deputy Municipal Commissioner-1	Shri G.K. Makwana	94264 87271
3	Deputy Municipal Commissioner-2	Shri Ravikant B. Patel	8141233434
4	P.A. to Municipal Commissioner	Shri Devangbhai Shah	97277 78086
5	P.A. to Deputy Municipal Commissioner-1	Shri Ashish Parmar	9726377962
6	P.A. to Deputy Municipal Commissioner-2	Shri Pankajbhai Solanki	7984149536
7	City Engineer	Shri Kalpesh Chauhan	96240 97768
8	Administrative and Institutional Department	Shri B.T. Vyas	82382 30540
9	Secretariat Department	Shri Pankajbhai L. Kordia	95100 99365
10	Tax Department and Estate Department	Shri Mohbatsinh Parmar	98798 38498
11	Coordination Department	Shri C.L.Jadav	97236 58410
12	Public Relations and Cultural Activities Department	Shri Sanjaybhai Shivabhai Chavda	83470 70663
13	Information and Communication	Shri Prasant Sindh	89828 99035
14	Urban Community Development Department	Shri Hiteshbhai Ramanuja	90990 25444

15	Town Planning Department	Shri Prashant Ji Nisaratha	89804 45105
16	Garden,Landscape, Green Space Development and Sports Department	Shri Kewant Singh G. Herma	97277 78078
17	Fire and Emergency Service	Shri Devangbhai Dudhreja	90339 59555
18	Law Department	Shri Hetalben M. Shilu	97233 79409
19	Accounting Department	Shri Mahendrasinh Veersinh Jhala	98241 52960
20	Audit Department	Shri Randhirsinh G. Jhala	98243 16287
21	Health Department(Medical Officer/Mother and Child Welfare/Tuberculosis Prevention Branch/Food Safety Branch)	Shri Dr. Darshan Patel	89808 10545
22	Civil Engineering Department	Shri Shaileshbhai I. Parmar	63597 19354
23	Department of Mechanical Engineering (Mechanical/Transport Branch)	Shri Pankajbhai L. Kordia	95100 99365
24	Department of Electrical Engineering	Shri Kandoliya Sudeep Kishorebhai	99098 59470
25	Sanitation, Solid Waste Management Department	Shri Kuldeep Singh Parmar	84699 94128
26	Urban Malaria Department	Shri Haresbhai J. Golani	99092 00907
27	Stray Cattle Control Department	Shri Ketanbhai A. Shah	81600 86233
28	Veterinary Officer	Mr. Unitbhai Vegda	93162 12774

10.2- List of Commissioners of Municipal Corporation of Gujarat

1	Ahmedabad	Shri Banchha Nidhi Pani	(O)07925352828
2	Anand	Shri R. N. Dodiya	(O)02692243942
3	Bhavnagar	Dr. N. K. Meena	(O)02782510532
4	Gandhidham	Shri B. D. Davera	(O)02836226573
5	Gandhinagar	Shri J. S. Prajapati	(O)07923220440
6	Jamnagar	Shri Deepesh Kedia	(O)02882552321
7	Junagadh	Shri Prabhav Joshi	(O)02852650450
8	Mehsana	Ms. Shalini Duhan	(O)02762254568
9	Morbi	Ms. Sangeeta Raiyani	(O)02822220551
10	Nadiad	Shri Kiran B. Jhaveri	(O)02682551376
11	Navasari	Shri Jayeshkumar B. Upadhyay	(O)02637250253
12	Porbandar	Shri H. J. Prajapati	(O)02862240936
13	Rajkot	Shri Tushar D. Sumera	(O)02812224133
14	Surat	Shri Nagarajan M.	(O)02612422244
15	Surendranagar	Shri J. K. Jadav	(O)02752282858
16	Vadodara	Shri Arun Mahesh Babu	(O)02652433344
17	Vapi	Shri N. F. Chaudhari	(O)02602463378

10.3 District Emergency Control Room

SrNo	Post	Name	MobileNo	Office Lanline
1	Collector	Shri G.H Solanki	99784 06223	282200
2	R.A.C.	Shri K.R. Patel	99784 05224	285200
3	Mamlatdar Disaster Management	Shri M.V.Sindhav	99985 26096	
4	Dy.Mamlatdar Disaster Management	Shri D.A.Parmar	7990815220	
5	D.P.O (GSDMA) Disaster Management	Shri Varshaben Parghi	9510574912	
6	Dy.Mamlatdar -- Flood			
7	Clerk Disaster Management	Shri Chirag Detroja	9909411019	
8	Driver / Peon	Shri Sohil Bodar	7567778651	
9	➤ District Disaster Management Centre ➤ D.E.O.C. ➤ District Emergency Control Room	Employee on duty	02752- 283 400 02752 – 284 300 02752 – 285 300	
10	E-mail I D	dismgmt-srn@gujarat.gov.in		

10.4 Central Govt Control Room.

No	Office	Phone No	Fax No
1	National Disaster Management Authority, New Delhi	01126701728	01126701700
2	Meteorology (Seismology), New Delhi	01124619943 01124624588	01124619943 01124649850
3	Meteorological Department (Met), New Delhi	01122865012	01122865449 01122864742

10.5 Gujarat State Disaster Management Authority, Gandhinagar

No.	Name	designation	Phone number		
			Office	Residential	Mobile
1	Shri Alok kumar	C.E.O. GSDMA	23259276	-	-
2	Shri D.K.Pandya	Ad.C.E.O GSDMA	23259302	-	
3	Shri Ankita Parmar	Director GSDMA(DRM)	23259292	-	-
4	Shri Samir Maheta	Director (Finance) GSDMA	23259219	-	-
5	Shri Ishvar Prajapati	ADMINISTRATION	-	-	982562217
6	Shri Yasvantsinh Parmar	Sector Manager	23259220		8469288345
7	Shri Sanjay mal	Sector Manager	23259306		9173863052
8	Shri Prashant Makwana	Sector Manager	-	-	9825498315

10.6 Head of all branches Surendranagar

District Level Emergency Contact

	<i>Designation</i>	<i>Name</i>	<i>Mo.number</i>	<i>Office No</i>	<i>Email Id</i>
1	Collector	Shri G.H Solanki	9978406223	02752 285200	collector-snr@gujarat.gov.in,
2	D.D.O.	Shri K.S.Yagnik	9978406248	02752 283752	ddo-snr@gujarat.gov.in,
3	S.P	Shri Premsukh delu	9978405083	02752 282100	sp-control-srn@gujarat.gov.in
4	Resi. Addl. Collector	Shri K.R Patel	99784 05224	02752 285200	rdc-srn@gujarat.gov.in
5	Dy. District Development Officer (Revenue)	Shri Kirtan Rathod	9106688067	02752 285602	dy.ddo-snr@gujarat.gov.in,
6	Deputy Conservator of Forest (Social)	Shri Vibhaben Goswami	9586806004	02752 283401	dcfsfsnr@gmail.com
7	Deputy Conservator of Forest	Dr.Tushar Patel	7490027654	02752 283401	dcfsfsnr@gmail.com
8	Dy. S.P.	Shri Parth parmar	9978407892	02752 282100	dy.sp-control-srn@gujarat.gov.in
9	Dy S.P Dhragadhra	Shri J D Purohit	9429665559	02754-282652	
10	Chief District Health Officer	Dr. B.G Gohil (i/c)	9727721376	02752 285383	cdho-srn@gujarat.gov.in
11	Director, DRDA	Shri R.M.Jalandhra	9737587600	02752 284808/284809	drda-snr@gujarat.gov.in,
12	D.S.O.	Shri A.G.Gajjar	6351346404	02752 284351	dso-srn@gujarat.gov.in
13	C.D.M.O.	Dr.Chaitanya Parmar	9879409818	02752 223052 /222553	cdmo-srn@gujarat.gov.in
14	D.E.O.	Shri A M Oza	9909970219	02752 284710	dposnr@gmail.com
15	D.P.E.O.	Dr.Bhadrasingh Vaghela	9909971695	02752 283099	dpeosnr@gmail.com
16	General Manager, DIC	Shri S.B. Parejiya	9924025050	02752 283465	dic-snr@gujarat.gov.in
17	Ass. Director of Information	Shri Prashant Trivedi	8222888127	02752 285650	information-snr@gujarat.gov.in
18	Nagar Palika Fire officer	Shri Devangbhai	90339 59555	02752 282250	surendranagar.nagarpalika@gmail.com
19	Executive Engineer, R & B (State)	Shri D.R. Patel	9925806429	02752 282252	srnrnb@gujarat.gov.in
20	Executive Engineer, R & B (Panchayat)	Shri D.R. Patel	9925806429	02752 285812	

21	Executive Engineer, irrigation (State)	Shri B.S Gameti	9265275166	02752 282920	ghgwd2@gmail.com
22	Executive Engineer, irrigation Panchayat (DDO Office)	Shri D.R. Patel	9925806429	02752 284902	
23	Executive Engineer GWSSB	Shri G.N Patel	9909955609	02752 284598	gwseecs0@gmail.com
24	Superintendent Engineer, PGVCL,	Shri N.N. Amin	9825603180	02752 223450	sesnr.pgvcl@gebmail.com
25	Dy Director of Animal husbandry (DDO Office)	Shri Dr. B.B .Patel	9638328884	02752 283785	-
26	District Agriculture officer (DDO)	Shri M.R.Parmar	9898260931	02752 285902	
27	Program Officer ICDS (DDO Office)	Shri Iraben Chauhan	9428506120	02752 283717	
28	Director Industrial Safety and Health	Shri harshadbhai	9712175167	02752 282351	astdish-srn@gujarat.gov.in
29	DC/ST Manager depot.	Shri D.V Chaudhari	6359918739	02752 221152	
30	Superintendent of Fisher	Shri Bhartiben Tank	6352590464	02752 283436	asstdir-fish-srn@gujarat.gov.in
31	Regional officer, GPCB	Shri Tushar Trivedi	9429648135		ro-gpcb-sure@gujarat.gov.in
32	Dy. Manager BSNL	Shri R K yadav	9413395588	02752 232000	
33	Mamlatdar Disaster	Shri M.V.Sindhav (i/c)	9998526096	02752 283400	dismgmt-snr@gujarat.gov.in,
34	D.P.O. Disaster Managment	Shri Varshaben Parghi	9510574912	02752 283400	dismgmt-snr@gujarat.gov.in,
35	Dy. Mamlatdar Disaster	Shri D.A.Parmar	7990815220	02752 283400	dismgmt-snr@gujarat.gov.in,

10.7 Urban Health Center :

UHC Details, Surendranagar

Taluka Name	Name	Nodal Officer	Officer Mob. No.
WADHWAN	UHC JORAVARNAGAR	Dr. Anjali zala	800018999
WADHWAN	UHC VEPARIMANDAL	DR. ALPESH SADHU	9601015612
WADHWAN	UHC LAXMIPARA	DR. RIDHHI SAHA	6353724065
WADHWAN	UHC KRUSHNNAGAR	DR.ARTI PARMAR	8469326569
WADHWAN	UHC WADHVN 1	DR. AVANI SATUNIYA	9499663350
WADHWAN	UHC WADHVN 2	DR.KAUSHAL KANZARIYA	9664668477

Blood Bank

Sr. No	Address	Name of officer	Mobile No.
1	C U Shah Medical College	Dr.kirtiben	02752287041 / 42 8320325918
2	Gandhi Government Hospital Surendranagar	Dr.Harshad prajapati	2752222052 9727712214
3	Life Line Blood Bank	Dr.pravin vyas	02752220000 9586223682
4	Shradhha Laboratory	Nileshbhai pandya	9426922330

District Level Rapid Response Team Information (RRT)

Designation	RRT Members Name	Address	Phone Numbers	E-Mail ID
Physician	Dr. Jaydip Gosai	General Hospital, Surendranagar	(O)(02752)222553 (F)02752)222052 (M)9428210234	cdmo.health.surendranagar@gmail.com
Pathologist	Dr. Harshad Prajapati	General Hospital, Surendranagar	(O)(02752)222553 (F)02752)222052 (M)9727712214,	dr.harshad@yahoo.co.in
Epidemiologist (CDHO)	Dr. B. G. Gohil	District Panchayat, Surendranagar	(O)(02752)285383 (F)(02752)285383 (M) 9099064396 9426232950	cdho.health.surendranagar@gmail.com
District Surveillance Officer (EMO)	Dr. Jayesh Rathod	District Panchayat, Surendranagar	(O)(02752)285382 (M)9727721280 9712915785	dso.health.surendranagar@gmail.com
Entomologist/ DMO	Dr. Jayesh Rathod(i/c)	District Panchayat, Surendranagar	(O)(02752)284851 (F)(02752)284851 (9712915785)	dmo.health.surendranagar@gmail.com
Microbiologist	Dr. Nilesh Khant	General Hospital, Surendranagar	(O)(02752)222553 (F)02752)222052 8866221199	cdmo.health.surendranagar@gmail.com

10.8 Emergency Contact Number Electricity Board

No	Name of division	Name of sub division	Phone No	Mobile No	Junior engineer mo.no.
1	Surendranagar	Wadhvan		6359638534	9978936270
2		Surendranagar city-1	02752-220450	6359638501	9925209874
3		Joravarnagar	02752-220091	6359638527	9925209880
4		Surendranagar city-2	02752-226250	6359638515	9925209876
5		Surendranagar(R)	02752-235806	6359638520	9925209877

10.9 Railway Dept. Surendranagar

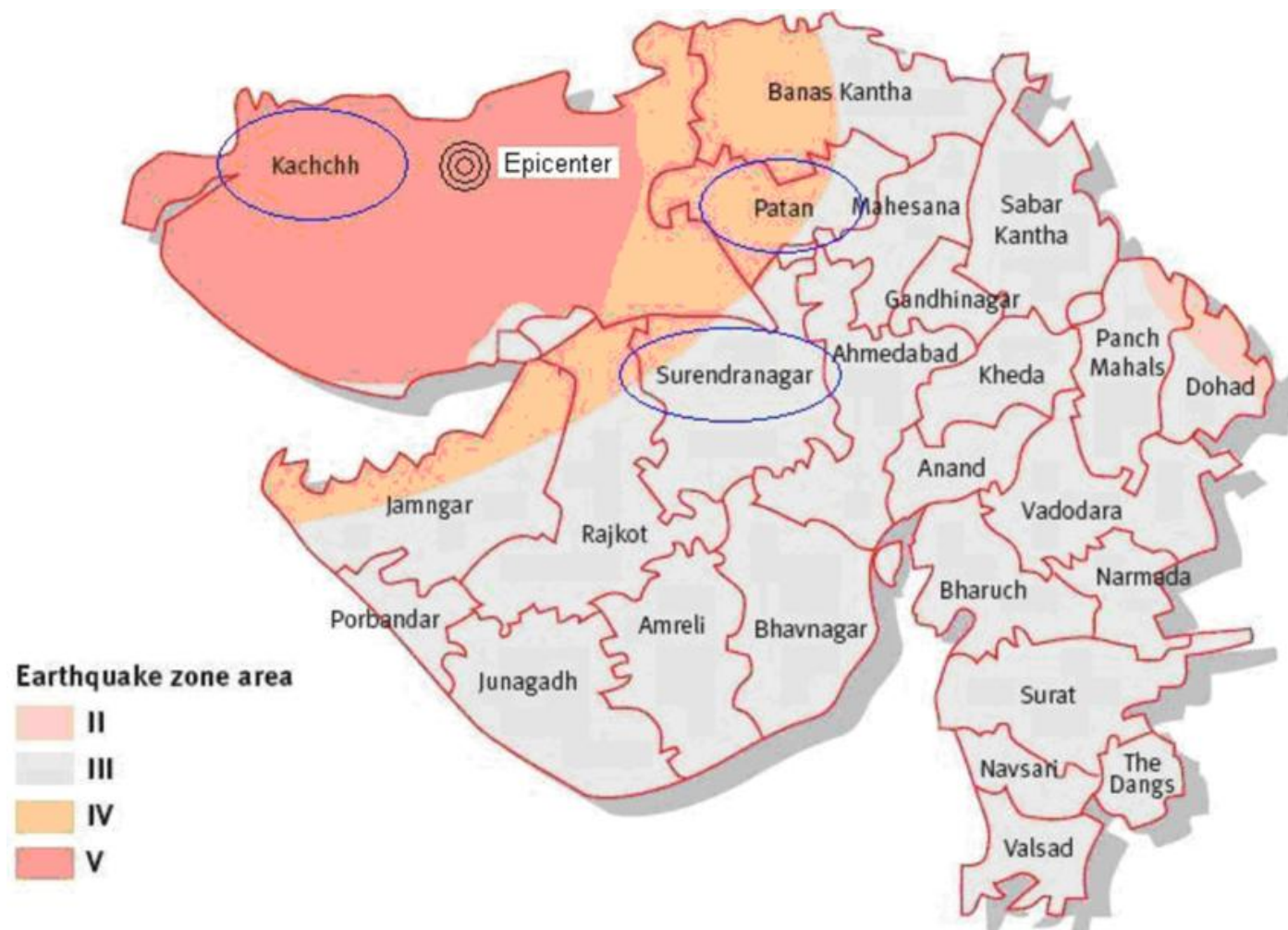
No	Designation	Name	MobileNo
1	STATION MASTER SURENDRANAGAR	Pradeep kumar	9724094949
2	AEN SURENDRANAGAR	SH. S.K SONI	9724094203
3	AST.ENGINEER Surendranagar	Mr.VIVEKANAND ARYA	9724094250
4	SAFETY OFFICER Surendranagar	SH. R.C MEENA(D.S.O)	9724094901
5	DRM RAJKOT	SH.GIRIRAJ MEENA	9724094000
6	ADRM SURENDRANAGAR	SH. BRIJESH KUMAR SINGH	9724094001
7	SSE -WORKS	SH.SARVAN KUMAR	9724094250

10.11 Electornic Media list

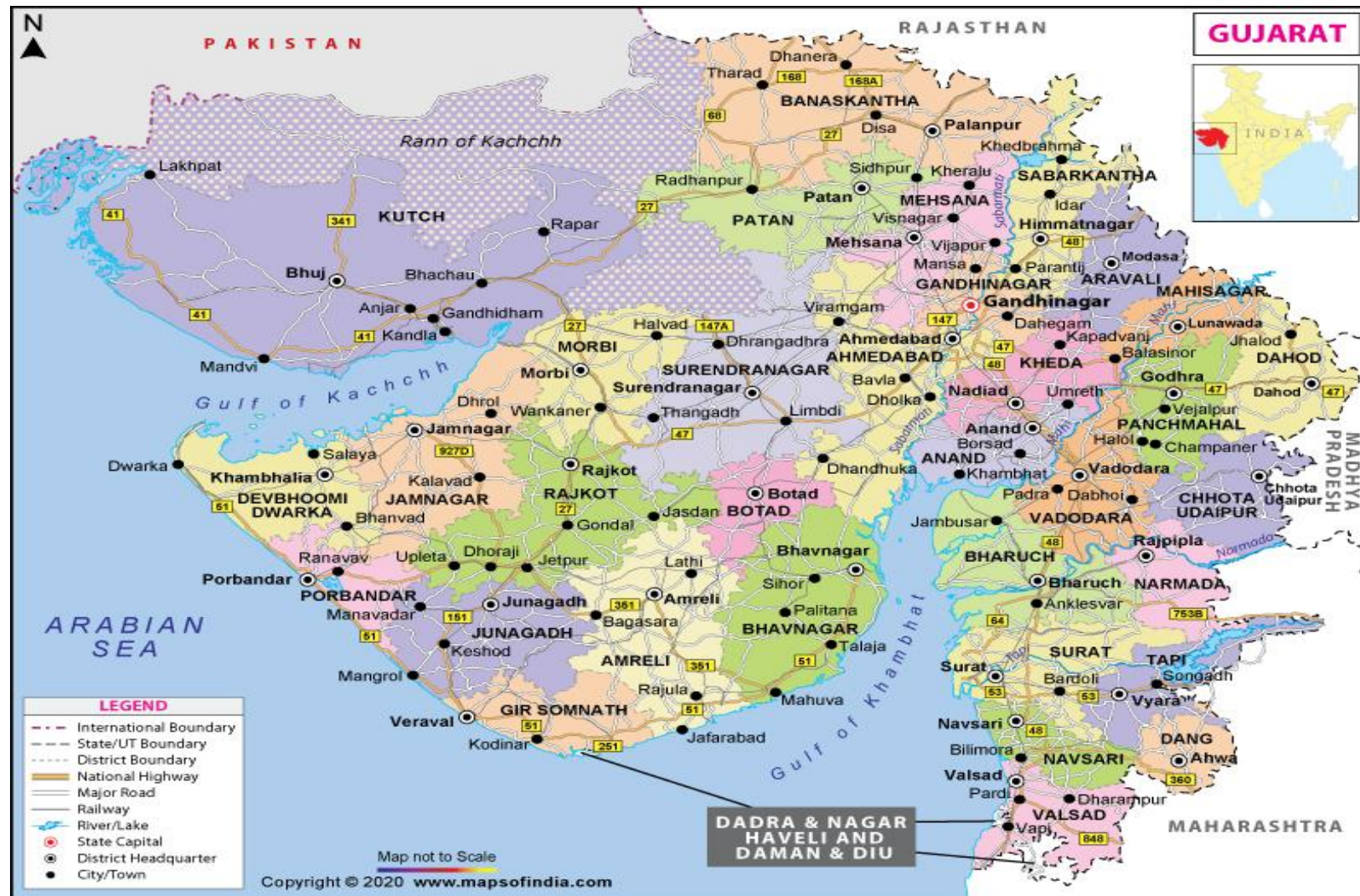
NO	TV CHANNEL NAME	MEDIA PERSON NAME	MOBILE NUMBER
1	NEWS 18 GUJRAT	AKSHAY JOSHI	9825858508
2	SANDESH NEWS	SAHRUKH SIPAI	9157772888
3	AAKASHVANI	DINESH PARMAR	9913156657
4	F M NEWS	DIPAKSINH	9825591366
5	GSTV NEWS	FAZAL CHAUHAN	8200424747
6	GTPL PTI	KRUNAL K RAVAL	9998423279
7	IAN S TV	MAYUR SANGHI	9825096092
8	ABP ASMITA ,DURDARSHAN	PANDYA JIGNESH	9825858950
9	Z-24	PARVEJ SANGHI	9825096092
10	TV13 GUJRAT	RAJESH BAHURASHI	7862882528
11	BBC,VTV	SACHIN PITHVA	9898190829
12	TV9	SAJID BELIM	9979964863
13	AAJTAK ,NIRBHAY SAMACHAR	SAJID BELIM	9979964863
14	INDIA TV	SAMIR SANGHI	9825096092
15	SAMACHAR CAPITAL	VIJAY BHATT	9725077709
16	GUJRAT PRATHAM	VIREN DANGRECHIYA	9825476964
17	MANTAVYA	ASHOK RAMI	9825079479
18	K TV SAMACHAR	JILU BHARVAD	9825355762
19	DIVYANG NEWS CHANNEL	MANHARDAN GADHVI	9998813900
20	SANDESH	ZALA DHARMENDRASINH	9879982476
21	DIVY BHASKAR	MANISH PAREKH	966227005
22	MAA ASHAPURA NEWS	ZAL JAYENDRASINH	9825659332
23	TMP NEWS	PRAVIN PARMAR	9099375234
24	CHAKRAVAT NEWS	UDAY CHAVDA	7069922622
25	ABTAK	GHANSHYAM BHATTI	9824419793

26	GSTV	VIPUL DAVE	9979477999
27	DP NEWS	DARSHAN MISTRI	8758850996
28	BHARAT TIMES NEWS	NARESH SOLANKI	9327979111
29	B INDIA NEWS	AVDHESH TRIVEDI	9825899680
30	BHARAT NEWS 24	PARMAR ASHOK	7698345777
31	G A NEWS	ASHARF VORA	9228892092
32	BS 9 NEWS	PARMAR BIPIN	7265854041
33	YUG ABHIYAN NEWS	ZALA KRIPALSINH	8347625675
34	VTV	PARESH PATEL	8866191969
35	CHAKRAVAT	YOGESH MAKVANA	9714225234
36	AAMTAK	ASHISH PARMAR	7016666800
37	ABP ASMITA	ZALA JAYDEVSIKH	9998942965

Annexure - (Earthquake Hazard Map)

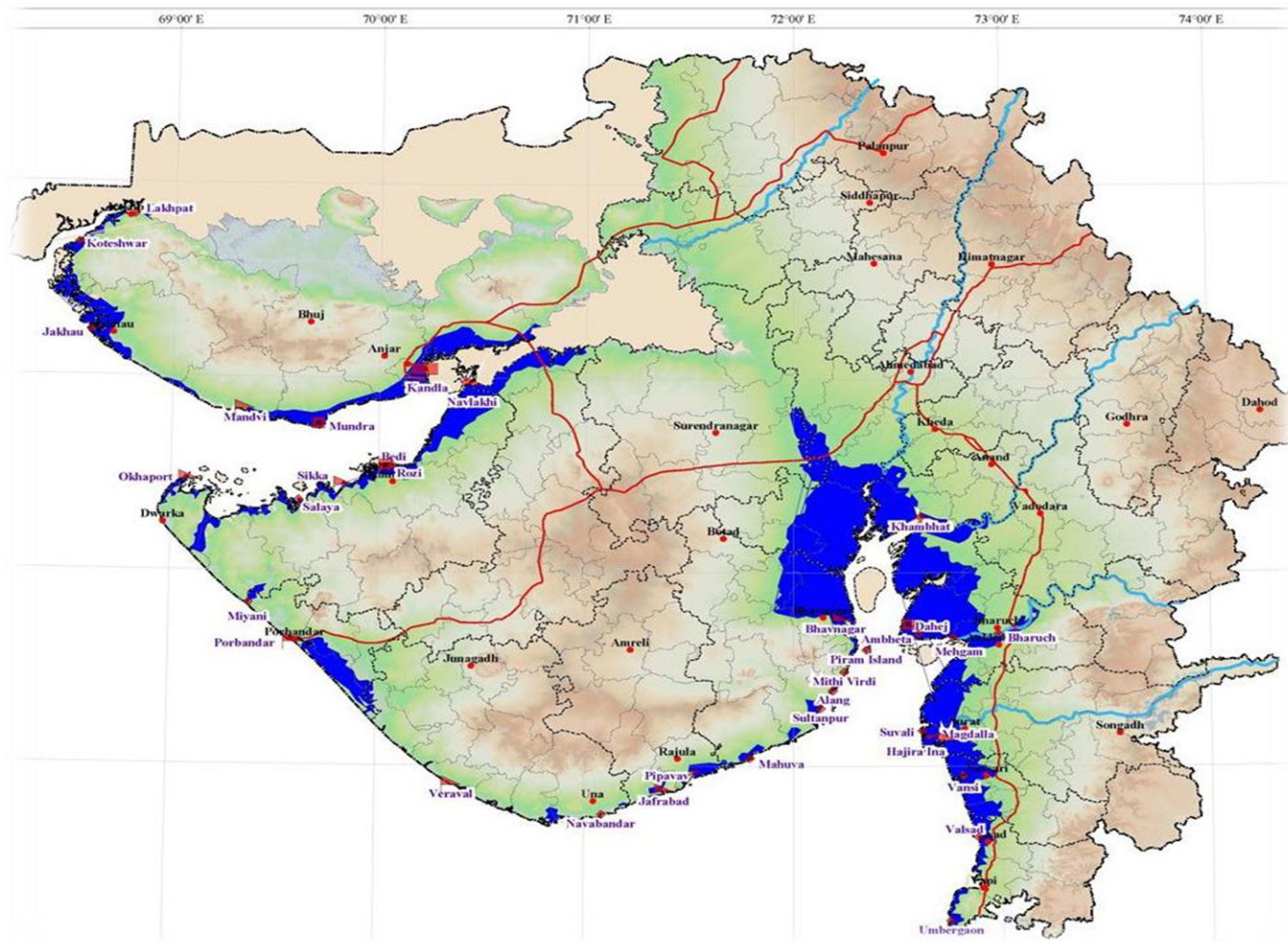


Annexure - A Gujarat Map



Cyclone Hazard Prone Map

Gujarat Tsunami Hazard Risk Zonation : Indicative Inundation based on PMS at Highest High Tide level



Flood Hazard Prone Map

