



Gujarat State Disaster Management Authority

&

Govt. of Gujarat

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Concept

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Preface

Establishment of the Disaster Management Authority and the Disaster Management Act has created a new direction about disaster management in the country by creating a scientific structure of it. It has always been learning something from being able to face natural and man-made disasters coming in Gujarat in functional form.

It is necessary to have timely and constructive planning to reduce the impact of disaster. The Gujarat State Disaster Management Authority in Surat district has implemented the Disaster Risk Management program. Under which, preparation of plans at various, first aid, search & rescue, housing construction, alert and communication skills, etc. have been undertaken by the Disaster Management Cell in the district in order to increase public awareness and their capacity building.

Emergency Operation Center at Surat and additional minor vehicles provided by the state government can be useful for immediate response at the time of disaster. The complete information of district, resources, resource inventory that are integrated in this district disaster management plan will be useful to the administration for responding at the time of disaster. This plan will be helpful and give guidance on district level for information regarding disaster. As a result, the damage caused by disaster can be properly reduced or removed.

In order to prepare the plan, timely information is taken; thanks to the active efforts of the District executives and Disaster Management Cell Authorities, Surat for cooperation.

For the purpose of checking the proposed district disaster response plan and making the plan more effective, yearly two times mockdrills are conducted. Also, the plan is updated periodically. This integrated booklet will be useful to all affiliates and your cooperation and suggestions are welcome to provide more efficient services.

Dr. Dhaval Patel (IAS)
Collector & District Magistrate
Surat

CHECK LIST

Given below is the general list of important actions / items required in a Disaster. Please check out the items pertaining to your area / function.

- District Collector is the chief custodian of this plan document and also ensure that this plan document is reviewed and updated regularly.
- The Collector shall submit a copy of district disaster management plan and of any amendment thereto to the GSDMA and the state Relief Commissioner as well.
- Each govt. department shall prepare a disaster management plan for the district and Collector shall ensure that such plans are integrated into the district disaster management plan.
- The departmental heads of the district shall ensure that all employees have gone through this document and aware of their roles and responsibilities.
- Each department shall identify a disaster coordinator who will be responsible to coordinate with different taskforces.
- Each taskforce leader shall ensure, their SOPs are prepared and all the members have gone through the Plan/SOPs and clear about their roles and responsibilities.
- During your absence/leave period, please keep key members informed.
- Make sure that you have identified an Alternate Member from your department who would function in your place in case of emergency.
- Each taskforce shall identify a Communication Coordinator from the taskforce members.
- Make sure, the facilities available at District Control Room (DCR) and Taluka control rooms are intact and are in good condition.
- Check that all Communication facilities like Telephones, Cell Phones, Radios, Base Stations etc. under your control are in good operating condition and fully charged.
- Ensure that you have the latest revised list of Emergency Contact Numbers and addresses.
- Ensure availability and operability of all resources under your control and at identified resource locations in neighboring districts for quick mobilization to emergency site.
- Maintain the records of area-wise population, shelter centers in your area for effective emergency evacuation.
- Check that the updated list of blood donors is available.
- Ensure adequate inventory of critical equipment/spares/medicines is available
- Make sure that all Fire Protection systems, rescue equipment, PPEs and other emergency equipment are in good state of repair.

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List of Abbreviations

| | |
|--------|---|
| ICS: | INCIDENT COMAND SYSTEM |
| EOC: | EMERGENCY OPERATION CENTER |
| DCR: | DISTRICT CONTROL ROOM |
| TCR: | TASKFORCE CONTROL ROOM |
| TLCR: | TALUKA LEVEL CONTROL ROOM |
| DC; | DISTRICT COLLECTOR |
| RAC: | RESIDENT ADDITIONAL COLLECTOR |
| RDC: | RESIDENT DISTRICT COLLECTOR |
| DDO: | DISTRICT DEVELOPMENT OFFICER |
| DSP: | DISTRICT SUPERINTENDENT OF POLICE |
| MC: | MUNICIPAL COMMISSIONER |
| SDM: | SUB DIVISIONAL MAGISTRATE |
| TDO: | TALUKA DEVELOPMENT OFFICER |
| SMC: | SURAT MUNICIPAL CORPORATION |
| ULB: | URBAN LOCAL BODIES |
| NAC: | NOTIFIED AREA COUNCIL |
| NCC: | NATIONAL CADET CROPS |
| NGOs: | NON GOVERNMENTAL ORGANISATIONS |
| CD: | CIVIL DEFENCE |
| GSDMA: | GUJARAT STATE DISASTER MANAGEMENT AUTHORITY |
| SOP: | STANDARD OPERATING PROCEDURE |

Chapter 1

Introduction

Disaster management is a process or strategy that is implemented when any type of catastrophic event takes place. Sometimes referred to as disaster recovery management, the process may be initiated when anything threatens to disrupt normal operations or puts the lives of human beings at risk. Governments on all levels as well as many businesses create some sort of disaster plan that make it possible to overcome the catastrophe and return to normal function as quickly as possible.

A disaster is an event triggered by natural manmade causes that lead to sudden disruption of normalcy causing widespread damage to life and property. The High Power Committee of Government of India has identified 30 major and minor disasters, which frequently occurs in our country. It is now a recognised fact that while natural disasters is primarily due to imbalance in the nature but losses due to them on account of human feelings. Human sufferings and misery from a large number of natural disasters can be minimised by taking timely action, preventing mechanisms and undertaking capital works of long and medium terms.

In India, 199 districts have been identified to be multi – hazard prone. At the district level, the district administration is the focal point to manage any disaster or eventuality. It is therefore, imperative to equip and train the district disaster management committee and disaster management team headed by the District Collector/ Magistrate/ Deputy Commissioner.

The district administration is also required to prepare a District Disaster Management Plan based upon the type of disasters likely to affect the district. The actual day –to day function of administering preparedness, response, and mitigation is the responsibility of the District Collector/ Magistrate/ Deputy Commissioner along with the DDMC and the DDMTs.

The previous disaster management plans of the Kutch district are mainly disaster specific contingency plans. Those plans reveal following facts:

- i) Plan document is too voluminous to be easily understood by users.
- ii) The command and control of relief efforts is not optimal
- iii) Integration of response is not effective
- iv) The mitigation, prevention and preparedness aspects are not addressed.

Secondly, separate plans for each disaster has produced multiple documents with considerable duplication, which would work against potential users reading and knowing any of the plans.

Recognizing the fact that most tasks and actions before and following a disaster are common at the district level, the **Surat** districtadministration hasused a **multi-disaster approach** (all disasters covered by one plan) while developing disaster management plan for the district.

1.1: Aims and Objectives

- To determine the risk and vulnerabilities associated with various hazards.
- To identify the hazardous areas and to create appropriate strategies to address the issues in these areas
- To develop appropriate strategies for effective prevention and mitigation of disasters
- To build the capacity of people working in the field of disaster management
- To aware the citizens
- To define and assign roles and responsibilities to various stakeholders associated with disaster management for pre disaster and post disaster phases.
- To develop and maintain arrangements for accessing resources, equipment, supplies and funding in preparation for disasters
- To defines the risks and Vulnerabilities of the citizens of the district to different disasters.
- To Identifies the private and public sector parties with prime and supporting responsibilities to reduce or negate these vulnerabilities
- To Mainstreaming disaster management concerns into the developmental planning process
- To Defines actions to be taken by these parties to avoid or mitigate the impact of possible disasters in the district

1.2: Evolution of the Plan

Gujarat Act No. 20 of 2003, THE GUJARAT STATE DISASTER MANAGEMENT ACT, 2003 clearly stated to mandatory provision of the DM plan as per the following clause & sections

Clause 15 of Chapter VI

1. The authority shall develop or cause to be developed guidelines for the preparation of disaster managements plans and strategies and keep them update and shall assist such departments of Government, local authorities and person, as may be specified by the authority in preparation of plans and strategies and coordinate them
2. The plan preparing authority while preparing the plan under subsection (1) shall make suitable provisions in the plan after considering the following namely:
 - (a) The types of disaster that may occur and their possible effects;
 - (b) The communities and property at risk;
 - (c) Provision for appropriate prevention and mitigation strategies;
 - (d) Inability to deal with disasters and promote capacity building;
 - (e) The integration of strategies for prevention of disaster and mitigation of its effects with development plans, programme and such other activities in the State;
 - (f) Provision for assessment of the nature and magnitude of the effects of a disaster;
 - (g) Contingency plans including plans for relief, rehabilitation and reconstruction in the event of a disaster, providing for-
 - (i) Allocation of responsibilities to the various stakeholders and coordination in carrying out their responsibilities;
 - (ii) Procurement of essential goods and providing essential services;
 - (iii) Establishment of strategic communication links;

- (iv) Dissemination of information; and
- (v) Other matters as may be provided for in the regulations.
- (h) Any other matter required by the Authority.

(3) The Authority shall prepare, or cause to be prepared, and maintained a master plan for the State/District

1.3: How to use the plan

The present plan is not intended to provide comprehensive explanations and background information about a disaster, or serve as a training manual on how to respond to a disaster or conduct a disaster related task. The approach taken is that plans and SOPs should be limited to the minimum information need to respond to a specific disaster or undertake a disaster related task. Steps to address disaster specific requirements can be covered in procedures related to actions. This approach does require that task forces develop disaster specific procedures where appropriate.

In other words, this plan is intended for use by persons who are technically competent in the tasks or responsibilities set out in each plan. The SOPs are intended to be used by persons who are unfamiliar with disaster management topics but are intended to be task specific and not as replacements for full plans.

1.4: Authority for the plan

Gujarat state Disaster Management Authority shall be primarily responsible for promoting an integrated and coordinated system of disaster management including prevention or mitigation of disaster by the State, local authorities, stake holders and communities. The Authority shall- act as the central planning, coordinating and monitoring body for disaster management and post-disaster reconstruction, rehabilitation, evaluation, and assessment. Assist the State Government in formulation of policy relating to emergency relief notwithstanding that the implementation of emergency relief shall be the responsibility of the Revenue Department and other departments of the Government. Inform the State Government and departments of Government on progress and problems in disaster management. Promote general education and awareness on disaster management, emergency planning and response and matters incidental thereto. The State Government, the Collector, concerned officers of the State Government and the local authorities in the State shall give such assistance and support to the Authority in performing its functions as may be required by the Authority.

At the district level, District Collector is responsible for responding any disaster situation in consultation with other line departments at district HQ are responsible to deal with all phases of disaster management within district

1.5: Stakeholders and their responsibilities

At the district level, District Collector is responsible for responding any disaster situation in consultation with other line departments at district HQ are responsible to deal with all phases of disaster management within district.

Technical institutions, NGOs, Local authority, private sector, Community groups, volunteer agencies and citizens.

According to Disaster Management Act-2003 Stakeholders and their responsibilities are:

District Collector:

During the period, an area is an affected area the Collector may issue directions to the officers of the departments of the Government and the local authority in the affected area, to provide emergency relief in accordance with the disaster management plans.

The District Collector may-

1. Make arrangements for release and use of available resources
2. Control and restrict traffic to, from and within the area affected by a disaster
3. Control and restrict the entry into, movement within and departure from any disaster area or part of it
4. Remove debris
5. Conduct search and rescue operations
6. Make arrangements for the disposal of the unclaimed dead body, by appropriate means
7. Provide alternative shelter
8. Provide food, medicines and other essentials
9. Require experts and consultants in the matters relevant to the disaster to provide relief under his direction and supervision
10. To take possession and make use of any property, vehicles, equipment, buildings and means of communication on such terms and conditions as may be prescribe
11. Procure exclusive or preferential use of amenities as and when required
12. Construct temporary bridges or other structures
13. Demolish unsafe structures which may endanger the public
14. Coordinate with non-governmental organizations and ensure that such entities carry out their activities in an equitable manner
15. Disseminate information to the public to deal with the disaster
16. Direct and compel evacuation, of all or part of the population from any affected area for the purpose of preservation of life and for such evacuation, and for such evacuation use such force as may be necessary
17. authorize any person, to make any entry into any place, to open or cause to be opened, any door, gate or other barrier, if he considers such an action is necessary for preservation of life and property, if the owner or occupier is absent, or being present, refuses to open such door, gate or barrier

The Collector may exercise the powers contained in subsection (2) to the extent only that this is necessary for the purpose of -

- (a) Assisting and protecting the community

- (b) Providing relief to the community
- (c) Preventing or combating disruption
- (d) Dealing with the destructive and other effects of the disaster

The Collector may issue such directions to any person or government agency and take such other steps, as may be necessary to curtail the escalation of the disaster or to alleviate, contain or minimize the effects of disaster.

1.6: Roles and responsibilities

The Collector

- Facilitate and, coordinate with, local Government bodies to ensure that pre and post - disaster management activities in the district are carried out.
- Assist community training, awareness programmes and the installation of emergency facilities with the support of local administration, non-governmental organizations, and the private sector.
- Take appropriate actions to smoothen the response and relief activities to minimize the effect of disaster.
- Recommend CoR and State Government for declaration of disaster.

Local Authority

- Provide assistance to GSDMA, CoR and Collector in disaster management activities.
- Ensure training of its officers and employees and maintenance of resources so as to be readily available for use in the event of a disaster.
- Ensure that all construction projects under it conform to the standards and specifications laid down.
- Each department of the Government in a district shall prepare a disaster management plan for the district. Carry out relief, rehabilitation and reconstruction activities in the affected area within its jurisdiction.

Private Sector

- The private sector should ensure their active participation in the pre-disaster activities in alignment with the overall plan developed by the GSDMA or the Collector.
- They should also adhere to the relevant building codes and other specifications, as may be stipulated by relevant local authorities.

Community Groups and Voluntary agencies

- Local community groups and voluntary agencies including NGOs should actively assist in prevention and mitigation activities under the overall direction and supervision of the GSDMA or the Collector.
- They should actively participate in all training activities as may be organized and should familiarize themselves with their role in disaster management

Citizen

It is a duty of every citizen to assist the Collector or such other person entrusted with or engaged in disaster management whenever his aid is demanded generally for the purpose of disaster management.

1.7: Scope of the Plan:

The District Disaster Management and Response Plan for Surat District have been prepared for its operation by various departments and agencies of the district and other Non-governmental Agencies expected to participate in disaster management. 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 elaborate inventory of resources has also been formalized.

1.8: Approach to Disaster Management

The Government of Gujarat takes an inclusive approach to disaster management. Disaster impact decrease is divided into three broad areas:

Warning, Relief and Recovery

Necessary actions are intended to eliminate the loss of life and property and hardship due to disasters. Plans and SOPs at District level should provide as seamless as possible provision 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 answerable for coordinating warning, relief and recovery with similar activities in neighboring districts and with the Revenue Department and GSDMA.

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 coordinate with the GSDMA in terms of policy and implementation.

Mitigation, Preparedness and Prevention

Mitigation, preparedness and prevention actions are to be taken before a disaster to reduce the probability of a disaster (risk reduction) or the level of damage (vulnerability reduction) expected from a possible disaster. Vulnerability reduction is given priority over a risk reduction. The district can avail itself of four mechanisms (singularly or together) to reduce risk and vulnerability;

- Long term planning for mitigation, preparedness and prevention investments in the district,
- Enforcement of regulations, particularly building and safety codes and land use plans,

- Review and evaluation of development plans and activities to identify ways to reduce risks and vulnerability, and,
- Capacity building including warning, the provision of relief and recovery assistance and community-level identification of risk and vulnerability

The overall approach to disaster management is based on six elements;

1. Precise risk and Vulnerability assessment
2. Planning and efficient allocation of resources,
3. Capacity building and training
4. Provision of ample resources
5. The assignment of disaster management roles and responsibilities which correspond to normal roles and responsibilities (if possible) and,
6. Use of diverse legal and operational mechanisms to accomplish disaster management objectives

Based on the interim assessment of risk and vulnerabilities, the District will focus on the following areas for mitigation, preparedness and prevention;

- Resilience of lifeline systems (water, power and communications)
- Reduction in disaster impact on health care facilities, schools and roads
- Vulnerability reduction in flood-prone areas
- Vulnerability reduction to high winds
- Improvement of off-site Preparedness near industrial sites.

1.9: Finance

The finance arrangement as per the fund granted by GSDMA / State nodal agencies to the district

District Collector has authorities to distribute / impart the fund to the counter partners of Disaster management in the District as per required activities, according to the instructions of Government of Gujarat.

The Collector, assisted by the District Development Officer, is responsible for developing plans and activities to effect mitigation, preparedness and prevention using the mechanism noted above.

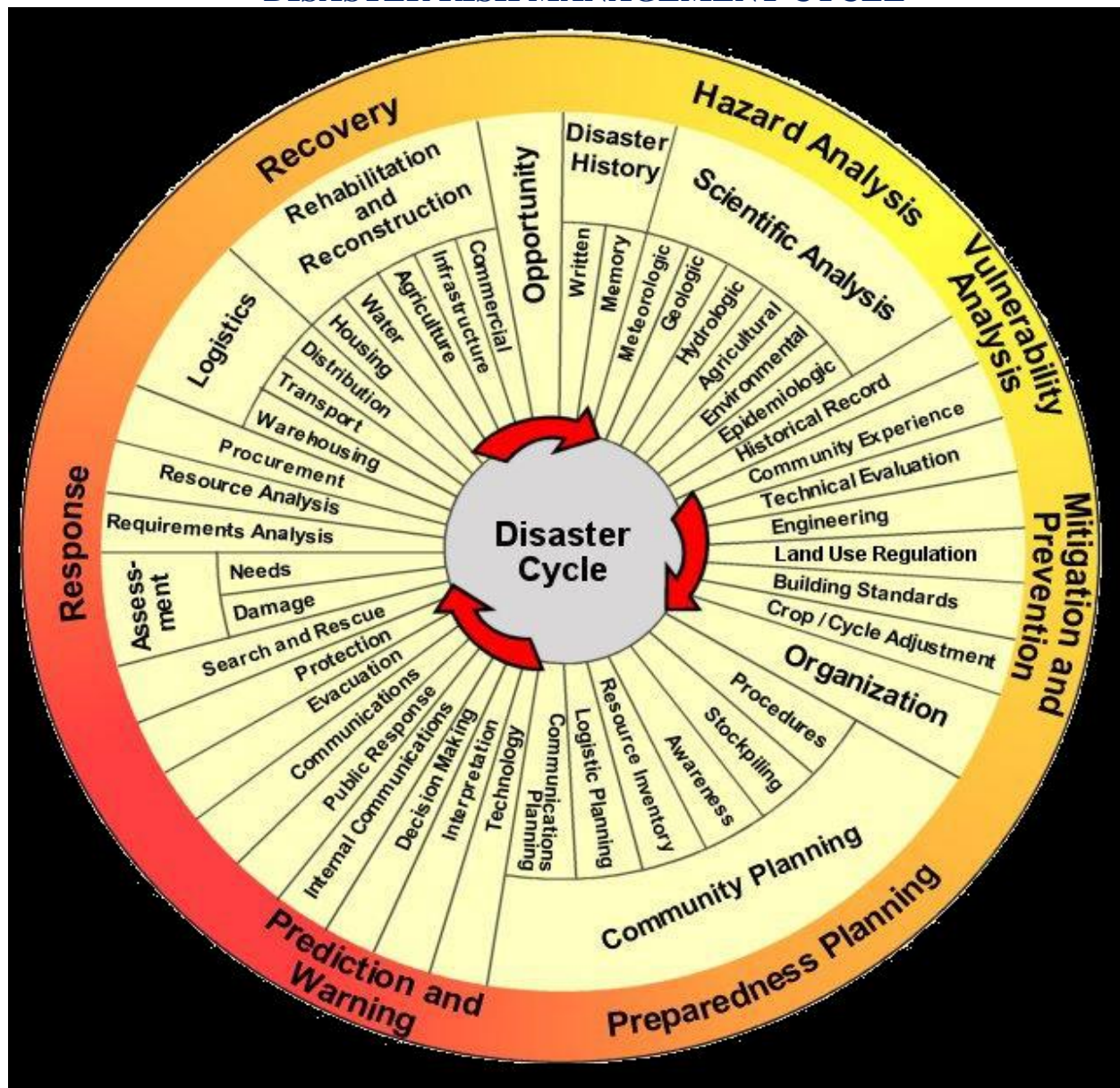
1.10: Plan review and updation

The District Collector is responsible for the preparation and revision of the District Disaster Management Plan in collaboration with the line departments and other organizations in the district.

Plan maintenance is a dynamic process of updating the plan on a periodic basis. The backbone of maintaining the plan is carrying out mock drills and updating the plan based on the lesson learnt as an outcome of the mock exercise, which consists of identifying the gaps and putting in place a system to fill the same. The District Disaster Management Plan shall be reviewed and updated regularly by annually/half yearly and updated

- When significant changes in the nature of any hazards
- Lessons learnt following any major disaster or
- When there is any significant change to organization or responsibility of primary members of the task forces defined in the plan.
- DDMC shall compile its learning and proposed new mechanisms for improvement of the capacity to deal with disasters
- Drills and Rehearsals
- Recommendations from all line Depts. in their Report
- Lessons learnt from any disaster event in other district and state
- Directions from National Disaster Management Authority, GSDMA, Government of Gujarat, Revenue Department etc.

DISASTER RISK MANAGEMENT CYCLE



Chapter 2: Hazard Vulnerability and Risk Assessment:

2.1 Risk and Vulnerability Ranking-Analysis

All events or activities carry some risk and are associated with some level of vulnerability. Risk and vulnerability ranking is the process of assigning scores to the risk and possible impact of hazards to be able to compare the likely vulnerability and make informed management decisions about which hazards are of greatest concern and when planning and preparation efforts should be directed. A crude risk and vulnerability ranking process can be accomplished in five steps.

Table No.: 1
Matrix of past Disaster

| Disaster | Year | Magnitude /extent | Talukas & no. of villages affected | Life & cattle loss | Damage to property | Economic al losses |
|---------------------|------|-------------------|------------------------------------|--------------------|--------------------|--------------------|
| Earthquake | 2001 | - | - | - | - | - |
| Cyclone | - | - | - | - | - | - |
| Flood | 2013 | Heavy rain | | - | - | - |
| Heat wave | -- | -- | -- | -- | -- | -- |
| Cold wave | -- | -- | -- | -- | -- | -- |
| Industrial disaster | 2013 | -- | IOCL Hazira Choryasi taluka | -- | -- | -- |

- Surat District is in Seismic zone III so the 2001 Earthquake has not caused much devastating effect, even it has not coastal areas so the vulnerability from Tsunami or Cyclone is even to less. Seasonal flood is affecting Tapi regularly but the effect of flood is nominal. In sort in Tapi district particularly no major incident has been taken place.

2.2 Hazard Risk Vulnerability Assessment (HRVA)

Complete the hazards column for the following table. Typical hazards have already been identified, but these should be confirmed at this step and additional hazards added as appropriate. Risk and Vulnerability Analysis-TapiDistrict

Table No.: 2

| Hazard | Probability | Impact | Vulnerability Rating (Probability times Impact) | Specific Locations and populations of concern |
|------------|-------------|--------|--|---|
| Earthquake | 3 | 5 | light-9 | Bardoli, Mahuva, Palsana, |

| | | | | |
|------------------------------|---|---|----------|--|
| (resulting in damage) | | | | Mandvi, Mangrol, Umarpada, Kamrej, Choryasi, Olpad, Surat City |
| High Wind (Cyclone) | 1 | 3 | Light- 9 | Bardoli, Mahuva, Palsana, Mandvi, Mangrol, Umarpada, Kamrej, Choryasi, Olpad, Surat City |
| Sea Surge (Cyclone) | - | - | - | Olpad, Choryasi |
| Flood | | | | Bardoli, Mahuva, Palsana, Mandvi, Mangrol, Kamrej, Choryasi, Olpad Surat City |
| Industrial Accident | 2 | 1 | Low-2 | Olpad Choryasi, Mandvi (KAPS Plant) |
| Drought | 2 | 2 | Low-4 | Nizar, Uchchhal, Songadh |
| Heat wave | 3 | 2 | Low-6 | Bardoli, Mahuva, Palsana, Mandvi, Mangrol, Umarpada, Kamrej, Choryasi, Olpad, Surat City |
| Cold wave | | | | |
| Landslides Mudflows | 1 | 1 | Low-1 | |
| Dam Failure | 1 | 1 | Low-1 | Ukai |
| Mine fires/collapse | 2 | 1 | Low-2 | Songadh |
| Road/rail/air accident | 5 | 3 | High-25 | Bardoli, Palsana, Mandvi, Mangrol, , Kamrej, Choryasi, Olpad, Surat City |
| Oil spill & Road (marine) | 2 | 5 | Low-2 | Choryasi |
| Boat sinking | - | - | - | - |
| Building collapse | 1 | 2 | Low-2 | All Taluka |
| Communal Disease (epidemics) | 1 | 1 | Low-1 | |
| Food poisoning | 1 | 1 | Low-1 | Bardoli, Mahuva, Palsana, Mandvi, Mangrol, Umarpada, Kamrej, Choryasi, Olpad, Surat City |
| Animal disease (epidemics) | 1 | 1 | Low-1 | Bardoli, Mahuva, Palsana, Mandvi, Mangrol, Umarpada, Kamrej, Choryasi, Olpad |
| Terrorism (consequences) | - | - | - | - |
| Critical | 1 | 3 | Low-3 | Ukai Dam |

| | | | | |
|---|---|---|---------|-------------------------------|
| Infrastructure Failure (e.g. extended power outage) | | | | |
| Civil Unrest | 1 | 1 | Low-1 | |
| WAR | - | - | - | - |
| Tsunami | - | - | - | - |
| Nuclear Emergency | 5 | 5 | 16 high | Bardoli Mandvi (101 Villages) |

Note: For the understanding of Table: 7 there is more information are given in respective table No. 8,9, and 10.

Assess the probability-or "livelihood" of each hazard by reaching a consensus on probability and then assign each hazard a "Probability Level," as indicated in the following table. Enter the score for each hazard in the probability column of the table in.

Table No. 3
Probability

| Probability | Score | Description |
|----------------|-------|--|
| Almost certain | 5 | A regular event, on the average at least once in a 12 month period |
| Likely | 4 | Will occur at least once every two years. |
| Moderate | 3 | Will occur at least once every 5 years. |
| Unlikely | 2 | Will occur sometime in a 25 years period. |
| Rate | 1 | Can be expected to occur sometime in a 50 to 100 year period |

Assign the Impact Ratings

Assess the potential magnitude or impact of each hazard and assign each an "Impact Level" as in the following table. Enter the impact score for each hazard in the table.

Table No. 4
Impact Ratings

| Impact | Scope | Description |
|--------------|-------|--|
| Catastrophic | 5 | Massive insecurity, substantial loss of life likely. Large and generalized assistance urgently needed for large segments of population. Additional management, administrative, and technical expertise urgently needed. Large volumes of materials inputs needed. |
| Major | 4 | Security threatened for large segments of population; substantial impacts on vulnerable groups likely. Some loss of life likely. Life-saving programs likely needed to handle impact of emergency situation. Large volumes of material inputs and additional administrative staff and technical expertise likely to be needed. |
| Moderate | 3 | Security is threatened for potential target groups, some interventions may be needed, particularly for groups who likely face increase in |

| | | |
|---------------|---|---|
| | | vulnerability. Organization can likely respond with existing country/regional management structures. |
| Minor | 2 | Momentary insecurity local groups able to respond adequately to those in need. Some technical assistance by organization may be helpful to local respondents, although not urgently needed. |
| Insignificant | 1 | Little or no significant change in conditions, no expected loss of life, injuries or significant loss of property for usual target groups as the result of the hazard Normal operations continue. |

Assign the "Vulnerability" Ranking

Multiply the probability and the impact scores in the table in Step 1. The resulting score indicates crude vulnerability. Scores above 15 indicate high vulnerability; scores between 7 and 15 indicate medium vulnerability and scores below 7 indicate low vulnerability.

Table No.5
Vulnerability" Ranking

| Probability Rating: Class and (score) | Impact Rating: Class and (score) | | | | |
|---------------------------------------|----------------------------------|------------------|---------------------|------------------|-------------------------|
| | Insignificant (1) | Minor (2) | Moderate (3) | Major (4) | Catastrophic (5) |
| Almost certain (5) | Low-5 | Moderate - 10 | Moderate - 15 | High-20 | High-25 |
| Likely (4) | Low-4 | Moderate-8 | Moderate - 12 | High-16 | High-20 |
| Moderate (3) | Low-3 | Low-6 | Moderate - 9 | Moderate - 12 | Moderate -15 |
| Unlikely (2) | Low-2 | Low-4 | Low-6 | Moderate - 8 | Moderate -18 |
| Rare (1) | Low-1 | Low-2 | Low-3 | Low-4 | Low-5 |

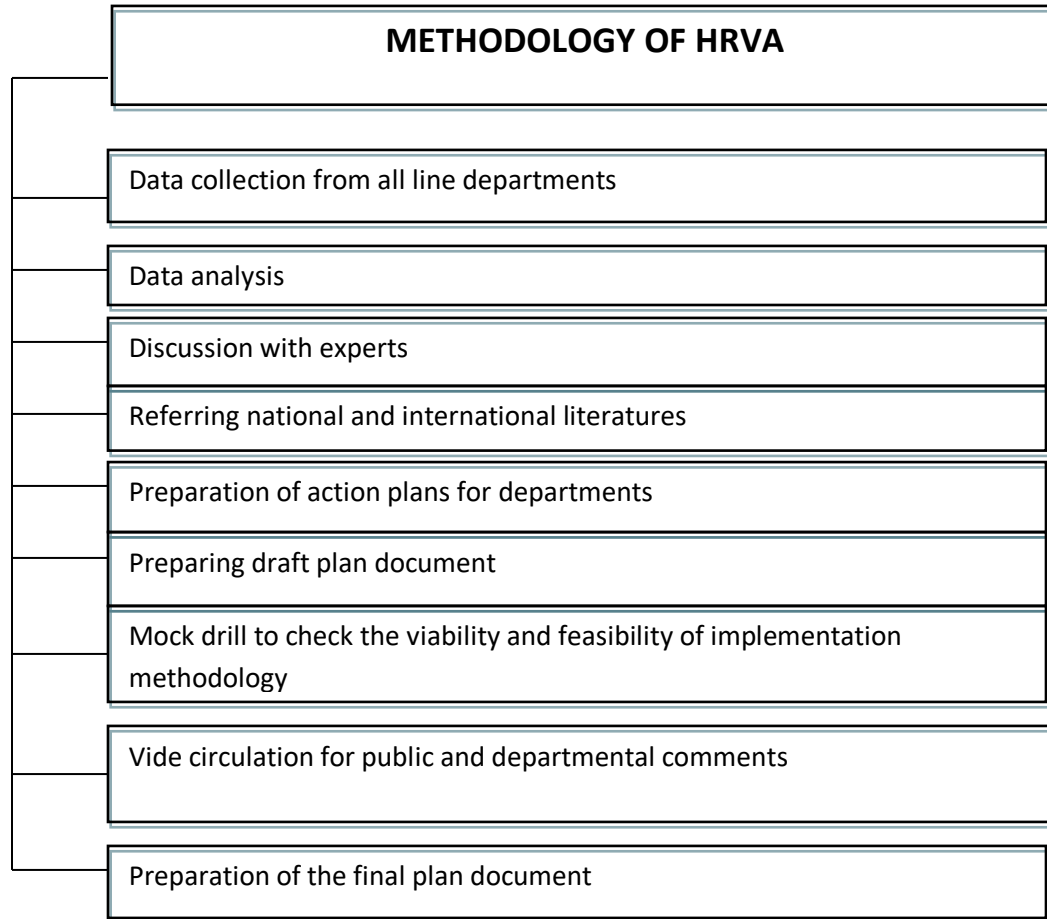
These three classes related to the immediate vulnerability to disaster and provide guidance on disaster response planning. Assessing risk and vulnerability to low likelihood but high impact hazards (e.g., earthquakes) requires a different, more long-term focused, assessment process.

Note that the rating process presumes that:

- Populations are better able to respond to disaster which more likely and do not have severe (major) impacts and,
- Steps taken to prepare for moderate or high vulnerability events will also improve the ability to respond to low vulnerability events.

The divisions between low, moderate and high crude vulnerability can be changed but should be used consistently for all similar assessments in the state.

Tool and methodology used for HRVA



2.3 List of hazards with probability (frequency and magnitude) to be addressed in this plan

| Probability of Occurrence of disaster | | | | | | | | | | | | |
|---------------------------------------|-------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|
| Type of Hazard | Time period | | | | | | | | | | | |
| | Jan | Feb | Mar | Apr | May | June | Jul | Aug | Sep | Oct | Nov | Dec |
| Earthquake | | | | | | | | | | | | |
| Cyclone | | | | | | | | | | | | |
| Flood | | | | | | | | | | | | |
| Tsunami | | | | | | | | | | | | |
| Fire | | | | | | | | | | | | |
| Nuclear Emergency | | | | | | | | | | | | |

Identify Areas with Highest Vulnerability

Once vulnerability ranks have been identified, the locations and populations considered most vulnerable should be identified. This aids in knowing where disaster assistance may be most needed, as well as providing a quick indication of where vulnerability reduction efforts could be most productive. Note that vulnerability reduction can include education, structural measures, and non-structural measures like evacuation planning. Where possible, the areas of high vulnerability should be mapped and included in disaster planning documents.

Outcome

Hazards are defined as “Phenomena that pose a threat to people, structures or economic assets and which may cause a disaster. They could be either man-made or naturally occurring in our environment.” A disaster is the product of a hazard coinciding with a vulnerable situation, which might include communities, cities or villages. Vulnerability is defined as “the extent to which a community, structure, service or geographical area is likely to be damaged or disrupted by the impact of particular hazard, on account of their nature, construction and proximity to a hazardous terrain or disaster prone area.

2.4 Hazard analysis:

A detailed analysis of the hazards likely to impact the state will be carried out by the Department of Disaster Management, in consultation with the DMC of the state H.C.M. RIPA and experts from the field. Hazard assessment is concerned with the properties of the hazard itself. The Vulnerability Atlas of Gujarat, developed by BMTPC, Govt of India, will be used as the baseline for all analyses. The State Disaster Management Authority shall take all appropriate steps to complete a comprehensive hazard assessment of the State.

1. Earthquake

The District is located in Zone-III of seismic vulnerability as captured in the Vulnerability Atlas. While earthquakes cannot be predicted, a detailed mapping of seismic fault systems and seismic source regions, quantification of probability of experiencing various strengths of ground motion at a site in terms of return period for intensity will be carried out and appropriate regulations put in place to decrease the vulnerability of built environment.

Different types of ground do shake with different severity in an earthquake. Softer soils and those with high water content generally shake more than rocky sites. Wherever possible site structures on firmer ground. This will reduce the severity of vibrations experienced in an earthquake. Capital intensive infrastructure, hazardous facilities and materials, and other important buildings should not be located in the vicinity of a known fault. Since early warning is not possible in case of earthquakes, the best choice is to ensure that seismicity is monitored and integrated with the GIS. It is necessary that mitigation strategy considers instrumentation of all other areas in order to have a total assessment of the seismic activity. This would enable reconfirmation and up gradation of micro zonation activities.

2. Flood

Flood is a major disaster in Surat District. There are many small and big rivers in Surat District like, Tapi, Purna, Mindhola, Ambika, kim , etc. Ukai Dam is situated in Surat District and due to the heavy rainfall in catchment area of Ukai Dam Site leads to released high amount of water and which affects the Many Villages of surat District and tapi District as well.

Regulations would include.

- Not permitting unrestricted new development in the hazard prone areas
- Anchoring and flood proofing structures to be built in known flood prone areas
- Built-in safe guards for new water and sewage systems and utility lines from flooding
- Enforcing risk zone, base flood elevation, and flood way requirements
- Prohibition on development in wetlands

Prescribing standards for different flood zones on flood maps.

To meet these requirements, local governments will have to adopt specific flood planmanagement into zoning and subdivision regulations, housing and building codes, and resource protection regulations.

In low-lying areas, close to the coast, and on flat land in river valleys, there may be apotential for coastal or river flooding. In geologically younger river valleys, in mountains, andfoothills there may be a potential for flash-flooding.

It is important to check the history of flooding in the area. Wherever possible

- Map the extent of land covered by past flood waters
- Get an indication of the depth of past floodwaters
- Find out about the severity of past floods; how much damage they have caused, how fast they flowed and how much debris they left behind and
- Find out how often flooding has happened, over at least the past 20 years.

3. Cyclone

In meteorology, a cyclone is an area of closed, circular fluid motion rotating in the same direction as the Earth. This is usually characterized by inward spiraling winds that rotate counter clockwise and clockwise of the Earth. Most large-scale cyclonic circulations are centered on areas of low atmospheric pressure. The largest low-pressure systems are cold-core polar cyclones and extra tropical cyclones which lie on the synoptic scale.

Tapi District does not have it's border directly connected to the sea shore so the effects and possibilities of Cyclone in Tapi district is meager but the Cyclone emerged from the Arabian Sea are effecting some extent.

4. Industries & Chemical Hazards:

Choryasi taluka is highly vulnerable for Industries & Chemical Hazards because of Hazira Notied Area and MAH units under the area. As per the district offsite plan, it affects the 11 villages the detail is mention below.

| Sr. No | Name of Vllage | Population | Sr. No | Name of Vllage | Population |
|--------|----------------|------------|--------|----------------|------------|
| 1 | Limla | 5675 | 7 | Dumas | 7266 |
| 2 | Mora | 7416 | 8 | Sunvali | 2573 |
| 3 | Kawas | 2215 | 9 | Rajgari | 1009 |
| 4 | Bhatpor | 2327 | 10 | Damka | 4039 |
| 5 | Ichchapor | 5144 | 11 | Bhatlai | 1303 |
| 6 | Vanta | 472 | | | |

Cities pandesara, Udhana, Limbayat & athwa zone is vulnerable for chemical disaster. In pandesara, Udhna the powerlooms, Dying-Printing Mills& Embroidery factories creates the chemical disaster. Some of them storage the chemical which created the chemical disaster probability. Athwa & Rander zone is near the Hazira Notifies Area, & also near having Magdalla port. Resident near the area vulnerable for chemical & Industrial Hazard. The detail of affected villages and evacuation centers which is linked from Offsite Plan Surat-2010.

Gas pipelines, Chemical plants & industrial units in olpad taluka. The cyanide chemical company which produce potassium cyanide, Potassium pharos cyanide, Sodium cyanide, Sodium Pharos cyanide & other chemicals, If any hazard occurs in the company the processing chemical ammonia gas & other dangerous gases creates the disaster in nearby area.

5. Tsunami

Tsunamis are ocean waves produced by earthquakes or underwater landslides. Tsunamis are often incorrectly referred to as tidal waves, but a tsunami is actually a series of waves that can travel at speeds averaging 450 (and up to 600) miles per hour in the open ocean. However, waves that are 10 to 20 feet high can be very destructive and cause many deaths or injuries.

Tsunamis are most often generated by earthquake-induced movement of the ocean floor. Landslides, volcanic eruptions, and even meteorites can also generate a tsunami. Areas at greatest risk are less than 25 feet above sea level and within one mile of the shoreline.

i. Epidemics:

The Public Health Department is the nodal agency responsible for monitoring and control of epidemics. Local governments and municipal authorities also have a responsibility for taking appropriate steps in this context. Therefore, success of mitigation strategy for control of epidemics is depending on the type of coordination that exists between the Health Department and local authorities. Mitigation efforts for control of epidemics would include

1. Surveillance and warning
2. Preventive and Primitive measures
3. Strengthening institutional infrastructure... Like...

- Promoting and strengthening community hospitals with adequate network of Para-professionals will improve the capacity of the Health Department for surveillance and control of epidemics.
- Establishing testing laboratories at appropriate locations in different divisions within the State will reduce the time taken for diagnosis and subsequent warning.
- Establishing procedures and methods of coordination between Health Departments and local authorities.

ii. Drought:

Of all the natural disasters, drought can have the greatest impact and affect the largest number of people. Drought invariably have a direct and significant impact on food production and the overall economy. Drought, however, differs from other natural hazards. Because of its slow onset, its effects may accumulate over time and may linger for many years. The impact is less obvious than for events such as earthquakes or flood but may be spread over a larger

geographic area. Because of the pervasive effects of drought, assessing their impact and planning assistance becomes more difficult than with other natural hazards.

Surat District is Gaining annual average rainfall which is evading the situation of drought, so the vulnerability from the drought is less and in even in such kind of situation the availability of resources may about to combat the situation.

6. Nuclear Power Radiation:

Mandvi taluka have a Kakrapar Atomic Power Station. Atomic radiation creates the disaster. The KAPS have prepared their confidential disaster plan. Any emergency in KAPS, the focal officer is Station Director. As per KAPS plan total 101 Tapi districts are affected. Out of 101, 82 villages of Mandvi and 19 villages are Bardoli taluka. List of villages falling under Emergency Planning Zone (EPZ) is shown below

| Mandvi Taluka | | | | Bardoli Taluka | | | | |
|---------------|-----------------|-------------|-----------|----------------|-------------|-------------------|-------------|----------|
| Wareth | Kevadi | Tarasadabar | Nandapur | Kalamkuwa | Ladkuva | Salaiya | Balda | Orgam |
| Badtal | Ambapor | Jakhla | Kasal | Zari Dadhwada | Choramba | Tarsada Khurd | Wanskui | Bamani |
| Sathvav | Karanjvan | Birma | Rupen | Jetpur | Kakrapar | Umarkhadi | Bhensudala | Haripura |
| Makanzar | Rajwad (M) | Uskedkhurda | Kakadava | Rakshakhadi | Batkhai | Gamtalao Khurd | Nanibhatalv | Uchhrel |
| Lakhgam | Wankla | Godawadi | Valargadh | Nanicher | Dadhwada | Regama | Madhi | Samthan |
| Katkuva | Beddha | Un | Moritha | Ratania | Sarkui | Gordha | Surali | Miyawadi |
| Fulwadi | Pipalwada | Umarsadi | Amba | Sadadi | Balaltirtha | Kimdungra | Rajvad | Kadod |
| Kharda | Amalchuni | Kamlapor | Titoi | Jamankuva | Magtara | Dadakui | Masad | Singod |
| Maldha | Chandpur | Kosadi | Kalbel | Amalsadi | Mahudi | Gamtalav Bujgranj | Nasura | Junwani |
| Visdalia | Haripura | Kharoli | Unteva | Pardi | Moticher | Godsamba | Wadhvania | |
| Junvana | Karuda | Mandvi | Khodamba | Karvali | Kherdpur | | | |
| Tarapur | Gangapur Harsad | Vaghnera | Ghantoli | Bori | Puna | | | |

Chapter 3:

Institutional Arrangements

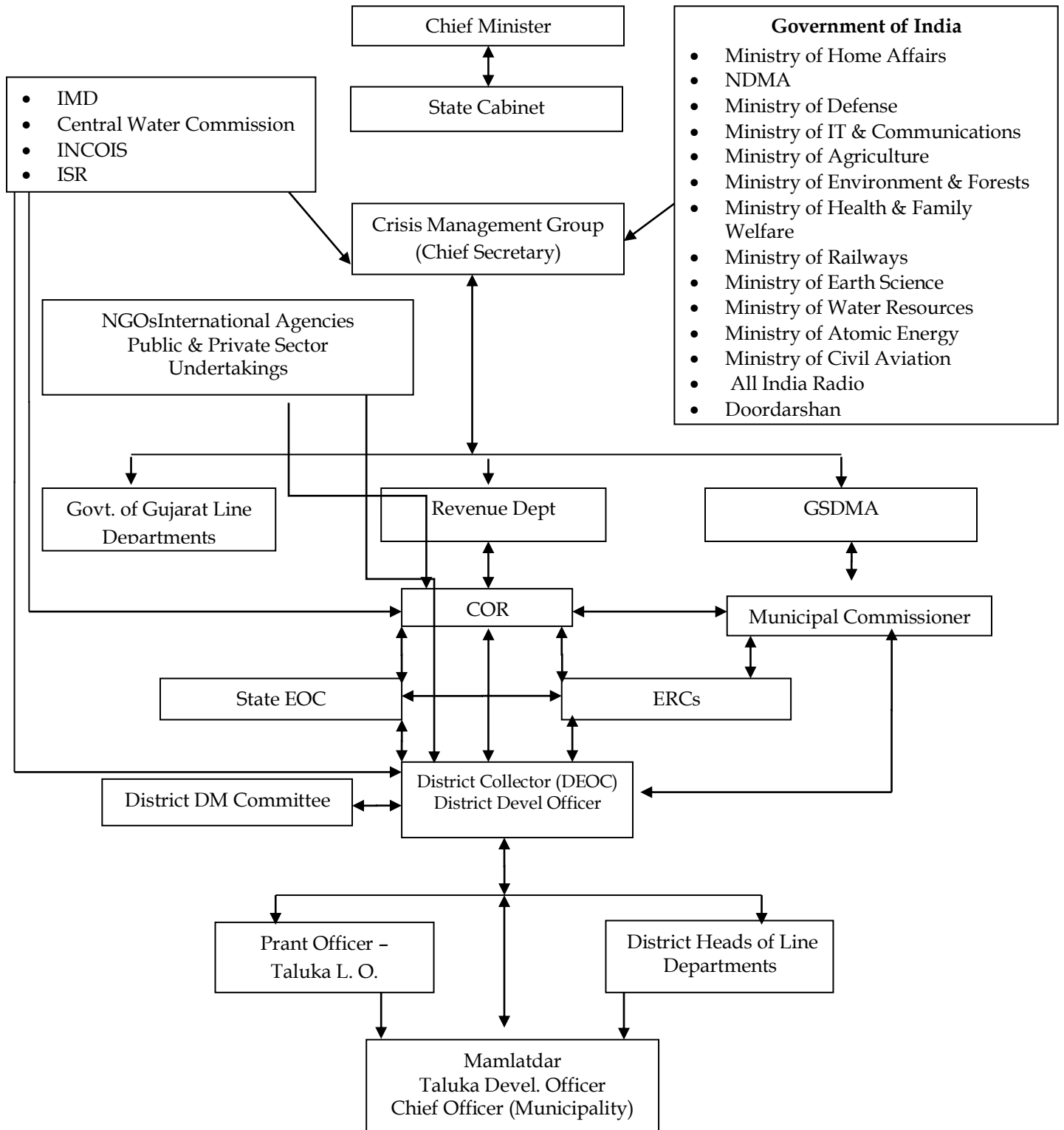
The plan incorporate multi level institutional as well as response planning mechanism at district level.

The DM structure in the State is as per the Gujarat State Disaster Management Act – 2003. The National Disaster Management Act – 2005 resembles the State Act with only a few provisions which are not a part of the State Act but are there in the Central Act. Those provisions include designating a Vice Chairman to the GSDMA, constitution of a State Executive Committee, establishment of a District Disaster Management Authority in each District and creation of a District Disaster Response & Mitigation Funds. The State has existing institutional arrangements in place for addressing the roles / responsibilities envisaged through the above provisions and hence does not find it compelling to implement the provisions afresh.

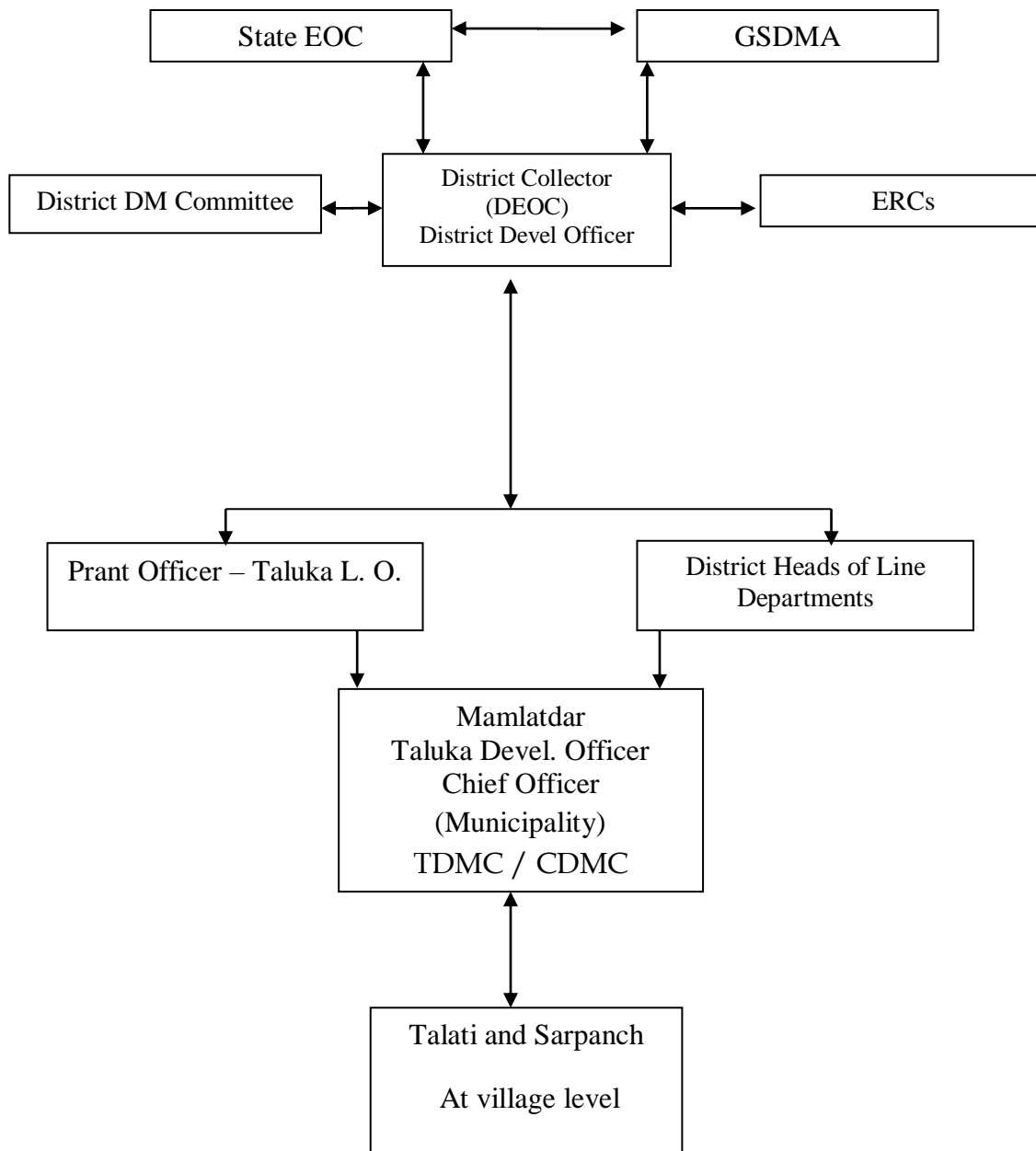
The Revenue Department of the State is the Nodal Department for controlling, monitoring and directing measures for organizing rescue, relief and rehabilitation. All other concerned line departments should extend full cooperation in all matters pertaining to the response management of the disaster whenever it occurs. The State EOC, ERCs and other control rooms at the State level as well as district control rooms should be activated with full strength. The State Government may publish a notification in the official gazette, declaring such area to be disaster-affected area under GSDMA Act (Section 32 (2) (a)).

Under this State Disaster Management Plan, all disaster specific mechanisms would come under a single umbrella allowing for attending to all kinds of disasters. The existing arrangements therefore will be strengthened by defining this administrative arrangement. This arrangement proposes Chief Secretary as the head supported by the Relief Commissioner through the branch arrangements at the Emergency Operations Centres (EOC), both at State level and at the district levels. There is a formal Incident Response System in the State. The GSDMA Act 2003 empowers Commissioner of Relief to be the Incident Commander in the State and District Collector in the respective districts.

3.1 D.M. Organizational Structure In The State



3. 2 D.M. Organizational Structure In The District



3.3 District Disaster Management Committee

The District Collector will be responsible for coordinating all disaster management activities at the district level. There shall be a District Disaster Management Authority headed by Collector. The District Disaster Management Authority shall approve a district disaster management planning and review all measures relating to preparedness and response to various hazards. The District Disaster Management Committee comprises members from Jilla Panchayat, different line departments, NGOs and others to be notified by the Department of Disaster Management from time to time. In times of disasters, Dist. Collector shall constitute a District Relief Committee to oversee management of relief. Following member should be club at district level committee.

| Sr. No. | Designation | Position in DCMG |
|---------|---------------------------------------|------------------|
| 1 | Collector/ District Magistrate | Chairmen |
| 2 | District Development officer | Member |
| 3 | District Superintend Police | Member |
| 4 | District Additional Collector | Member |
| 5 | District Supply Officer | Member |
| 6 | Exe. Engineer-R&B State | Member |
| 7 | Exe. Engineer-R&B Panchayat | Member |
| 8 | Exe. Engineer-R&B State Irrigation | Member |
| 9 | Superintending Engineer- PGVCL | Member |
| 10 | District Home guard commandant | Member |
| 11 | Superintendent Civil Hospital | Member |
| 12 | Port Officer-KPT | Member |
| 13 | District forest Officer (west) | Member |
| 14 | District forest Officer (east) | Member |
| 15 | Dy. Director-Information Department | Member |
| 16 | District Municipality Officer | Member |
| 17 | Regional Officer-GPCB | Member |
| 18 | District Agriculture Officer | Member |
| 19 | All S D M | Member |
| 20 | Regional Transport officer | Member |
| 21 | Divisional Controller-State transport | Member |
| 22 | Dy. Controller –Civil Defense | Member |
| 23 | District Education Officer | Member |
| 24 | District Primary Education officer | Member |
| 25 | NGO Member | Member |
| 26 | Media Person | Member |

3.4 Incident Response System in the Surat District

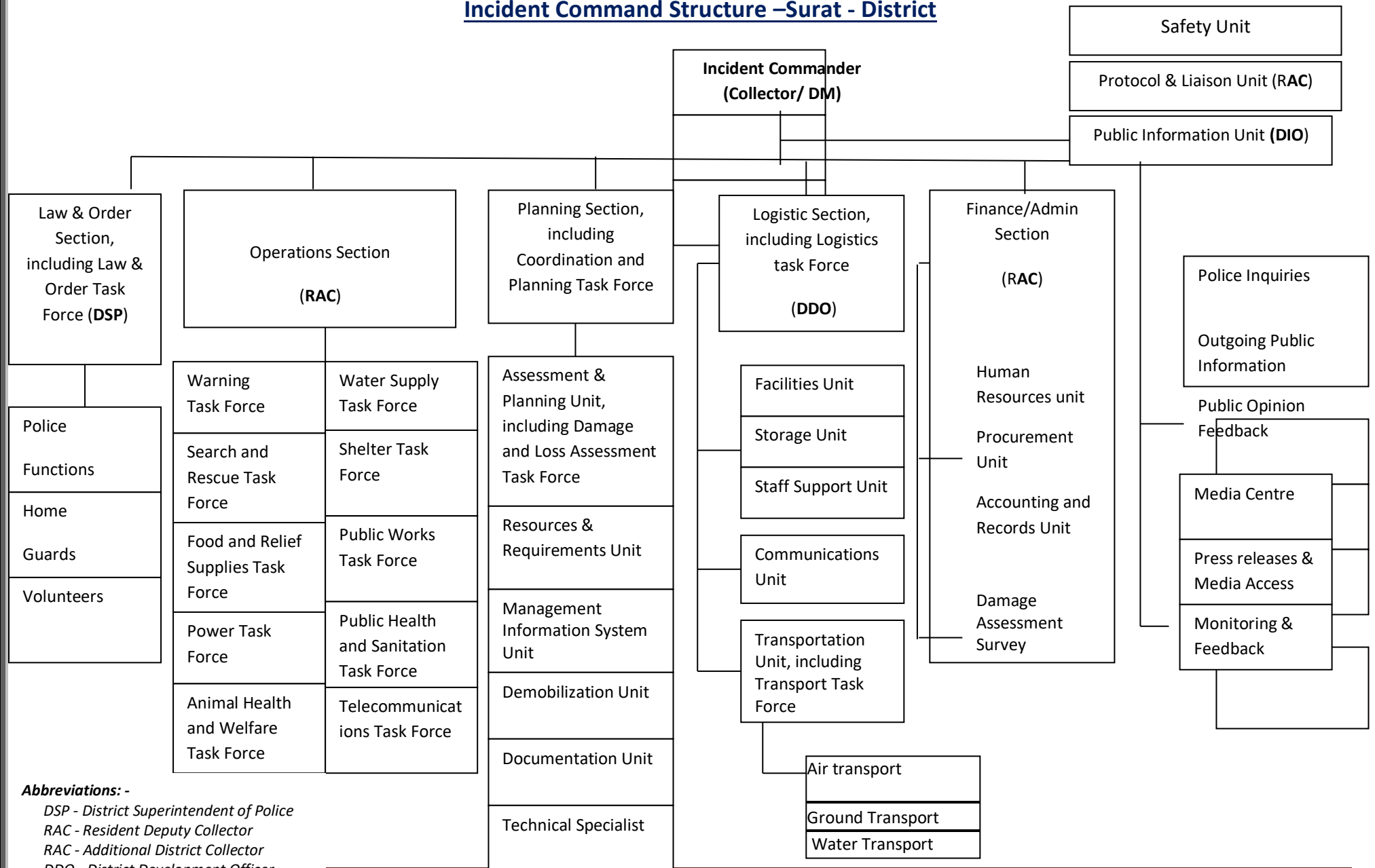
1. Disaster Response and District Incident Command System

The response to disasters in the district will be organized according to the Incident Command System as adopted to conditions in Gujarat State (ICS/GS). The argument for the ICS is that its fundamental elements –unity of command, clarity of objectives and efficient resource use are common to the effective response to any disaster.

In Tapi district, the multi-hazard response plan focused on sector specific action plans unlike the department specific planning approach in the previous plan documents. The disaster response is led by the **District Emergency Operation Center (EOC)** under the command and control of the District Collector.

The organizational structure of the Incident command system of Surat district is given in the next page.

Incident Command Structure –Surat - District



Abbreviations: -

DSP - District Superintendent of Police

RAC - Resident Deputy Collector

RAC - Additional District Collector

DDO - District Development Officer

DIO - District Information Officer

2. ICS-Basic Functions

The basic functional descriptions for key elements in the district Incident command System is describe below. Not all these functions need to be filled (activated) in every disaster. However, the ensemble of these functions represents all the key tasks, which need to be accomplishes in a well-planned manner and execute in effective and cost efficient disaster response effort.

I. Incident Commander :

Responsible for overall management of an incident based on clearly stated mandate from higher authority and based on focused objectives responding to the immediate impact of the incident.

An Incident Commander, who can be assistby a Dy. Incident Commander, leads the Incident command. In each incident will have as many as many commanders and other staff as there are shifts in the incident operation. Shifts will normally not exceed 12 hours at a time and should be standardized to 8 hours each as soon as possible after the start of the incident.

II. Command Staff Units

A) Safety unit:

Responsible for ensuring the safe accomplishment of all activities undertaken in response to the incident. This task is accomplishes through developing incident specific safety guidance documents, reviewing and advising on the safety of plans and monitoring actual operations to ensure safety of personnel and survivors.

B) Protocol and Liaison unit:

Responsible for all official visits as well as liaison between the incident command and organizations providing personnel or material support being used to manage the incident. The first point of contact for NGOs and others coming to the disaster as well as responsible for managing coordination meetings (some of which may actually be held by taskforces or sections).

C) Public Information Unit:

Responsible for all media and public information tasks related to the incident. To accomplish its task, the unit can have the following sub units:

- **Public inquiries:** To handle non media requests for information
- **Outgoing public information:** To handle public information dissemination
- **Public opinion feedback:** To collect information from the public (incident survivors and the non-affected)
- **Media center:** To provide a single point of contact for all media involved in the incident.
- **Press release and media access:** Produce all releases and provide a single point of contact to arrange media access to the incident.
- **Monitoring and Feedback:** To monitor media reports and provide feedback to the incident management on coverage of the incident and to also take corrective measures and issue contradictions if required.

III. Law and Order Section

Responsible for assuring the execution of all laws and maintenance of order in the area affected by the incident. The law and order section incorporates law and order task force that may be create to deal with a disaster.

Police functions: As determined by the normal mandate for and special duties assigned to the police service

Home guard: As determined by the normal mandate for and special duties assigned to the home guard

Volunteers: Supporting police and home guards in non-enforcement tasks, such as patrolling, monitoring and evacuations

IV. Operation Section

Responsible for assuring specific operations according to objectives and plans to address the immediate impacts of the incident. Taskforces under the operation section will deal with specific functional tasks, such as search and rescue, the provision of water or shelter. The composition and size of these taskforces depends on the nature of the incident.

The District administration of Kutch has identified 16 expected task forces for key response operation functions that are describe below. Additional taskforces can be added under the operations section as needed by the circumstances of a disaster. Each Taskforce is led by one organization and supporter by other organizations.

Emergency Operation Taskforce Functions

| Sr. No. | Emergency Operation Taskforce | Functions |
|---------|--|--|
| 1 | Coordination and Planning | Coordinate early warning, Response & Recovery Operations |
| 2 | Administration and Protocol | Support Disaster Operations by efficiently completing the paper work and other Administrative tasks needed to ensure effective and timely relief assistance |
| 3 | Warning | Collection and dissemination of warnings of potential disasters |
| 4 | Law and Order | Assure the execution of all laws and maintenance of order in the area affected by the incident. |
| 5 | Search and Rescue (including Evacuation) | Provide human and material resources needed to support local evacuation, search and rescue efforts. |
| 6 | Public Works | Provide the personnel and resources needed to support local efforts to reestablish normally operating infrastructure. |
| 7 | Water | Assure the provision of sufficient potable water for human and animal consumption (priority), and water for industrial and agricultural uses as appropriate. |
| 8 | Food and Relief Supplies | Assure the provision of basic food and other relief needs in the affected communities. |
| 9 | Power | Provide the resources to reestablish normal power |

| | | |
|----|---|---|
| | | supplies and systems in affected communities. |
| 10 | Public Health and sanitation (including First aid and all medical care) | Provide personnel and resources to address pressing public health problems and re-establish normal health care systems. |
| 11 | Animal Health and Welfare | Provision of health and other care to animals affected by a disaster. |
| 12 | Shelter | Provide materials and supplies to ensure temporary shelter for disaster-affected populations |
| 13 | Logistics | Provide Air, water and Land transport for evacuation and for the storage and delivery of relief supplies in coordination with other task forces and competent authorities. |
| 14 | Survey (Damage Assessment) | Collect and analysis data on the impact of disaster, develop estimates of resource needs and relief plans, and compile reports on the disaster as required for District and State authorities and other parties as appropriate. |
| 15 | Telecommunications | Coordinate and assure operation of all communication systems (e.g; Radio, TV, Telephones, Wireless) required to support early warning or post disaster operations. |
| 16 | Media (Public Information) | Provide liaison with and assistance to print and electronic media on early warning and post-disaster reporting concerning the disaster. |

The specific response roles and responsibilities of the taskforces indicated above is that these roles and responsibilities will be execute and coordinated through the ICS/GS system. For example, in flood, search & rescue would come under the Operations section, Transport would come under the Logistics Section and Public Information under the Public Information Unit.

V. Planning Section

Responsible for collecting and analyzing information and developing plans to address the objectives set to address the incident. The overall work of the planning section will include efforts undertaken by any planning and coordination taskforce which is established as part of the response to a disaster. Units under the section include:

1. Assessment and planning
2. Resources and Requirements
3. Management information system
4. Documentation
5. Demobilization and
6. Technical specialists

VI. Logistic section

Responsible for all task and functions related to provision of material and other resources needed for operations and the physical and material support and operation of the incident

management team. This section include transportation taskforce established to support disaster operations. Logistics tasks are through the following units:

1. Storage and supply
2. Facilities
3. Staff support
4. Communications
5. Transportation (include ground, air water)

VII. Finance and Administration

Responsible for managing all financial and administrative tasks related to incident field operations. These tasks may, but would not usually include disbursement of financial aid to those affected by an incident .The task of this section are accomplished through following units: 1. Human resources

2. Procurement
3. Accounting and records

Cross-Task Force Action Matrix

(Gray areas indicate where cooperation between task forces was noted as needed during action plan development.)

| Task Force | Warning | Law & Order | SAR & Evacuation | Public Works | Water | Food & Relief Supplies | Power | Health | Animal Health | Shelter | Logistics | Damage Assessment | Tele-communications | Media |
|-------------------------|---------|-------------|------------------|--------------|-------|------------------------|-------|--------|---------------|---------|-----------|-------------------|---------------------|-------|
| Coordination & Planning | | | | | | | | | | | | | | |
| Warning | | | | | | | | | | | | | | |
| Law & Order | | | | | | | | | | | | | | |
| S & R/Evacuation | | | | | | | | | | | | | | |
| Public Works | | | | | | | | | | | | | | |
| Water | | | | | | | | | | | | | | |
| Food & Relief Supplies | | | | | | | | | | | | | | |
| Power | | | | | | | | | | | | | | |
| Health | | | | | | | | | | | | | | |
| Animal Health | | | | | | | | | | | | | | |
| Shelter | | | | | | | | | | | | | | |
| Logistics | | | | | | | | | | | | | | |
| Damage Assessment | | | | | | | | | | | | | | |
| Telecommunications | | | | | | | | | | | | | | |

Task force, supporting organizations vis-a vis ICS/GS section matrix

The composition of the taskforces is given in the table below:

| S. No. | Task Force | Taskforce Leader | Supporting members / Organizations | ICS/GS Section / Unit |
|--------|----------------------------|---|--|--------------------------|
| 1. | Planning and Coordination | Collector/ DM | DDO, DSP, RAC, SDM and Mamlatdar | Planning |
| 2. | Administration & Protocol | RAC | DDO, DSP, RAC and Mamlatdar | Finance & Administration |
| 3 | Damage Assessment/Survey | RAC | DIC, Dy. DDO, Ex. Engr., R&B, DAO, Fisheries | Planning |
| 4 | Warning | RAC | RAC, Dy. Mamlatdar, Control Room, District Information Officer (DIO) | Operation |
| 5 | Communications | RAC | Dy. Mamlatdar, Mobile Operators, TV, Radio, Port Office GMB, Police, Forests | Logistics |
| 6 | Media | District Information Officer | Information Department, Print, Media, TV, Journalists, NGOs | Public Information |
| 7 | Logistics | DDO | RTO, DSO, FPS, Private & Public sector, Municipal water supply board, Mamlatdar, Dist. Supply Mamlatdar | Logistics |
| 8 | Law & Order | DSP | Dy. SP, Home Guards Commandant, NGOs, Para-military and Armed Forces | Law & Order |
| 9 | Search & Rescue | Dy. Collector Civil Defense | Mamlatdar, TDO, Police, Executive Engr., Fire Brigade, RTO, State Transport, Health Deptt. | Operation |
| 10 | Public Works | Ex. Engr. R&B (State) | Irrigation, Ex. Engr., Panchayat, NGOs, Water Supply Board, Municipalities, Home Guards, Police | Operation |
| 11 | Shelter | Dist. Primary Education Officer | School Principal, Teachers, Health, PHC, State Transport, Water Supply, RTO, Mamlatdar, TDO. | Operation |
| 12 | Water Supply | Ex. Engr. GWSDB / Ex. Engr. Water Works | Dy. Ex. Engr., Talati, Mamlatdar, TDO, Health, Dy. Engr. | Operation |
| 13 | Food & Relief Supplies | Dist. Supply Officer | FPS, PDS, Mamlatdar, NGO, RTO, State Transport, Municipality, DRDA, Police, Home guard | Logistics |
| 14 | Power | Supt. Engr. GEB | Ex. Engr., Dy. Engr. Technical, GEB, Transport | Operation |
| 15 | Public Health & sanitation | Chief district health Officer (CDHO) | Supt. Hospital, PHCs, CHCS, Municipality, Fire Brigade, CivilDefense, R&B, NGOs, Doctors, TDO, Mamlatdar | Operation |
| 16 | Animal Health & Welfare | Dy. Director Animal Husbandry | Veterinary Inspector, NGOs | Operations |

DISTRICT INCIDENT COMMAND STRUCTURE-KEY OFFICERS

Incident Commander -District Collector: - 9978406222

Alternate Incident Commander- Resident Additional Collector: -9978405220

| Sr. No. | Taskforce | Taskforce Operation Room/Contact Number | Taskforce leader/Contact Number | TASKFORCE-Alternate LEADER /Contact Number |
|---------|-----------------------------------|---|---------------------------------|---|
| 1 | Warning and Communications | RAC Office | RAC | Mam. Disaster Management 026-2663200 F-0261-2664800 |
| 2 | Law & Order | Police Control Room (CR) | DSP:- | Dy. SP/ |
| 3 | Search & Rescue | Dy. Collector Chief Fire Officer | Chief fire Officer | Chief Officer |
| 4 | Public Works | R&B-CR | Ex. Engr, R&B/ | Dy. Engr. |
| 5 | Shelter | Education . Office-CR | District Primary Edu. Officer/ | Dy. District Primary Edu. Officer |
| 6 | Water Supply | GWSDB-CR | Ex. Engr. GWSDB/ | Ex. Engr. Water orks, / |
| 7 | Food & Relief supplies | DSO-CR &DDO office | District Supply Officer/ | Dy. DDO office |
| 8 | Public Health & Sanitation | District Health Centre, | CDHO/ | Add. CDHO |
| 9 | Power | GEB-CR | Supt. Engr. GEB/ | Ex. Egg. GEB |
| 10 | Logistics | DDO office | DDO | Dy. DDO/ |
| 11 | Animal Health & Welfare | A & H Office | Dy. Director, A&H/ | Ass. Director A&H |
| 12 | Damage Assessment/Survey | RAC office | RAC | Mam. Disaster Management |
| 13 | Media/public Information | Information Dept. CR | District Info Officer/ | Dy. DIO/ |
| 14 | Planning and coordination | Collector's office | Collector/ | RAC |
| 15 | Finance/ Administration/ Protocol | RAC office | RAC | Mam. Disaster Management |

***Note:** for municipal areas, the Chief fire Officer is the taskforce leader of the Search & Rescue. While a Deputy collector should be appointed as taskforce leader for search and Rescue operation in non-municipal areas.*

3.5 EOC setup and facilities available with the location

District Emergency Operation Centers/Control Rooms (DEOC)

- **District Control Room (DCR) / District Emergency Operation Centers (DEOC)**

The District Control Room is located in Collector office District Surat. It is also the central point for information gathering, processing and decision making more specifically to combat the disaster. Most of the strategic decisions are taken in this control room with regard to the management of disaster based on the information gathered and processed. The Incident Commander takes charge at the District Control Room and commands the emergency operations as per the Incident Command System organizational chart.

All the task force leaders shall take position in the District Control Room along with Incident Commander to enable one point co-ordination for decision-making process.

- **Facilities at District Emergency Operation Centers**

The District Control Room equipped with to the following items in Table:

| Sr. No. | Item/ Facility | Unit/ Number of item |
|----------------|--|-----------------------------|
| 1 | Telephones | 3 |
| 2 | Handheld Radios and Base Stations | 0 |
| 3 | Satellite Telephone | 1 |
| 4 | PC with GSWAN Internet and web site facilities | 3 |
| 5 | Marker board - | 1 |
| 6 | Conference table | 1 |
| 7 | A copy of Disaster Management Plan | 2 |
| 8 | Drawings showing Disaster information | 10 |
| 9 | Other relevant documents of district information | -- |
| 10 | Chairs | 20 |
| 11 | Fax machine | 1 |
| 12 | Printer | 4 |

- **Taluka Emergency Operation Centers (TEOC)**

The Taluka Emergency Operation Centers located at the Office of Mamlatdar. The Liaison Officers of the respective Talukas shall take charge of the Control Room. The respective Liaison Officers shall coordinate between the task group members working at disaster sites and TFOR for mobilization of resources and dissemination of instructions received from TFOR/DEOC.

- **Task Force Operation Room (TFOR)**

Individual Task Force function shall activate & operate their respective control rooms in their office manned by a competent person who is proficient in communication and technically capable of coordinating with Taluka Level Control Room and District Control Room and mobilize requisite resources to the disaster site.

- **Facilities at Task Force Operation Rooms (TFOR)**

The following facilities are maintained inside TFCR:

- Telephones
- Facsimile
- Satellite Phone (no immediately) - it is desirable.

- Hand held Radios/Base Stations
- Marker board (1)
- A copy each of Disaster Management Plan and Task Force Plan
- Other relevant documents, if any

● **Facilities at Taluka Level Control Rooms (TLCR)**

The following facilities are maintained inside TFCR:

- Telephones
- Facsimile
- Satellite Phone (desirable)
- Hand held Radios/Base Stations
- Marker board (1)
- A copy each of Disaster Management Plan and Taluka Level Plan
- Other relevant documents, if any

Responsibility of up keeping and maintenance of all the above items / facilities in the respective Control rooms is given as below.

DCR (DEOC) : District Collector or any person nominated

TFCR :Respective Task Force Leader

TLCR (TEOC) :Respective Taluka Liaison Officer

The above responsible Depts./ personnel shall carryout periodic inspection of such facilities in their respective control rooms at the frequency set by them and maintain records on the same.

Emergency Communication Systems

Communication system is very crucial for effective control of any disaster. The communication philosophy adopted by Disaster Management team during the disaster is given as below:

In the event of collapse of any communication facility / Communication infrastructure as a cascading effect/consequence of disaster, Telecommunication Task Force Leader shall ensure immediate restoration of such facility or infrastructure to ensure uninterrupted communication for effective disaster management operations.

Synthesized Radio Communication

All the Control Rooms are equipped with Radio base stations and all the task force leaders and their teams are provided with hand held radio sets. The different user groups are operating at different frequency channels allotted to them for ease in communication in respective groups. The table below shows the allotted frequency channel for individual Task Force. All the sets are programme for different groups' frequencies to facilitate horizontal communication among the different task groups.

| Sr. No. | Task Force / Functional Area | Channel |
|---------|------------------------------|---------|
| 1. | DCR | 1 |
| 2. | Law & Order & its TFOR | 2 |
| 3. | Search & Rescue & its TFOR | 3 |
| 4. | Public Works & its TFOR | 4 |
| 5. | Shelter & its TFOR | 5 |
| 6. | Water Supply & its TFOR | 6 |

| | | |
|-----|---------------------------------------|----|
| 7. | Food & Social Service & its TFOR | 7 |
| 8. | Power & its TFOR | 8 |
| 9. | Public Health & Sanitation & its TFOR | 9 |
| 10. | Logistics & its TFOR | 10 |
| 11. | Animal Health & Welfare & its TFOR | 11 |
| 12. | Relief Supplies & its TFOR | 12 |
| 13. | Communication & its TFOR | 13 |
| 14. | Survey & its TFOR | 14 |
| 15 | Taluka Level Control Room (TLCR) | 15 |

At present, “Hand held radio sets” are with the District Magistrate, DDO, DSP, fire Brigade and Forest department. If possible, Health Personnel may be given these sets later.

Telephones

Telephones and Fax Machine had provided at DEOC and all TEOC Control Rooms.

3.6 Alternate EOC available and its location

In case of any emergency when the main district Emergency Operation Centre may collapse, the control room of New Collector Office, Jilla Seva Sadan, Collector Office Panvadi, Vyara might be use as the Alternative Control room. It is also the central point for information gathering, processing and decision making more specifically to combat the disaster but when such kind of situation where DEOC will collapse so alternate EOC will started at Collector office.

Alternate Communication System

There could be a situation when all the communication facilities and systems may come to halt due to collapse of communication facilities/infrastructures. In the event of such a failure, till the facility/infrastructure is restored made functional, following alternate systems shall be used based on the seriousness of the situation:

Satellite Communication System

Satellite communication shall be activated once all the communication systems fail. This facility is installed at all the control rooms. The Telecommunication Task Force Leader shall ensure that this facility is resumed on all such occasions.

Messengers

- Use of messengers as a last resort to carry the hand written messages to persons concerned in dealing with the disaster.
- A dedicated vehicle shall be made available by the Transport Task Force Leader upon request

Right use of Communication facility

- The sense of urgency that every one experiences during disaster may lead to a chaotic situation if communication systems are not properly used.
- Communication shall be brief and simple.
- Telephones/ Hot Lines shall be used wherever possible to avoid congestion of Radio communication.
- All task force members shall communicate only through their allotted frequency channel to avoid congestion in the particular channel.

Personnel who use Radios should be acquainted with the operation of the equipment, various channels, code words, length of speech, etc.

3.7 Public and private emergency service facilities available in the district

Surat district has One fire station in surat Mun,Corporation and Three Fire stations in Respective three nagarpalika.(bardoli, mandvi and Tarsadi nagarpalika) These emergency services are fully equipped with various equipmentand trained personal which are use in search and rescue operation during disaster situation.

3.8 Forecasting and warning agencies

Alert Mechanism – Early Warning

On the receipt of warning or alert from any such agency, which is competent to issue such a warning, or on the basis of reports from District Collector of the occurrence of a disaster, the response structure of the State Government will be put into operation. The Chief Secretary/Relief Commissioner will assume the role of the Chief of Operations during the emergency. The details of agencies competent enough for issuing warning or alert pertaining to various types of disasters are given below;

| Sr. No. | Disaster | Agencies |
|---------|---------------------------------|--|
| 1 | Earthquakes | IMD, ISR |
| 2 | Floods | IMD, Irrigation Department |
| 3 | Cyclones | IMD |
| 4 | Tsunami | IMD, ISR, INCOIS |
| 5 | Drought | Agriculture Department |
| 6 | Epidemics | Health & Family Welfare Department |
| 7 | Industrial & Chemical Accidents | Industry, Labor& Employment Department, DISH |
| 8 | Fire | Fire & Emergency Services |

Chapter 4

Prevention and Mitigation Measures

4.1 :Prevention measures in development plans and programmers

For disaster prevention and mitigation, both structural and non-structural interventions can be planned. Structural interventions include construction of physical engineering and non engineering structures to reduce hazard risks. Non structural mitigation includes awareness and capacity building at official and community level, formulation of new plans and overall promoting a commitment for safety.

Mitigation measures can be divided in two categories:

- i) Structural measures: On site works, construction, and engineering works and
- ii) Non-structural measures: Which include studies, research, regulations, policy changes and capacity building activities that support the structural measures.

The taluka disaster management plan includes hazard specific structural and non structural mitigation plans in consultation and convergence with various Departments. For example, the MGNREGA work can take up activities on construction of embankment for flood safety or the forest department may take up mangrove plantation in the coastal areas, while the water supply department can construct hand pumps on raised platforms.

Departments shall draw out its own plan, goals and milestones and review it annually for its achievements and planning for next year.

Mitigation, preparedness and prevention actions are to be taken before a disaster to reduce the likelihood of a disaster (risk reduction) or the level of damage (vulnerability reduction) expected from a possible disaster. Vulnerability reduction is given priority over a risk reduction. The district can avail itself of four mechanisms (singularly or together) to reduce risk and vulnerability;

- Long term planning for mitigation, preparedness and prevention investments in the district,
- Enforcement of regulations, particularly building and safety codes and land use plans,
- Review and evaluation of development plans and activities to identify ways to reduce risks and vulnerability, and,
- Capacity building, including warning, the provision of relief and recovery assistance and community-level identification of risk and vulnerability.

The Collector, assisted by the District Development Officer, is responsible for developing plans and activities to effect mitigation, preparedness and prevention using the mechanism noted above.

Base on the interim assessment of risk and vulnerabilities, the District will focus on the following areas for mitigation, preparedness and prevention;

- Resilience of lifeline systems (water, power and communications)
- Reduction in disaster impact on health care facilities, schools and roads
- Vulnerability reduction in flood-prone areas
- Vulnerability reduction to high winds
- Improvement of Off-site Preparedness near Industrial sites.

Hazard wise Structural and Non- structural Mitigation Measures

Hazard: Flood

Table No. : 4.1
Structural Mitigation Measures for Flood
 (Identified works of concerned Departments)

| Probable Mitigation Measures | Implementing Departments | Convergence with Scheme/ Program | Time Frame |
|---|--|---|------------|
| Desalting and deepening of water channel (khans) | Irrigation and Rural Development, GLDC | Departmental program & MGNREGS, | Regularly |
| Construction of embankments/ protection wall | Rural Development, Forest | Departmental program & MGNREGS, watershed | Regularly |
| Repair of embankments/ protection wall | Rural Development, R&B department | Departmental program & MGNREGS | Regularly |
| Repair and maintenance of Flood Channels, canals, natural drainage, storm water lines | Irrigation department Concern Municipality | Departmental or special plan | Regularly |
| Construction of Safe Shelters (new construction through Indira Awas, Sardar Awas and Ambedkar Awas) | Collector and R&B District Panchayat | | Regularly |
| Protection wall and mangroves and vegetative cover against sea level intrusion and land erosion | Forest and Rural development department GEC | Department schemes, MGNREGS, IWMP | Regularly |
| Desalting of water bodies like river and ponds | Irrigation DDORural Development | MGNREGA and Land Development | 2014-15 |

Table No. : 4.2
Non-Structural Mitigation Measures for Flood
 (Identified works of concerned Departments)

| Non-Structural measures | Implementing Departments | Convergence with agency/program | Time Frame |
|--|--|--|-------------------|
| Safety audit of existing and proposed housing stock in risk prone areas | DDO, Rural development | IAY, Sardar Awas and other rural housing schemes | Regularly |
| Promotion of Traditional, local and innovative practices like bamboo/plastic bottle rafts etc, clean city green city | DDMC, TDMC, CDMC, SHGs and youth groups, NGOs Volunteers | Training and capacity building plan for disaster management At all level | Regularly |
| Capacity building of volunteers and technicians | DDMC, TDMC, CDMC | Training and capacity building plan for disaster management | Regularly |
| Awareness generation on health and safety of livestock | veterinary officer, rural development | Departmental Scheme | Regularly |

Hazard: Cyclone

Table No.: 4.3
Structural Mitigation Measures for Cyclone

| Structural measures | Identified Locations and Villages | Implementing Departments | Convergence with Scheme/Program | Time Frame |
|--|--|--|--|-------------------|
| Plantations (mangroves) and Shelter Belt in the Coastal Area | | Forest department, Port Authority, DIC, TDO, Rural development department, GEC | Departmental schemes, MGNREGA | Regularly |
| Identification and repair/ retrofitting of houses and buildings unsafe for cyclone | | R & B (District Panchayat) | Departmental Scheme | |

Table No.: 4.4
Non-Structural Mitigation Measures for Cyclone

| Non-Structural measures | Location/ coverage area | Implementing Departments | Convergence with agency/ program | Time Frame |
|---|--------------------------------|---|--|-------------------|
| Strengthening of Early warning mechanisms | | DDMC, TDMC | District administration Line department | Regularly |
| Training and awareness generation for use of safety jackets/rings/buoys/rope etc for fisher folks | | DDMC, TDMC, VDMC, CDMC | TDMP, VDMC | 2014-15 |
| Enforcing strict compliance to coastal regulation zone and awareness regarding hazard | | Department of Environment & Forest Dept. Fishing GEC | Integrated Coastal Zone Management CRZ Regulation | |
| Registration of fishing boats | | Fisheries Department | CRZ Regulation | |
| Regulate and issue orders for poor quality hoardings/buildings or any other objects | | R & B Department | | |

Hazard: Earthquake

Table No. : 4.5
Structural Mitigation Measures for Earthquake

| Structural measures | Identified Locations and Villages | Implementing Departments | Convergence with Scheme/ Program | Time Frame |
|--|---|--|---|-------------------|
| Retrofitting (if required) of public utility buildings like offices, schools/ banks/ markets etc | Earthquake prone 5 Taluka under zone 3 In district | R & B (State and Panchayat), DDO, Rural department | TP Plan and all development plan | Regularly |
| Retrofitting of unsafe rural houses | | DDMC, DDO, R & B State and panchayat | Rural housing schemes and departmental programs | Regularly |
| Identifying and safely dismantling unsafe structures | | R & B department | Development plan | Regularly |
| Issue permission for Earthquake registrant house | | Area Development Authority | TP plan | Regularly |

Table No. : 4.6
Non Structural Mitigation Measures for Earthquake

| Non-Structural measures | Location/ coverage area | Implementing Departments | Convergence with agency/ program | Time Frame |
|--|--|---|---|-----------------------|
| Capacity building of architects, engineers and masons on earthquake resistant features | under zone 3 | R & B (State and Panchayat) DDMC, TDMC, CDMC | DRM, DRR, special training programme | Regularly |
| Registration of trained and certified mason | | R & B (State and Panchayat), DDMC | -- | Regularly |
| Strict enforcement of guideline pertaining to seismic safety for government rural housing, urban development structure | | DDO, DDMC, CDMC, TDMC, VDMC | Rural housing schemes | Regularly |
| Mock-drills for Schools, Hospitals and , Public Buildings and trainings for mason, engineers and architects | | DDMC, Schools | DRM, Nssp, DRR DM regulation | Regularly |

Hazard: Drought

Table No. : 4.7
Structural Mitigation Measures for Drought

| Structural measures | Identified Locations and Villages | Implementing Departments | Convergence with Scheme/ Program | Time Frame |
|---|--|---|--|-----------------------|
| Development of Pasture land in common property, seed farms and trust land | | Forest, Rural Development, Panchayat | Departmental Scheme, MGNREGA | Regularly |
| Rain Water Harvesting storage tanks at household level and public buildings | | GWSSB, (WASMO), Rural Development | MGNREGA, Swajaldhara | Regularly |
| Structures for water harvesting and recharging like wells, ponds, check dams, farm ponds, etc | | DDO, Rural development, irrigation department | MGNREGA ,Watershed program, departmental schemes | Regularly |
| Development of fodder plots/banks | | DDMC, Forest department , animal husbandry department | Development plan | Regularly |
| Repair and maintenance, de-silting of water sources, check dams, hand pumps etc. | | Irrigation, Rural Development | MGNREGA, Watershed | Regularly |

Table No. :4.8
Non-Structural Mitigation Measures for Drought

| Non-Structural measures | Locations/ coverage area | Implementin g Departments | Convergence with agency/ program | Time Frame |
|--|---|--|---|-----------------------|
| Listing/developing shelf of work for drought proofing/scarcity works including Identification of potential sites of water bodies | | Rural Development | MGNREGS | Regularly |
| Farmer education to practice drought resistant crops and efficient water use | | Agriculture & horticulture department | Departmental schemes | Regularly |
| Set up control mechanism for regulated water use (ponds, small dams, check dams) on the early onset. | | Panchayats | | Regularly |

Hazard : Industrial (Chemical)

Table No. 4.9
Industrial (Chemical) Structural Measures
(in coordination with LCG, DCG district and state level authorities)

| Structural measures | Activities | Implementing Departments | Convergence with agency/ program | Time Frame |
|--|---|--|---|----------------------|
| Monitoring impact of industries on NRM (land, water and air) | Data collection of impact on natural resources (ground water monitoring wells, air quality test, etc) | DDMC, DCG GPCB | Environment protection act | Regular intervention |
| Safety assessment | Carry out structural safety inspection/audit | DISH, DCG (Asst.Director. Industrial safety and health) | Industrial act | Regular intervention |
| Protection wall | Build protection wall for minimize risk of disaster | Industrial unit | Industrial act | Regular intervention |

Table No.: 4.10
Industrial (Chemical) Non-Structural Measures
(in coordination with LCG, DCG, district and state level authorities)

| Non structural Measures | Activities | Implementing Departments | Convergence Agencies | Time Frame |
|--------------------------------|--|---------------------------------|-----------------------------|----------------------|
| Planning | Prepare an onsite and offsite emergency plan | Occupier, DISH | Various Industrial act | - |
| | Conduct mock drills as per the regulations | DISH and LCG | Various Industrial act | Regular intervention |
| | Update the DM plan as per the requirement | Occupier, DISH | Various Industrial act | Industrial act |
| | Monitor similar activities in all the factories/ industries | DISH and LCG | Various Industrial act | Industrial act |
| Capacity Building | Develop IEC material for Publication & Distribution | TDMC | Various Industrial act | Industrial act |
| | Awareness generation to general public and medical professional residing near MAH factories for immediate steps | TDMC, LCG | Various Industrial act | Industrial act |
| | Organize training programmers, seminars and workshops (e.g. for drivers of HAZMAT transport, line departments officers, Mamlatdar etc) | TDMC, LCG | Various Industrial act | Industrial act |
| | List of experts/ resource person/ subject specialist (District emergency Off site plan) | TDMC, LCG | Various Industrial act | Industrial act |
| | Encourage disaster insurance | Labor& employment department | Various Industrial act | Industrial act |
| Medical | Listing of hazardous chemicals and gases. | Occupier, LCG, DISH, THO | Various Industrial act | Industrial act |
| | Keep check on availability and validity of relevant antidotes for chemical hazards prevalent in Taluka | Occupier, LCG, DISH, THO | Various Industrial act | Industrial act |
| | Workshops and trainings for medical professionals to handle potential chemical and industrial hazard | THO, Occupier, LCG, DISH | Various Industrial act | Regularly |
| Compliance | Environmental Protection Act, Factory Act, Mutual Aid SOPs | DISH , GPCB | Various Industrial act | Regular interval |

At the District level, the District Crisis Management Group (DCG) is an apex body to deal with major chemical accidents and to provide expert guidance for handling them. DCG has a strength of 34 members which includes District Collector, SDM and Dy. Collector, DDO, Dy. Director – Industrial Safety & Health, DSP, PI, Fire Superintendent of the City Corporations or important Municipalities, Chief District Health Officer, Civil Surgeon, SE, Chief Officer, Dy. Chief Controller of Explosives, Commandant – SRPF, Group-I, Dy. Director – Information to name a few. At Taluka level Local Crisis Management Group (LCG) is formed for coordination of activities and executing the operations.

Hazard: Tsunami

Table No. 4.11
Structural Mitigation Measures for Tsunami

| Structural measures | Identified Locations and Villages | Implementing Departments | Convergence with Scheme/ Program | Time Frame |
|---|--|---------------------------------|---|--------------------|
| Constructing shelter belts in coastal areas | No coastal area | Rural Development | Departmental programs , MGNREGA | Long term planning |
| Contraction Sea water brake structure | | R & B State and panchayat | Departmental programs , MGNREGA | Long term planning |

Table No. : 4. 12
Non-Structural Mitigation Measures for Tsunami

| Non-Structural measures | Locations/ coverage area | Implementing Departments | Convergence with agency/program | Time frame |
|---|---------------------------------|--|--|--------------------|
| Provisions of Coastal Regulation Zone to be effectively implemented | No Coastal Area | Department of Environment & Forest GEC | ICZMP | Long term planning |
| Capacity building of task forces in coastal villages | | TDMC, DDMC, CDMC, VDMC, | DRM, | Periodically |
| Awareness activity in prone/ vulnerable area | | DDMC , TDMC, CDMC, VDMC | DRM | Regularly |

4.2: Special projects proposed and ongoing programmers for preventing the disasters

1. Disaster Risk Management Programme (DRM)

Disaster Risk Management Programme (DRM) has taken strong roots at various levels of administration in Gujarat. The Department of Revenue & Disaster Management is the nodal Department in Government of Gujarat that handles the subject with GSDMA. Disaster Management Committees are formed at various levels and are assigned the task of implementing the programme. Representation for these committees are drawn from elected representatives, officials of line departments, professional bodies, Civil Defense, NGO and CBO representatives and local opinion leaders. Major Activities are being carried out under DRM program are Plan Development at Various Levels, Emergency Resources Database maintain through SDRN / IDRN, Capacity Building through Trainings & Resource Mobilization, Disaster Awareness through Orientations, Campaigning, Media Management and IEC distribution. Coordinate District Administration for all Disaster Management Activities with expertise knowledge, logistics and fund allocation.

2. National School Safety Programme:

A national school safety programmer is pilot project of NDMA and Government of India. Under a, project Kutch and Jamnagar are selected from Gujarat state and 200 school selected from Kutch District. NSSP project focus of School safety and done various activity like Capacity building of Teacher, student, Awareness programme at school level on Disaster management, conducting hazards wise mock drill, preparation of school disaster management plan etc.

This Program is not functioning in Surat District.

3. Gujarat Initiative School Safety Programme-I

Initiative (GSSI) – I & II. The pilot programs were designed for promoting a culture of disaster safety in schools and reduce risk through structural and non-structural measures in the schools. One hundred and fifty schools were selected from the cities of Ahmadabad (100), Jamnagar (15) and Vadodara (35) cities on basis of the school's disaster vulnerability, number of students and willingness to implement the suggested measures. The following activities were conducted in each of the project schools:

- School management was first approached and a presentation was made about why and how the concerned school can work on school safety.
- A School Safety Committee was formed with the help of school administration.
- A three-day programme on orientation of the school disaster management committee on school disaster management planning.
- Orientation about basic disaster awareness to coordinators and members of the school task forces.
- Detail training of the task force members on task force skills such as activities to be done for search and rescue, first aid, etc.
- Imparting lessons on emergency response in each classroom.
- Conducting mock drill and holding a debriefing meeting to evaluate the mock drill.

Gujarat School Safety Initiative – I is completed in all the 152 schools, covering training of 1,00,000 students (primary and secondary standards) and 1,500 teachers in the basics of disaster management. School based DM plans were prepared for all the 152 schools. Earthquake drills were conducted in 80 schools attended by around 40,000 students and 640 teachers. As part of the long-term sustainability of the program, an assessment of non-structural mitigation measures was completed and school safety clubs have been opened in all the project schools. A short play on disaster awareness was also organized in 68 schools.

Gujarat School Safety Initiative – II

This initiative was designed for creation of cadre of master trainers and a pool of trained teachers at district level in disaster risk reduction across all the 25 districts of the State. It was designed for creating a pool of 100 Master Trainers (4 from each district). These master trainers would provide training to 625 teachers (25 from each district). Twenty five model schools were selected & School DM Plans were prepared involving the trained teachers. It was planned that trainings will be conducted for 1,000 teachers and 7,500 students in model schools.

4. National Cyclone Risk Mitigation Project (NCRMP):

Gujarat being prone to cyclones, it is the topmost priority of the State Government to reduce the effect of cyclone and minimize the loss to property and lives in the coastal regions of the State through creation of suitable infrastructure. Gujarat has therefore been included in the NCRMP initiated by the National Disaster Management Authority and funded by the World Bank. Under NCRMP project various activity will carry out like Construction of cyclone shelter for selected area.

As Tapi district's vulnerability is less from Cyclone so this Program is not functioning in Tapi district.

4.3: Structural: Structural Mitigation Measures

- a. Retrofitting of Buildings:** Surat district come in Zone III in Earthquake. In Tapi region maximum buildings are engineered or, having good seismic resistant capacity. There are mainly four major types of constructions:

| | |
|-------------|---|
| Category A: | Adobe, fieldstone Masonry Buildings |
| Category B: | Brick Construction Masonry Buildings |
| Category C: | R. C. C. Construction |
| Category X: | Traditional & Conventional Construction |

The buildings of Category A are very weak and may be damage even due to a lower intensity earthquake. There is a need for detailed assessment of buildings, which are vulnerable and may cause losses to life. Assessment of these buildings will help to evolve a strategy for their retrofitting.

After assessment of vulnerability of buildings the priority for structural mitigation has to be defined. Generally, public buildings are given first priority because they are lesser in number and at the time of disaster, people can take shelter in these public buildings. Some examples of important buildings are hospitals, clinics, communication buildings, fire and police stations, water supply, cinema halls, meeting halls, schools and cultural buildings such as museums, monuments and temples. The second priority goes to other type of buildings like housing, hostels, offices, warehouses and factories.

- b. Construction control:** The best protection against earthquake is a strong built environment. The quality of buildings, measured by their seismic resistance is of

fundamental importance. Minimum design and construction standards for earthquake and flood resistant structures legislated nationally, are an important step in establishing future minimum levels of protection for important structures. India now has building codes and regulations for seismic and flood resistant design. These codes are in constant review by the experts. The below mentioned building codes are generally practiced in India:

- **IS: 1893, 1984** - Criteria for earthquake resistance design of structures
- **IS: 13828, 1993** - Guidelines for improving low strength earthquake resistant masonry buildings
- **IS: 13920, 1993** - Ductile detailing of reinforced concrete structures subjected to seismic forces- code of practice
- **IS: 13827, 1993** - Guidelines for improving earthquake resistance of earthen buildings
- **IS: 13935, 1993** - Guidelines for repairing & seismic strengthening of buildings

In building by-laws and the Seismic Code must be enforce by the municipal, Area Development Authority and Panchayat bodies.

4.4: Non-structural:

Land use planning: Damage to a building depends primarily upon the soil conditions and topology of the area. Tapi district comes under Moderat risk zone in terms of earthquake (Zone 3)

Training and awareness programmers: Mitigation also includes training of people for making the houses safe from earthquakes and floods. Training modules have to be prepared for different target groups viz. engineers and masons about safe building practices and general 'do's and don'ts' for public.

Mitigation strategies

The mitigation strategy for Tapi district involves the following elements:

- Further growth of human settlements in the low-lying areas should be check through land-use planning. Such areas are vulnerable not only from flood hazards but are also vulnerable to earthquake liquefaction, which may increase the damage manifold. The department of Town and Country Planning will take care of seismic hazards while preparing the development plans for the district;
- Appropriate building codes will be making applicable for new engineered & non-engineered constructions, and should be strictly enforce by local body. The Municipal Corporation of local area will ensure the construction as per Indian Standard Building Codes;
- Infrastructure department will do the retrofitting of public buildings under their maintenance charge. Generally, PWD, Rural Engineering Services and Housing Board maintain the public buildings. The expenditure for such retrofitting will be taken care under maintenance head.
- Community awareness will be rising regarding seismic resistant building construction techniques and seismic retrofitting of existing buildings. Housing Board will be the nodal agency to provide training through workshops and demonstrations. PWD and RES will support MPHB in these efforts;
- Community awareness will be raised regarding 'do's and don'ts' in the event of an earthquake with the involvement of Panchayati Raj institutions and CBOs. Revenue department will be the nodal agency for this activity.

4.5: Special Projects for Vulnerable Groups:

Development Schemes:

MGNREGS:

The MGNREGA achieves twin objectives of rural development and employment. The MGNREGA stipulates that works must be targeted towards a set of specific rural development activities such as: water conservation and harvesting, a forestation, rural connectivity, flood control and protection such as construction and repair of embankments, etc. Digging of new tanks/ponds, percolation tanks and construction of small check dams are also given importance. The employers are given work such as land leveling, tree plantation, etc. It has a very broad spectrum which can be used for the benefit of the population that are vulnerable and are likely to be affected.

1. Construction of Tube wells can be done.
2. Building of Roads for places which are not connected to other parts of the district.
3. Leveling of low lying areas during flood to a higher level to prevent those areas.
4. Construction of check dams and embankments and drainage systems to prevent flooding of those areas.

Indira Awas Yojana :

This scheme can be used for the rehabilitation of the affected villages by making constructions for the affected population.

Sarva Shiksha Abhiyan:

This scheme can be used for creating awareness about mitigation and preparedness about accidents that are in control of man, in collaboration with educational institutions to the people so that they can make use of it when required.

NRHM:

This scheme can be used to facilitate for voluntary first aid during disaster and training the local population to deal with minor injuries so that they do not have to wait for professional help to help any individual. Training of nurses can be carried out as a preparatory plan.

Mukhyamantri Awas Yojana:

The scheme can facilitate the rehabilitation programs among the affected villages or the ones that are likely to be affected and lie in the vulnerable zone. They can come up with collaboration with the construction norms.

Jal- Abhishekh Abhiyan:

The aim of the scheme is to provide safe drinking water so it can be used to provide for clean drinking water during response and relief period .It can work in collaboration with sanitation systems during relief period and help in avoiding any kind of future epidemics in the affected region.

Samagra Swachta Abhiyan:

This scheme can also be used for providing sanitation in the relief camps to the affected population. Since relief camps are the places where lot of diseases and epidemics may break out, proper defecation and sanitation should be ensured by this scheme.

Madhyanah Bhojan Karyakram:

The scheme can provide for food supply during emergency situations in the affected areas or even in the relief camps.

Risk Management Funding

Short term provisions are expected to cover the immediate loss, incurred due to disasters. Whereas long term provisions include the set up of fire stations, watershed management, planting trees along the river etc.

Insurance schemes are important source of funds for restoration of private business enterprises. The Collector will coordinate with Insurance Companies to speed up settlement of insurance claims. It will help in restoration of private business enterprises. He will also coordinate with commercial banks for ensuring smooth flow of financial assistance from commercial banks for restoration of private business enterprises.

Agriculture department shall provide seeds and the required finance as loans through local banks for the resumption of agriculture activities. The district administration shall elicit the support funding of agencies like Care, CRS etc. for the resumption of agriculture and livelihood activities.

Revenue/Book Circulars contains standing instructions of the Government for distribution of ex-gratia payments to poor families, who suffer from disasters to initiate their recovery process. This assistance will be provided very promptly to the poor families by the functionaries of the Revenue Department.

In order to achieve the objectives, rollout workshop was held for sensitization of education department officials, district level administrators (District Education Officers & District Primary Education Officers), teachers and students. Eighty six master trainers were trained in 4 regional workshops, 593 teachers were trained throughout the State in 3 day workshops. Twenty five model schools were selected where 25,543 students and 861 teachers have been trained. One model school developed for each district. Methodology for School Safety program has been developed and tested, including templates for developing a School Disaster Management Plan. Training and awareness material has been developed. Also, draft text books for class VII, VIII IX were prepared incorporating the basics of Disaster Management.

Over and above the softer issues highlighted above, GSDMA has provided all the existing Government schools in Gujarat with ISI marked portable Water-CO2 type of Fire Extinguisher (31746 Government schools covered of which 31336 are primary and 410 are secondary and higher secondary schools). For the necessary guidance/instruction for use of fire extinguishers, GSDMA has prepared an 18-minute short education film in Gujarati on fire safety for schools. This was shown to all government primary schools through the satellite network.

Chapter 5

Preparedness Measures

5.1: Formation of Persons and training for

Search & rescue

It is the duty of the DDMA to provide specialized life saving assistance to district and local authorities. In the event of a major disaster or emergency its operational activities include locating, extricating and providing on site medical treatment to victims trapped in collapsed structures. In the event of any disaster the Home Guards along with the support of the Police dept. form teams to locate injured and dead and try to rescue the ones in need. There are other bodies too that help these departments in this work, like the PWD, Health dept, Fire dept and also the people that voluntarily form teams to help the ones in need. Proper training for search and rescue process needs to be undertaken so as to minimize the time taken in rescuing someone. Also proper methodology and resources are needed to carry out a search & rescue mission.

The tactics used in the search & rescue process vary accordingly with the type of disaster that we are dealing with. In case of flood, a boat and trained swimmers are a must while in case of an earthquake sniffer dogs and cutting tools with trained manpower is a binding requirement. The household register that is maintained by the warden should be maintained for every village as it proves to be of great help in case of a disaster like an earthquake. Because in case of the aforementioned disaster people get trapped in the debris of buildings and houses and it becomes difficult to estimate how many people are present in the debris. But if a household register is maintained then the task becomes quite easy and effective to find out almost correctly that how many people would be present in any building/house at any given time. Thus the resources can be justifiably distributed and more lives can be saved. This kind of process is highly recommended in this particular district which lies in moderate earthquake prone region.

For flood it is recommended that the boats that are used should be light weight and the motor should be of 'luma' type, so that it becomes easy for the rescue team to lift the boat and carry it to the spot.

Search & rescue Team

Designation of trained S&R Team member

The Search & Rescue team is formed as and when required and the members & equipments are taken according to the nature of the disaster (and also on their availability).

- Police Officers (2 or more)
- Home guards (2 or more)
- Swimmers (In case of flood)
- A construction engineer (From P.W.D.)
- Driver (For Every vehicle)
- Any person with the prior experience of the disaster (From Home Guard/Police Dept.)
- A doctor or nurse or at least a person having first aid training
- A Class IV Officer (Health Dept.)

Early Warning:

The early warning systems for different disasters should be in place so that the concerned administrative machinery and the communities can initiate appropriate actions to minimize loss of life and property. These should give an indication of the level of magnitude of the mobilization required by the responders. The goal of any warning system is to maximize the number of people who take appropriate and timely action for the safety of life and property. All warning systems start with the detection of the event and with their timely evacuation. Warning systems should encompass three equally important elements viz detection and warning, dissemination of warning down to the community level and the subsequent quick response.

The State acknowledges the crucial importance of quick dissemination of early warning of impending disasters and every possible measure will be taken to utilize the lead-time provided for preparedness measures. As soon as the warning of an impending calamity is received, the EOCs at the State, District and Block levels will be on a state of alert. The Incident Commander will take charge of the EOC and oversee the dissemination of warning to the community. The District Collector will inform the District Disaster Management Committees who will alert the block and Village level DMCs and DMTs to disseminate the warning to the community. On the basis of assessment of the severity of the disaster, the State Relief Commissioner (Incident Commander) shall issue appropriate instructions on actions to be taken including evacuation to the District Collector, who will then supervise evacuation. In situations of emergency, the District Collector will use his own discretion on the preparedness measures for facing the impending disaster.

At the village level, members of the VDMCs and DMTs or village level will coordinate the evacuation procedures to the pre-designated relief centers, taking special care of the vulnerable groups of women, children, old people etc. according to the plans laid down earlier.

Evacuation:

Evacuation is a risk management strategy, which may be used as a means of mitigating the effects of an emergency or disaster on a community. It involves the movement of people to a safer location. However, to be effective, it must be correctly planned and executed. The process of evacuation is usually considered to include the return of the affected community.

Shelter provides for the temporary respite to evacuees. It may be limited in facilities, but must provide protection from the elements as well as accommodate the basic personal needs, which arise at an individual level in an emergency.

The plan must allocate responsibility for management of each of the elements of shelter. Considering the wide range of services, agencies and issues to be managed, it becomes essential for 'shelter' to be managed within a structure, which facilitates the coordination of agencies and services and support of emergency workers. The following factors may need consideration:

- Identification of appropriate shelter areas based on safety, availability of facilities, capacity and number of victims
- Approaches to the shelter location in light of disruption due to hazard impact and traffic blockades

- Temporary accommodation
- Provision of essential facilities like drinking water, food, clothing, communication, medical, electrical and feeding arrangements, etc
- Security
- Financial and immediate assistance
- First-aid and counseling

Types of evacuation

For planning, all evacuations may be considered to be one of two generic types:

- (a) Immediate evacuation, which allows little or no warning and limited preparation time as in the case of earthquakes and air accident
- (b) Pre-warned evacuation resulting from an event that provides adequate warning and does not unduly limit preparation time as in the case of flood and cyclones.

Principles of Evacuation Planning

- Establishment of a management structure for organization, implementation, coordination and monitoring of the plan
- Determination of legal or other authority to evacuate
- Clear definition of rules and responsibilities
- Development of appropriate and flexible plans
- Effective warning and information system
- Promoting awareness and encouraging self-evacuation.
- Assurance of movement capability
- Building confidence measures and seeking cooperation of the affected community.
- Availability of space for establishment of relief camps having requisite capacity and facilities
- Priority in evacuation to be accorded to special need groups like women, old and sick, handicapped and children
- For effective evacuation, organization and running of relief centers, cooperation and involvement of all agencies viz. Community, volunteers, NGOs, NCC / NSS, Home guards and civil defense, district and village bodies be ensured
- Security arrangement and protection of lives and property
- Preparation and updating of resource inventories
- Appropriate welfare measures throughout all stages
- Test exercise of prepared plans and recording of lessons learnt
- Documentation

Stages of Evacuation

There are five stages of evacuation as under:

- Decision of authorities to evacuate victims
- Issue of warning and awareness
- Ensuring smooth movement of victims to designated relief camps
- Ensuring provision of all requisite facilities like security, safe-housing, feeding, drinking-water, sanitation, medical and allied facilities
- Safe return of personnel on return of normalcy

Decision to Evacuate

Vulnerability analysis may indicate that for certain hazards and under certain conditions, sheltering in place could well be the best protection. Available lead-time may influence the decision to evacuate the public before the impact of emergency (e.g. floods) and reducing the risk to lives and property. Decision would also be dependent on factors like ready availability of suitable accommodation, climatic condition, and severity of likely hazard and time of the day.

The Collector would be the authoritative body to issue directions for evacuation. The OIC of DECR would convey directions to Desk Officers of concerned agencies, which are responsible to execute evacuation.

Basic consideration for Evacuation

The DCG will define area to be evacuated as also the probable duration of evacuation based on meteorological observations and intimations by the concerned forecasting agencies. It should also identify number of people for evacuation, destination of evacuees, lead-time available, welfare requirements of evacuees as also identify resources to meet the needs of victims, viz. manpower, transport, supplies equipments, communications and security of the evacuated area.

The evacuating agency should set priorities for evacuation in terms of areas likely to be affected and methodology to execute evacuation:

- Delivery of warning
- Transport arrangement
- Control and timing of movement
- Fulfill welfare needs including medical treatment
- Registration of evacuees

All agencies involved in evacuation operation like Home guards, Police, PWD, PHED, etc. will coordinate in field. They will remain in touch with the Desk officials in the DECR for issuing warning, information and advise the public.

Evacuation Warning

An evacuation warning must be structured to provide timely and effective information. Factors, which may influence the quality and effectiveness of warning, include time, distance, visual evidence, threat characteristic and sense of urgency e.g. the more immediate the threat, the greater the resilience of people to accept and appropriately react to the warning.

The warning should be clear and target specific. The warning statement issued to the community should be conveyed in a simple language. The statement should mentioned:

- The issuing authority, date and time of issue
- An accurate description of likely hazard and what is expected
- Possible impact on population, area to be in undated or affected due to earthquake
- Need to activate evacuation plan
- Do's and Don'ts to ensure appropriate response
- Advise to the people about further warnings to be issued, if any

Damage & Loss Assessment

Immediately after the disaster, there is an urgent need of damage assessment in terms of loss of life, injury and loss of property. The objectives of damage assessment are to mobilize resources for better rescue and relief, to have detailed information of damage extent and severity of disaster and to develop strategies for reconstruction and restoration facilities.

Damage is assessing with regard to building stock, standing crops, agricultural area, livestock lost, forest cover decimated, vital installations etc. In damage assessment of building stock, generally three types of flags are used; green, yellow and red. The green color is given to the buildings that are safe and require 2-3 days to return to their original function. Yellow flags depict the considerable damage to the buildings and considered unsafe for living, as they require proper structural repairs and careful investigation. The red flag is assigned to buildings that are partially or completely collapsed. Immediately after a disaster event, damage assessment will be conducted in 2 phases viz. Rapid Damage Assessment and Detailed Damage Assessment.

5.2: Training need analysis -Education and Capacity Building and arrangement for training:-

Although education about disaster mitigation and prevention and capacity building would seem to be ideal district-level efforts, the lead for both probably best rests with the state level, with districts having a facilitating role. The issue is that if 26 districts independently embark on education and capacity building it will be hard to coordinate and standardize the results across districts. A significant consequence would an inequality in capacities across districts, and thus uneven mitigation and prevention results'How to fund these activities remains open. Options range from GSDMA grants to set-asides in budget allocations. Project Impact in the US and similar programs in Australia and Canada are good models for the former approach.

5.3: Training, capacity building and other proactive measures Training:

Table No. 5.3

| Sr. No. | Task / Activity | Responsibility |
|----------------|---|--|
| 1 | Training to civil defense personal in various aspect of disaster management | Home Department |
| 2 | Training to home Guards personal in various aspect of disaster management including search and rescue | Dy.Controller Civil Defense District Home Guards Commandant |
| 3 | Training to NCC and NSS personal in various aspect of disaster management | Education Department NCC Collector Office |
| 4 | Training to educational and training institutions personal in various aspect of disaster management | DDMC |
| 5 | Training to civil society, CBOs and corporate entities in various aspect of disaster management | DDMC |
| 6 | Training to fire and emergency service personal in various aspect of disaster management | Fire Dept, CDMC DDMC |
| 7 | Training to police and traffic personal in various aspect of disaster management | DDMC Police Dept. |
| 8 | Training to media in various aspect of disaster management | DDMC Information Dept. |
| 9 | Training to govt. officials in various aspect of disaster management | DDMC |

| | | |
|----|---|-------------|
| 10 | Training to engineers, architects, structural engineers, builders and masons in various aspect of disaster management | DDMC, R & B |
|----|---|-------------|

Awareness

| Task | Activity | Responsibility |
|--|---|---|
| Information, education And communication | Advertisement, hording, booklets, leaflets, banners, shake-table, demonstration, folk dancing and music, jokes, street play, exhibition, TV Spot, radio spot, audio-visual and documentary, school campaign, Rally, - Planning and Design - Execution and Dissemination | <input type="checkbox"/> Information Dept <input type="checkbox"/> Education Dept <input type="checkbox"/> All line dept <input type="checkbox"/> Dist. Collectors <input type="checkbox"/> Chief officer <input type="checkbox"/> Other Dist. Authorities |

5.4: Activation of Incident Response System in the District and identification of quick response team

Command:

This function establishes the framework within which a single leader or committee can manage the overall disaster response effort. A single Incident Commander is responsible for the successful management of the response during operational period in an area. If the incident grows in size and extends throughout many jurisdictions, multiple incident commanders can be useful with an area command authority may be established to coordinate among the incidents. Incident Commander requires the following Command Staffs to support him, which are as followings,

- Public Information Officer – the single media point of contact
 - Safety Officer – Responsible for identifying safety issues and fixing them, he has the authority to halt an operation if needed.
 - Liaison Officer – Point of contact for agency to agency issues.
1. **Operations:** this section carries out the response activities described in the Incident Action Plan (IAP) along with coordinating and managing the activities taken the responding agencies and officials that are directed at reducing the immediate hazard, protecting lives and properties. This section manages the tactical fieldwork and assigns most of the resources used to respond to the incident. Within operations, separate sections are established to perform different functions, such as emergency services, law enforcement, public works...etc.
 2. **Planning:** this section supports the disaster management effort by collecting, evaluating, disseminating, and uses information about the development of the emergency and status of all available resources. This section creates the action plan, often called “Incident Action Plan” (IAP), which shall guide emergency operations/response by objectives.

Followings are the six primary activities performed by the planning section, including,

- Collecting, evaluating, and displaying incident intelligence and information

- Preparing and documenting IAPs
 - Conducting long-range and contingency planning
 - Developing plans for demobilization
 - Maintaining incident documentation
 - Tracking resources documentation
3. **Logistics:** the process of response includes personnel, equipments, vehicles, facilities...etc, all of which will depend upon the acquisition, transport, and distribution of resources, the provision of food and water, and proper medical attention. The Logistic section is responsible for the mentioned process.
4. **Finance and Administration:** this section is responsible for tracking all costs associated with the response and beginning the process for reimbursement. The finance and administration section becomes very important when the national government provides emergency funds in place that guarantee local and regional response agencies that their activities, supply use, and expenditures will be covered.

A traditional command structure exists in the administrative hierarchy which manages disasters in India. It has been planned to strengthen and professionalise the same by drawing upon the principles of the ICS with suitable modifications. The ICS is essentially a management system to organise various emergency functions in a standardised manner while responding to any disaster. It will provide for specialist incident management teams with an incident commander and officers trained in different aspects of incident management, such as logistics, operations, planning, safety, media management, etc. It also aims to put in place such teams in each district by imparting training in different facets of incident management to district level functionaries. The emphasis will be on the use of technologies and contemporary systems of planning and execution with connectivity to the joint operations room at all levels.

The local authorities do not have the capacity to play an efficient role at local level to support the DEOC's requirements for field information and coordination. The DEOC will therefore need to send its own field teams and through them establish an Incident Command System. The system will comprise:

- Field command
- Field information collection
- Inter agency coordination at field level

Management of field operations, planning, logistics, finance and administration

5.5: Checking and certification of logistics, equipments and stores

Kutch district has various types of logistics and equipment. It should be check and certified by concern officer periodically. Disaster Management cell is regularly monitoring this activity and got certification of this equipment. (Detail information of Equipment is given in Annexure)

5.6: Operational check-up of Warning System

Warning system are checking periodically like, Satellite phone, Hot Line, Telephone connection, GSWAN connectivity etc, In Pre- monsoon meeting also give direction for checking warning system like, port signals.

5.7: Operational check-up for Emergency Operation Centre

Operational checkup of Emergency Operation Centre are carry out month wise and check out all facility and equipment in DEOC.

5.8: NGOs and other stakeholders coordination – identify their strengths and allocation of responsibilities in area/sector/duty/activities – Activate NGO coordination cell

NGO and Voluntary group are doing very important activity and response during disaster. DDMA also organized capacity-building programmers, awareness programmers on Disaster Management for NGO and Voluntary group. For arrangement of water supply, temporary sanitation facilities, search and Rescue activity, Relief distribution can be sought with help of special agencies, NGOs and CBOs. (Information of NGO and Voluntary group refer Annexure)

Awareness Generation: -

As a part of Preparedness Awareness, generation among community will be continuous process. From District to Taluka, Village level awareness programme must be conduct with the help of Print Media, Electronic media, folk media authority can create awareness among community.

5.9: Seasonal preparedness for Seasonal Disaster like Flood and Cyclone: -

Whether personal or institutional, all collections are subject to risks that can seriously affect the lifetime and value of a collection. For many museums, galleries, and private collectors, an essential aspect in Collection Management is maintaining a loss prevention plan for seasonal disasters.

Hazards from these storms come in many forms including high winds, tornadoes, storm surges and flooding. Natural disasters make all of us acutely aware of our vulnerabilities to disaster. Fortunately, catastrophes of a large magnitude are rare, but disaster can strike in many ways. Large or small, natural or man-made, emergencies put collections in danger. Hazards can often be mitigated or avoided altogether by a comprehensive, emergency-preparedness plan. Such plans provide a means for recognizing and responding effectively to emergencies. The goal is to hopefully prevent damage or, at least, to limit the extent of the damage.

Identifying Risks:

A prudent first step is to list geographic and climatic hazards and other risks that could jeopardize the building and collections. These might include geographical susceptibility to hurricanes, tornadoes, flash flooding, earthquakes, or forest fires, and even the possibility of unusual hazards such as volcanic eruptions. Consider man-made disasters such as power outages, sprinkler discharges, fuel or water supply failures, chemical spills, arson, bomb threats, or other such problems. Take note of the environmental risks that surround you. Chemical industries, shipping routes for hazardous materials, and adjacent construction projects all expose you to damage. Any event that is a real possibility should be covered under your Emergency Preparedness Plan. It is also important to determine the vulnerability

of the objects within the collections. What types of materials are included? Are they easily damaged? Are they particularly susceptible to certain types of damage such as moisture, fire, breakage, and the like? How and where are collections stored? Are they protected by boxes or other enclosures? Is shelving anchored to structural elements of the building? Is it stable? Are any artifacts stored directly on the floor where they could be damaged by leaks or flooding? All items should be raised at least four inches from the floor on waterproof shelves or pallets. Are materials stored under or near water sources? Analyze your security and housekeeping procedures. Do they expose collections to the dangers of theft, vandalism, or insect infestation? Consider vulnerabilities. Are your collections insured? Is there a complete and accurate inventory? Is a duplicate of the inventory located at another site? Although there may be a wide range of disaster scenarios, the most common are water, fire, physical or chemical damage, or some combination of these. The specific procedures of a disaster plan focus on the prevention and mitigation of these types of damage.

Decreasing Risks

Once your hazards are specified, the disaster planner should devise a program with concrete goals, identifiable resources, and a schedule of activities for eliminating as many risks as possible. While water damage is the most common form of disaster for collections, everyone needs a good fire-protection system. Wherever possible, collections should also be protected by a firesuppression system. Preservation professionals now recommend wet-pipe sprinklers for most collections. In addition, water misting suppression systems have become available within the last several years; these can provide fire suppression using much less water than conventional sprinkler systems. Before choosing a fire-protection system, be sure to contact preservation professional or a fire-protection consultant for information about the latest developments in fire protection and for advice appropriate to your collections and situation. An inventory will provide a basic list of holdings, and will be essential for insurance purposes. Improved collection storage, such as boxing and raising materials above the floor level, will reduce or eliminate damage when emergencies occur. Comprehensive security and housekeeping procedures will ward off emergencies such as theft, vandalism, and insect infestation. They will also ensure that fire exits are keep clear and fire hazards eliminated.

Identifying Resources

An important step in writing your plan is to identify sources of assistance in a disaster. Research these services thoroughly--it is an essential part of the planning process. These can range from police, fire, and ambulance services to maintenance workers, insurance adjustors, and utility companies. If possible, invite local service providers to visit in order to become familiar with your site plan and collections in advance of an emergency. For example, you may want to provide the fire department with a list of high-priority areas to be protected from water if fire-fighting efforts permit.

Other valuable sources of assistance are local, state, or federal government agencies.

5.10: SDRN/IDRN data updation: -

State disaster Resource network and India Disaster Resource Network is a crucial databases for response any disaster. SDRN, a decision support tool, is layered using the existing IT Wide Area Network (WAN) of the State - GSWAN. SDRN uses the map-based Geospatial Information Systems developed by the Gujarat based organization

Bhaskaracharya Institute for Space Applications and Geo-Informatics (BISAG). Currently, the SDRN network is being integrated with the GIS based Decision Support System using Java, MS-Access, Visual Studio 2005 with Database SQL Server 2005. The GIS Visualize does not require any GIS software. The GIS visualize contains multi layered options depicting roads-highways, taluka, district boundaries, rivers, ports, airways, etc. SDRN and IDRN updation are regularly base work and it is updation.

India Disaster Resource Network (IDRN) : -

IDRN, a web based information system, is a platform for managing the inventory of equipments, skilled human resources and critical supplies for emergency response. The primary focus is to enable the decision makers to find answers on availability of equipments and human resources required to combat any emergency. This database will also enable them to assess the level of preparedness for specific vulnerabilities. Total 226 technical items listed in the resource inventory. It is a nationwide district level resource database. Each user of all districts of the state has been given unique username and password through which they can perform data entry, data updation on IDRN for resources available in their district. The IDRN network has functionality of generating multiple query options based on the specific equipment, skilled human resources and critical supplies with their location and contact details.

the IDRN inventory of Surati District is combined with Tapi District's inventory so for the access of Tapi District's IDRN data we need to access Surat District's Portal on IDRN

5.11: Community Warning System, Education, Preparedness

DRM Programme:

GSDMA DRM activities:

Disaster Risk Management Programme (DRM) has taken strong roots at various levels of administration in Gujarat. The Department of Revenue & Disaster Management is the nodal Department in Government of Gujarat that handles the subject with GSDMA. Disaster Management Committees are formed at various levels and are assigned the task of implementing the programme. Representation for these committees are drawn from elected representatives, officials of line departments, professional bodies, Civil Defense, NGO and CBO representatives and local opinion leaders. Major Activities are being carried out under DRM program are Plan Development at Various Levels, Emergency Resources Database maintain through SDRN / IDRN, Capacity Building through Trainings & Resource Mobilization, Disaster Awareness through Orientations, Campaigning, Media Management and IEC distribution. Coordinate District Administration for all Disaster Management Activities with expertise knowledge, logistics and fund allocation.

The Disaster Risk Management Program (DRM) being implemented by Gujarat State Disaster Management Authority (GSDMA) aims to strengthen the response, preparedness and mitigation measures of the community, local self-governments, the District administration and the State in Gujarat. Under the DRM Programme

For the Prepared level specific plan following process will followed.

District Level Process

1. Orientation of District level officers and PRI members including line department officials
2. Formation of District Disaster Management Committee
3. Development of manuals and guidelines Capacity building of DDMC members, government officials, training institutes, other concerned organizations at district level
4. Development of the District Disaster Management Plan
5. Use of IEC materials for awareness generation for preparedness, risk reduction and mitigation
6. Data updation on IDRN

Taluka level process

1. Orientation cum sensitize Taluka level officers and PRI members.
2. Formation of Taluka Disaster Management Committee
3. Capacity building of government officials
4. Development of the TDMP
5. Use of IEC material and media sources for create awareness at taluka level
6. TDMP update on SDRN

City-ULB level process

1. Orientation of City level officers, elected members & leaders.
2. Formation of CDMP
3. Capacity building of municipal official and concerned organizations at city level
4. Development of the CDMP.
5. Use of IEC material for create awareness at city level
6. CDMP updation on SDRN

Village Level Process

1. Formation Cluster within 10 to 12 village and conduct cluster meetings over 10-12 villages
2. Organize Gramsabha in each village
3. Undertake PRA exercise at village level for hazard, vulnerability assessment and resource analysis
4. Facilitate the formation of the Village Disaster Management Committee (VDMC)
5. Conduct training programs for DMT and DMC Members and volunteers
6. Awareness campaigns on risk reduction mechanisms, Risk Transfer- insurance, disaster resistant construction
7. Developed Village Disaster Management Plan (VDMP)
8. Conduct mock drills for test the VDMP
9. Update VDMP twice in a year (by VDMC)

Surat district had taken the preparedness measures from village level to District level. At the villages village Task forces was formed and trained about First aid and Health, Search and Rescue and Disaster Management. Some volunteers were also trained in Disaster Management and plans like VDMP were prepared and updated. Officers reviewed the disaster preparedness of the villages and interacted with the Village level Disaster Management team members, in the pre-monsoon meeting all departments, and stakeholders

were asked to get prepared departmental plan. SOP's were also discussed with them so that quick response can be assured and any kind of risk due to water lodging, flood, heavy rainfall and dam overflow can be reduced.

Prevention and Mitigation and preparedness actions are to be taken before a disaster to reduce the likelihood of a disaster (risk reduction) or the level of damage (vulnerability reduction) expected from a possible disaster. Vulnerability reduction is given priority over a risk reduction.

Base on the interim assessment of risk and vulnerabilities, certain majors for mitigation, preparedness and prevention has been taken with respect to Kutch District. These are...

The proposed state-level disaster-planning format sets out priorities for mitigation, prevention and preparedness activities. The underlying concept is to incorporate these three types of activities into normal (developmental) policies, procedures and undertakings and targeting specific areas for concerted effort.

Complementary priorities, plans and activities need to be established at the district level. This process is complicated by five realities:

1. Developmental policies and budgets are set at the state-level and project implementation is not always under the control of district authorities
2. District authorities have limited policy and funding independence.
3. The range of possible mitigation, prevention and preparedness actions within a district is significant but can be difficult to prioritize.
4. Many activities require popular participation and should be focus on the family or community, which requires time and effort to effectively organize.
5. The local commercial sector is cost-conscious and tends to avoid investments in activities which do not immediately improve profits.

A set of possible district-level approaches to mitigation, prevention and preparedness are summarized below based on these realities. These approaches need to be reviewed at the district and state level and. to the degree possible, harmonized vertically within the government structure and across public and private sector organizations and districts. At the same time, the focus of efforts can vary between and even within districts depending on their particular hazards, risks and vulnerabilities.

One approach to developing this harmonization is to hold a state-district conference on mitigation, preparedness and prevention, complemented by annual review workshop. The initial conference would define and harmonize policies, procedures and approaches vertically and horizontally. The workshop would serve to recognize progress and adjust plans to take into account changing local and state-level conditions.

District-level Approaches to Mitigation, Prevention and Preparedness

Preventive measure (for all disasters)

Preventive actions have to be taken before a disaster to reduce the likelihood of a disaster (risk reduction) or the level of damage (vulnerability reduction) expected from a possible disaster. Vulnerability reduction is given priority over a risk reduction. The district can avail itself of four mechanisms (singularly or together) to reduce risk and vulnerability.

1. Long term planning for mitigation, preparedness and prevention investments in the district,

2. Enforcement of regulations, particularly Structural-building and safety codes and land use plans,
3. Review and evaluation of development plans and activities to identify ways to reduce risks and vulnerability, and,
4. Capacity building, including warning, the provision of relief and recovery assistance and community-level identification of risk and vulnerability.

The Collector, assisted by the District Development Officer, is responsible for developing plans and activities to effect mitigation, preparedness and prevention using the mechanism noted above. Based on the interim assessment of risk and vulnerabilities, the Kutch District will focus on the following areas for mitigation, preparedness and prevention;

- Resilience of lifeline systems (water, power and communications)
- Reduction in disaster impact on health care facilities, schools and roads
- Vulnerability reduction in flood-prone areas
- Vulnerability reduction to high winds
- Improvement of off-site Preparedness near Industrial sites.

Mitigation measure (for all disasters)

Town and Country Planning Acts and their related provisions:

The Department of Disaster Management, being a member of all regulatory bodies will coordinate with the Town & Country Planning Board and constitute a committee of experts to evaluate the provisions of the State Town & Country Planning Act in place. The Committee will consist of experts from the fields of disaster management, town and country planning and legal experts and will be chaired by the State Relief Commissioner.

Zoning Regulations and their related provisions:

The State Urban Development Department, in consultation with the Department of Disaster Management will constitute a committee of experts with, members from the Institute of Town Planners, town development, State Pollution Control Board, Chairpersons of major Development Authorities/Notified Area Authorities, eminent faculty from planning, architecture and civil engineering departments of engineering colleges, eminent resource persons and such other experts nominated from time to time to study the existing zoning regulations and suggest necessary amendments to incorporate components for vulnerability reduction. The State Chief Town Planner will be the Convener of the Committee.

Development Control regulations:

The same committee of experts constituted to evaluate the zoning regulations will also evaluate the development control regulations and suggest measures to incorporate the disaster management concerns into them.

Government-sponsored programmers and schemes:

The State Planning Department will prepare a report on the government sponsored programmers, schemes running in the State and how far each programme/scheme addresses the issue of disaster management, and submit to the government. The Disaster Management Group which is constituted under the chairmanship of the Chief Secretary with concern Secretaries of the Departments of Disaster Management, Urban Development, Rural Development, Health, Home, Finance, Science & Technology, Transport, and Agriculture to evaluate and suggest disaster mitigation measures to be incorporated.

5.12: Community Warning system-Early Warning System (EWS)

It is often observed that communities living in remote and isolated locations do not receive timely and reliable warnings of impending disasters. Hence, it is necessary to have robust and effective early warning systems, which can play crucial role in saving lives and limiting the extent of damage to assets and services. Outreach and reliability of warnings are key factors for planning and implementing response measures. Post disaster advisories like information on rescue, relief and other services are important to ensure law, order, and safety of citizens.

Early Warning Action Plan

| Type of Action | Flood | Cyclone | Chemical and industrial accidents | Tsunami |
|---|--|--|--|---|
| Existing EWS | Irrigation department /dam authority/ IMD ↓ Collector ↓ Mamlatdar/TDO ↓ Villages | IMD ↓ Collector ↓ Mamlatdar/TD O ↓ Villages | Industrial Association/industrie s ↓ DCG ↓ LCG ↓ Mamlatdar ↓ Villages | IMD ↓ Collector ↓ Mamlatdar /TDO ↓ Villages |
| Responsible Agency for warning dissemination | DDMC Mamlatdar office/TDO VDMC | DDMC Mamlatdar office/TDO VDMC | DDMC Mamlatdar office/TDO VDMC | DDMC Mamlatdar office/TDO VDMC |
| Trained personnel and operators available (Y/N) | Yes | Yes | No (Team to be formed and trained) | No (Team to be formed and trained) |
| Villages covered | All risk prone villages | | | |
| Villages/habit ation not covered or difficult to access | Communities in remote locations (fisher folk, salt pan workers, maldharis etc) VDMC | | | |
| Measures required to improve timeliness and outreach (For example, voice enabled SMS) | Contact of communities in remote locations (fisher folk, saltpan workers, Maldharis etc) | | | |

During and Post Disaster Advisory Action Plan

| Type of Hazard | Flood | Cyclone | Earthquake | Drought | Chemical and industrial accidents | Tsunami |
|---|--|---------|------------|---------|-----------------------------------|---------|
| Responsible Agency | DDMC, Mamlatdar office & TDO | | | | | |
| Villages covered | All risk prone villages | | | | | |
| Villages/habitat not covered or difficult to access | communities in remote locations (fisher folk, salt pan workers, Maldharis etc) | | | | | |
| Measures required for outreach | Contact of communities in remote locations (fisher folk, salt pan workers, Maldharis etc) | | | | | |

5.13: Procurement various Resource :

Provide logistical support to government and agencies for procurement of relief goods, transportation, Tents, blankets, tarpaulins, equipment etc, and monitoring illegal price escalations, stocking etc. during crisis. DDMA and other local authority should do procurement of such resource and If they have such resource so keep them in ready to use in disaster situation.

5.14: Protocol and arrangement for VIP Visit

It is important that immediately inform VIPs and VVIPs on impending disasters and current situation during and after disasters. Appeals by VIPs can help in controlling rumors and chaos during the disaster. Visits by VIPs can lift the morale of those affected by the disaster as well as those who are involved in the response. Care should be taken that VIP visits do not interrupt rescue and life saving work. Security of VIPs will be additional responsibility of local police and Special Forces. It would be desirable to restrict media coverage of such visits, in which case the police will liaise with the government press officer to keep their number to minimum.

5.15: Media Management

The role of media, both print and electronic, in informing the people and the authorities during emergencies becomes critical, especially the ways in which media can play a vital role in public awareness and preparedness. Media through educating the public about disasters; warning of hazards; gathering and transmitting information about affected areas; alerting government officials, helping relief organizations and the public towards specific needs; and even in facilitating discussions about disaster preparedness and response. During any emergency, people seek up-to-date, reliable and detailed information.

The State Government has established an effective system of collaborating with the media during emergencies. At the State Emergency Operation Centre (SEOC), a special media cell has been create which is made operational during emergencies. Both print and electronic media areregularly brief at predetermined time intervals about the events as they

occur and the prevailing situation on ground. A similar set up is also active at the District Emergency Operation Centre (DEOC).

5.16: Documentation

Documentation is very important activity in disaster management. DDMA also appoint duty for Documentation to the information department. Documentation should be in good manner. It can be in summary and detail form. It is reliable and authenticate.

Chapter 6

Response Measures (Multi-Hazard)

Response measures are those which are taken instantly prior to, and following, a disaster aimed at limiting injuries, loss of life and damage to property and the environment and rescuing those who are affected or likely to be affected by disaster. Response process begins as soon as it becomes apparent that a disastrous event is imminent and lasts until the disaster is declared to be over. Since response is conducted during periods of high stress in a highly time-constrained environment and with limited information and recourses (in majority of the cases), it is by far, the most complex of four functions of disaster management. Response includes not only those activities that directly address the immediate needs, such as search and rescue, first aid and shelters, but also includes systems developed to coordinate and support such efforts. For effective response, all the stakeholders need to have a clear perception/vision about hazards, its consequences and actions that need to be taken in the event of it.

The Revenue Department of the State is the Nodal Department for controlling, monitoring and directing measures for organizing rescue, relief and rehabilitation. All other concerned line departments should extend full cooperation in all matters pertaining to the response management of the disaster whenever it occurs.

The District EOC, ERCs and other control rooms at the District level should be activate with full strength and begun active for search and rescue according disaster.

6.1: Response flow chart

Response flow chart on next page

6.2: District CMG meeting

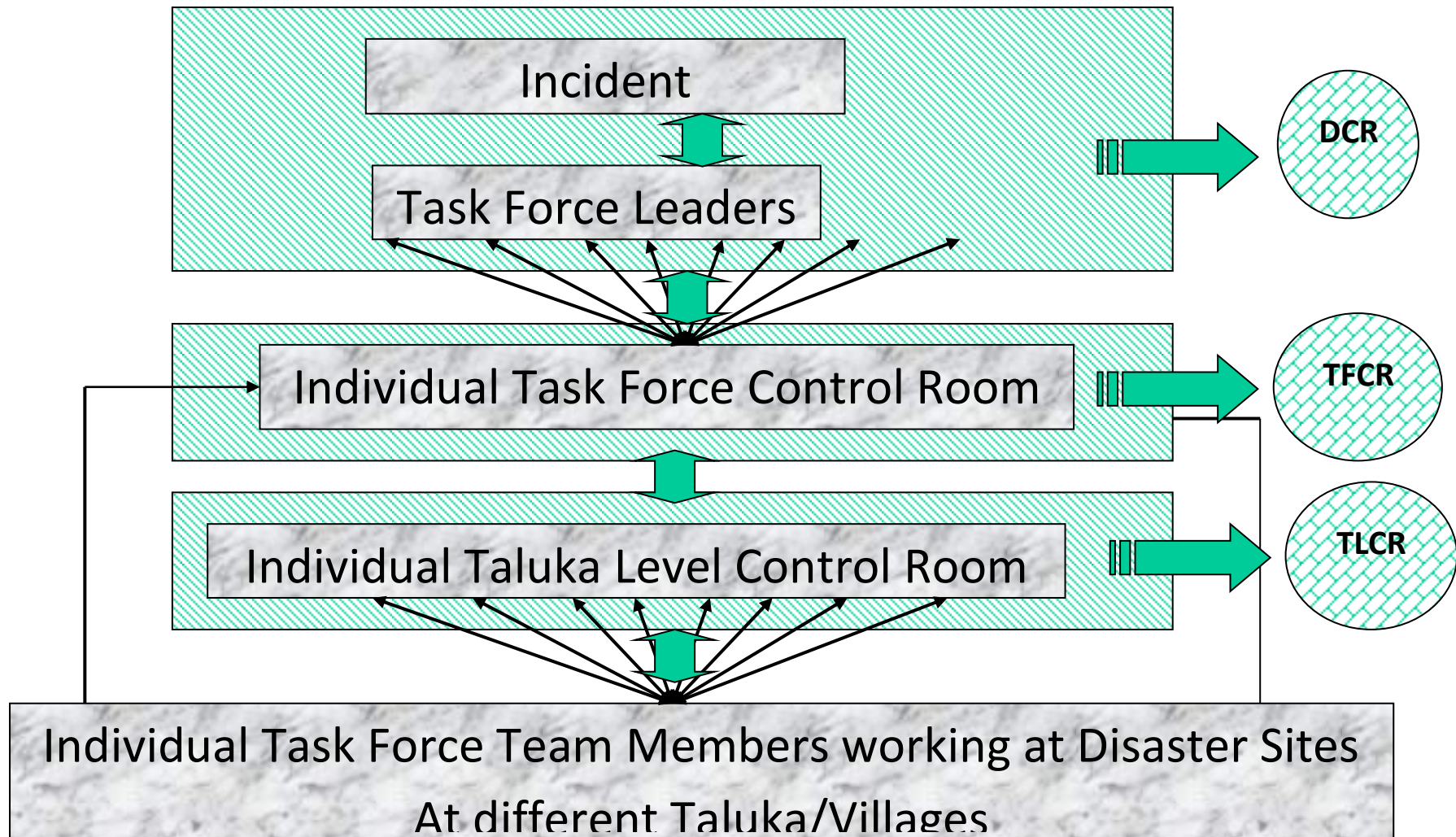
At the District level, the District Crisis Management Group (DCG) is an apex body to deal with major chemical accidents, disaster and to provide expert guidance for handling them. DCG has a strength of 34 members which includes District Collector, SDM and Dy. Collector, DDO, Dy. Director – Industrial Safety & Health, DSP, PI, Fire Superintendent of the City Corporations or important Municipalities, Chief District Health Officer, Civil Surgeon, SE, Chief Officer, Dy. Chief Controller of Explosives, Commandant – SRPF, Group-I, Dy. Director – Information to name a few. At Taluka level Local Crisis Management Group (LCG) is formed for coordination of activities and executing the operations. DCGs as well as LCG.meeting will meet periodically twice in a year.

6.3: Activation of EOC

Emergency Operation Center (EOC) is a physical location and normally includes the space, facilities and protection necessary for communication, collaboration, coordination and emergency information management.

The EOC is a nodal point for the overall coordination and control of relief work. In case of a Level 1 Disaster the Local Control room will be activate, in case of a Level 2 disaster DEOC will be activated along inform with the SEOC.

Response flow chart and Communication Flow Chart during Disaster Management



6.4: Warning, alert and warning dissemination

On the receipt of warning or alert from any such agency, which is competent to issue such a warning, or on the basis of reports from District Collector of the occurrence of a disaster, the response structure of the State Government will be put into operation. The Chief Secretary/Relief Commissioner will assume the role of the Chief of Operations during the emergency. The details of agencies competent enough for issuing warning or alert pertaining to various types of disasters are given below:

| Sr. No. | Disaster | Agencies |
|----------------|-----------------------------------|---------------------------------------|
| 1 | Earthquakes | IMD/ISR |
| 2 | Floods | Meteorological Department, Irrigation |
| 3 | Tsunamis | IMD/ISR/INCOIS |
| 4 | Cyclones | IMD |
| 5 | Epidemics | Public Health Department |
| 6 | Road Accidents | Police |
| 7 | Industrial and Chemical Accidents | DISH, Police, Collector |
| 8 | Drought | Agriculture, Scarcity department |
| 9 | Fire | Fire Brigade, Police, Collector |
| 10 | Rail Accident | Railways, Police, Collector |
| 11 | Air Accident | Police, Collector, Airlines |
| 12 | Ammunition Depot-Fire | Army, Police, Collector. |

1. Cyclone/flood forecasting is generally the responsibility of the Indian Meteorological Department (IMD). IMD is the nodal agency for providing cyclone-warning services. IMD's INSAT satellite based Cyclone Warning Dissemination System (CWDS) is one of the best currently in use in India to communicate cyclone warnings from IMD to community and important officials in areas likely to be affected directly and quickly. There are 19 CWDS stations in Gujarat.

2. After getting information from IMD, warning dissemination is a responsibility of State Government (COR). The COR under the Revenue Department is responsible for disseminating cyclone warnings to the public and Line Departments.

3. On receiving an initial warning, the office of the COR disseminates the warning to all Line Departments, the District administration and DG Police. Warning messages are transmitted through wireless to all districts and Talukas. District Collectors are provided with satellite phones and a Ham radio to maintain effective communication, even if terrestrial and cell-phone communication fails.

4. The state EOC and control rooms of the other line departments at the State level as well as district level also get the warnings. The control rooms are activated on receiving the warnings.

6.5: Resource Mobilization

Any disaster happens in district so resources are very important for response disaster. Resource mobilization is one of most important crucial activity. As mention above about IDRN and SDRN portal are have information regarding which kind of resource are available

and location of its. IDRN and SDRN should use for resource mobilization. DDMC, TDMC, CDMC and VDMC should be update regularly.

6.6: Media Management

The role of media, both print and electronic, in informing the people and the authorities during emergencies becomes critical, especially the ways in which media can play a vital role in public awareness and preparedness through educating the public about disasters; warning of hazards; gathering and transmitting information about affected areas; alerting government officials, helping relief organizations and the public towards specific needs; and even in facilitating discussions about disaster preparedness and response. During any emergency, people seek up-to-date, reliable and detailed information.

The State Government has established an effective system of collaborating with the media during emergencies. At the State Emergency Operation Centre (SEOC), a special media cell has been created which is made operational during emergencies. Both print and electronic media is regularly briefed at predetermined time intervals about the events as they occur and the prevailing situation on ground. A similar set up is also active at the District Emergency Operation Centre (DEOC).

Media can play crucial role during response time. Media management to ensure precise communication of the impact of disaster and relief measures being taken and generate goodwill among community and other stakeholders;

6.7: Emergency Response Functions:

Responsible for assuring specific operations according to objectives and plans to address the immediate impacts of the incident. Taskforces under the operation section will deal with specific functional tasks, such as search and rescue, the provision of water or shelter. The composition and size of these taskforces depends on the nature of the incident.

The District administration of Kutch has identified 16 expected task forces for key response operation functions that are describe below. Additional taskforces can be added under the operations section as needed by the circumstances of a disaster. Each Taskforce is led by one organization and supporter by other organizations.

Emergency Operation Taskforce Functions

| Sr. No. | Emergency Operation Taskforce | Functions |
|----------------|--------------------------------------|---|
| 1 | Coordination and Planning | Coordinate early warning, Response & Recovery Operations |
| 2 | Administration and Protocol | Support Disaster Operations by efficiently completing the paper work and other Administrative tasks needed to ensure effective and timely relief assistance |
| 3 | Warning | Collection and dissemination of warnings of potential disasters |
| 4 | Law and Order | Assure the execution of all laws and maintenance of order in the area affected by the incident. |

| | | |
|---|--|--|
| 5 | Search and Rescue (including Evacuation) | Provide human and material resources needed to support local evacuation, search and rescue efforts. |
| 6 | Public Works | Provide the personnel and resources needed to support local efforts to reestablish normally operating infrastructure. |
| 7 | Water | Assure the provision of sufficient potable water for human and animal consumption (priority), and water for industrial and agricultural uses as appropriate. |
| 8 | Food and Relief Supplies | Assure the provision of basic food and other relief needs in the affected communities. |
| 9 | Power | Provide the resources to reestablish normal power supplies and systems in affected communities. |

| | | |
|----|------------------------------|---|
| 10 | Public Health and sanitation | Provide personnel and resources to address pressing public health problems and re-establish normal health care systems. |
| 11 | Animal Health and Welfare | Provision of health and other care to animals affected by a disaster |
| 12 | Shelter | Provide materials and supplies to ensure temporary shelter for disaster-affected populations |
| 13 | Logistics | Provide Air, water and Land transport for evacuation and for the storage and delivery of relief supplies in coordination with other task forces and competent authorities. |
| 14 | Survey (Damage Assessment) | Collect and analysis data on the impact of disaster, develop estimates of resource needs and relief plans, and compile reports on the disaster as required for District and State authorities and other parties as appropriate. |
| 15 | Telecommunications | Coordinate and assure operation of all communication systems (e.g; Radio, TV, Telephones, Wireless) required to support early warning or post disaster operations. |
| 16 | Media (Public Information) | Provide liaison with and assistance to print and electronic media on early warning and post-disaster reporting concerning the disaster. |

The specific response roles and responsibilities of the taskforces indicated above is that these roles and responsibilities will be execute and coordinated through the ICS/GS system. For example, in flood, search & rescue would come under the Operations section, Transport would come under the Logistics Section and Public Information under the Public Information Unit.

Each Department and Govt. agency involved in Disaster Management and Mitigation will

- Designate a Nodal officer for emergency response and will act as the contact person for that department/agency □
- Ensure establishment of fail-safe two-way communication with the state, district and other emergency control rooms and within the organization.
- Emphasis on communication systems used regularly during LO with more focus on the use of VHF's with automatic repeaters, mobile phones with publicized numbers, VHF radio sets etc. It should be remembered that SAT phones fail during prolonged emergencies and electric failure if the phones cannot be re-charged.

- Work under the overall supervision of the IC / the District Collectors during emergencies.

Other Departmental plan incorporated in DMRP

Agriculture

Prevention Activities:

- Awareness generation regarding various plant diseases, alternate cropping practices in disaster-prone areas, Crop Insurance, provision of credit facilities, proper storage of seeds, etc.
- Hazard area mapping (identification of areas endemic to pest infections, drought, flood, and other hazards)
- Develop database village-wise, crop-wise, irrigation source wise, insurance details, credit etc.
- Regular monitoring at block level; the distribution and variation in rainfall
- Prepare the farmers and department officers to adopt contingency measures and take up appropriate course of action corresponding to the different emerging conditions.
- Detail response manuals to be drawn up for advising the farmers for different types of disasters, e.g., rain failure in July or September & development of a dynamic response plan taking into account weekly rainfall patterns.
- Develop IEC materials to advise the farming communities on cropping practices and precautionary measures to be undertaken during various disasters
- Improving irrigation facilities, watershed management, soil conservation and other soil, water and fertility management
- Measures keeping in mind the local agro climatic conditions and the proneness of the area to specific hazards.
- Promotion of alternative crop species and cropping patterns keeping in mind the vulnerability of areas to specific hazards
- Surveillance for pests and crop diseases and encourage early reporting.
- Encourage promotion of agro service outlets/enterprise for common facilities, seed and agro input store and crop insurance.

Preparedness Activities before disaster seasons

- Review and update precautionary measures and procedures, especially ascertain that adequate stock of seeds and other agro inputs are available in areas prone to natural calamities.
- Review the proper functioning of rain gauge stations, have stock for immediate replacement
- of broken / non-functioning gadgets/equipments, record on a daily basis rainfall data, evaluate the variation from the average rainfall and match it with the rainfall needs of existing crops to ensure early prediction of droughts.

Response Activities:

- 1 Management of control activities following crop damage, pest infestation and crop disease to minimize losses
 - a. Collection, laboratory testing and analysis of viruses to ensure their control and eradication
 - b. Pre-positioning of seeds and other agro inputs in strategic points so that stocks are readily available to replace damage caused by natural calamities.

- c. Rapid assessment of damage to soil, crop, plantation, irrigation systems, drainage, embankment, other water bodies and storage facilities and the requirements to salvage, replant, or to compensate and report the same for ensuring early supply of seeds and other agro inputs necessary for re-initiating agricultural activities where crops have been damaged.
- d. Establishment of public information centers with appropriate and modern means of communication, to assist farmers in providing information regarding insurance, compensation, repair of agro equipments and restarting of agricultural activities at the earliest.

Recovery Activities

1. Arrange for early payment of compensation and crop insurance dues.
2. Facilitate provision of seeds and other agro inputs.
3. Promotion of drought and flood tolerant seed varieties
4. Review with the community, the identified vulnerabilities and risks for crops, specific species, areas, which are vulnerable to repetitive floods, droughts, other natural hazards, water logging, increase in salinity, pest attacks etc. and draw up alternative cropping plans to minimize impacts to various risks.
5. Facilitate sanctioning of soft loans for farm implements.
6. Establishment of a larger network of soil and water testing laboratories
7. Establishment of pests and disease monitoring system
8. Training in alternative cropping techniques, mixed cropping and other agricultural practices which will minimize crop losses during future disasters

Health Department

Disaster Events

Prevention Activities:

- Assess preparedness levels at State, District and Block levels.
- Identification of areas endemic to epidemics and natural disasters
- Identification of appropriate locations for testing laboratories
- Listing and networking with private health facilities
- Developing a network of volunteers for blood donation with blood grouping data
- Strengthening of disease surveillance, ensuring regular reporting from the field level workers (ANMs/LHV etc) and its compilation and analysis at the PHC and District levels, on a weekly basis (daily basis in case of an epidemic or during natural disasters), forwarding the same to the State Disease Surveillance Cell and monthly feedback from the State to the district and from the District to the PHC
- Formation of adequate number of mobile units with trained personnel, testing facilities, communication systems and emergency treatment facilities
- Identification of locations in probable disaster sites for emergency operation camps
- Awareness generation about various infectious diseases and their prevention
- Training and IEC activities
- Training of field personnel, Traditional Birth Attendants, community leaders, volunteers,
- NGOs and CBOs in first aid, measures to be taken to control outbreak of epidemics during and after a disaster, etc
- Arrangement of standby generators for every hospital
- Listing of vehicles, repair of departmental vehicles that will be requisitioned during emergencies for transport of injured

Preparedness Activities before Disaster Seasons

For heat wave :

Preparation and distribution of IEC materials, distribution of ORS and other life-saving drugs, training of field personnel on measures to be taken for management of patients suspected to be suffering from heatstroke;

For flood and cyclone:

- Assessment and stock piling of essential medicines, anti snake venom, halogen tablets, bleaching powders. ORS tablets, Pre-positioning of mobile units at vulnerable and strategic points

Response activities:

Stock piling of life-saving drugs, detoxicants, anesthesia, Halogen tablets in vulnerable areas
Strengthening of drug supply system with powers for local purchase during Level-0
Situational assessment and reviewing the response mechanisms in known vulnerable pockets
Ensure adequate availability of personnel in disaster site
Review and update precautionary measures and procedures.

Sanitation

- Dispensing with post-mortem activities during L1, L2 and L3 when the relatives and/or the competent authority are satisfied about cause of death
- Disinfections of water bodies and drinking water sources
- Immunization against infectious diseases
- Ensure continuous flow of information.

Recovery Activities

- Continuation of disease surveillance and monitoring
- Continuation of treatment, monitoring and other epidemic control activities till the situation is brought under control and the epidemic eradicated
- Trauma counseling
- Treatment and socio-medical rehabilitation of injured or disabled persons
- Immunization and nutritional surveillance
- Long term plans to progressively reduce various factors that contribute to high level of vulnerability to diseases of population affected by disasters

Epidemics

Preventive Activities:

- Supply of safe drinking water, water quality monitoring and improved sanitation
- Vector Control programme as a part of overall community sanitation activities
- Promotion of personal and community latrines
- Sanitation of sewage and drainage systems
- Development of proper solid waste management systems
- Surveillance and spraying of water bodies for control of malaria
- Promoting and strengthening Primary Health Centers with network of para-professionals to improve the capacity of surveillance and control of epidemics

- Establishing testing laboratories at appropriate locations to reduce the time taken for early diagnosis and subsequent warning
- Establishing procedures and methods of coordination with the Health Department, other local authorities/departments and NGOs to ensure that adequate prevention and preparedness
- measures have been taken to prevent and / or minimize the probable outbreak of epidemics
- Identification of areas prone to certain epidemics and assessment of requirements to control and ultimately eradicate the epidemic
- Identification of appropriate locations and setting up of site operation camps for combating epidemics
- Listing and identification of vehicles to be requisitioned for transport of injured animals.
- Vaccination of the animals and identification of campsites in the probable areas
- Promotion of animal insurance
- Tagging of animals
- Arrangement of standby generators for veterinary hospitals
- Provision in each hospital for receiving large number of livestock at a time
- Training of community members in carcasses disposal

Preparedness activities before disaster seasons

- Stock piling of water, fodder and animal feed
- Pre-arrangements for tie-up with fodder supply units
- Stock-piling of surgical packets
- Construction of mounds for safe shelter of animals
- Identification of various water sources to be used by animals in case of prolonged hot and dry spells
- Training of volunteers & creation of local units for carcass disposal
- Municipalities / Gram Pranchayats to be given responsibility for removing animals likely to become health hazards.

Response Activities:

- Control of animal diseases, treatment of injured animals, Protection of lost cattle.
- Supply of medicines and fodder to affected areas.
- Ensure adequate availability of personnel and mobile team.
- Disposal of carcasses ensuring proper sanitation to avoid outbreak of epidemics.
- Establishment of public information centre with a means of communication, to assist in providing an organized source of information.
- Mobilizing community participation for carcass disposal.

Recovery Activities:

- Assess losses of animals assets and needs of persons and communities.
- Play a facilitating role for early approval of soft loans for buying animals and ensuring insurance coverage and disaster proof housing or alternative shelters/ mounds for animals for future emergencies.
- Establishment of animal disease surveillance system

Water Supplies and Sanitation (GWSSB)

Prevention Activities:

- Provision of safe water to all habitats
- Clearance of drains and sewerage systems, particularly in the urban areas
- Assess preparedness level
- Annual assessment of danger levels & wide publicity of those levels
- Identify flood prone rivers and areas and activate flood monitoring mechanisms
- Provide water level gauge at critical points along the rivers, dams and tanks
- Identify and maintain of materials/tool kits required for emergency response
- Stock-pile of sand bags and other necessary items for breach closure at the Panchayat level

Preparedness Activities for disaster seasons

- Prior arrangement of water tankers and other means of distribution and storage of water.
- Prior arrangement of stand-by generators
- Adequate prior arrangements to provide water and halogen tablets at identified sites to used as relief camps or in areas with high probability to be affected by natural calamities.
- Rising of tube-well platforms, improvement in sanitation structures and other infrastructural measures to ensure least damages during future disasters
- Riser pipes to be given to villagers

Response Activities:

- Disinfections and continuous monitoring of water bodies.
- Ensuring provision of water to hospitals and other vital installations.
- Provision to acquire tankers and establish other temporary means of distributing water on an emergency basis.
- Arrangement and distribution of emergency tool kits for equipments required for dismantling and assembling tube wells, etc.
- Carrying out emergency repairs of damaged water supply systems.
- Disinfection of hand pumps to be done by the communities through prior awareness activities & supply of inputs.
- Monitoring flood situation.
- Dissemination of flood warning.
- Ensure accurate dissemination of warning messages to GPs & Taluka with details of flow.
- Monitoring and protection of irrigation infrastructures.
- Inspection of bunds of dams, irrigation channels, bridges, culverts, control gates and overflow channels.
- Inspection and repair of pumps, generator, motor equipments, station buildings.
- Community mobilization in breach closure

Recovery Activities:

- Strengthening of infrastructure.
- Sharing of experiences and lessons learnt.
- Training to staff, Review and documentation.
- Development of checklists and contingency plans.
- Strengthening of infrastructure and human resources.
- Review and documentation.
- Sharing of experiences and lessons learnt.
- Training of staff.

- Development of checklists and contingency plans.

Police:

Prevention Activities:

- Keep the force in general and the RAF in particular fighting fit for search, rescue, evacuation and other emergency operations at all times through regular drills.
- Procurement and deployment of modern emergency equipments while modernizing existing infrastructure and equipments for disaster response along with regular training and drills for effective handling of these equipments.
- Focus on better training and equipments for RAF for all types of disasters.
- Rotation of members of GSDRAF so that the force remains fighting fit.
- Ensure that all communication equipments including wireless are regularly functioning and deployment of extra wireless units in vulnerable pockets.
- Ensure inter changeability of VHF communication sets of police and GSDMA supplied units, if required.
- Keeping close contact with the District Administration & Emergency Officer.
- Superintendent of Police be made Vice Chairperson of District Natural Calamity Committee.
- Involvement of the local army units in response planning activities and during the preparation of the contingency plans, ensure logistics & other support to armed forces during emergencies.

Response Plan:

- Security arrangements for relief materials in transit and in camps etc.
- Senior police officers to be deployed in control rooms at State & district levels during L 1
- level deployment onwards.
- Deploy personnel to guard vulnerable embankments and at other risk points.
- Arrangement for the safety.
- Coordinate search, rescue and evacuation operations in coordination with the administration
- Emergency traffic management
- Maintenance of law and order in the affected areas
- Assist administration in taking necessary action against hoarders, black marketers etc.

Civil Defense:

Prevention Activities

- Organize training programmes on first-aid, search, rescue and evacuation.
- Preparation and implementation of first aid, search and rescue service plans for major public events in the State.
- Remain fit and prepared through regular drills and exercises at all times.

Response Activities

- Act as Support agency for provision of first aid, search and rescue services to other emergency service agencies and the public.
- Act as support agency for movement of relief.
- Triage of casualties and provision of first aid and treatment.
- Work in co-ordination with medical assistance team.

- Help the Police for traffic management and law and order.

Fire Services:

Prevention Activities:

- Develop relevant legislations and regulations to enhance adoption of fire safety measures.
- Modernization of fire-fighting equipments and strengthening infrastructure.
- Identification of pockets, industry , etc. which highly susceptible to fire accidents or areas,events which might lead to fires, building collapse, etc. and educate people to adopt safety measures. Conduct training and drills to ensure higher level of prevention and preparedness.
- Building awareness in use of various fire protection and preventive systems.
- Training the communities to handle fire emergencies more effectively.
- VHF network for fire services linked with revenue & police networks.
- Training of masons & engineers in fireproof techniques.
- Making clearance of building plans by fire services mandatory.

Response Activities:

- Rescue of persons trapped in burning, collapsed or damaged buildings, damaged vehicles,
- including motor vehicles, trains and aircrafts, industries, boilers, trenches & tunnels.
- Control of fires and minimizing damages due to explosions.
- Control of dangerous or hazardous situations such as oil, gas and hazardous materials spill.
- Protection of property and the environment from fire damage.
- Support to other agencies in the response to emergencies.
- Investigation into the causes of fire and assist in damage assessment.

Civil Supplies:

Preventive Activities

- Construction and maintenance of storage goods storage at strategic locations
- Stock piling of food and essential commodities in anticipation of disaster.
- Take appropriate preservative methods to ensure that food and other relief stock are not damaged during storage, especially precautions against moisture, rodents and fungus infestation.

Response Activities

- Management of procurement
- Management of material movement
- Inventory management

Recovery Activities

Conversion of stored, unutilized relief stocks automatically into other schemes like Food for Work. Wherever, it is not done leading to damage of stock, it should be viewed seriously.

Public Works/ Rural Development Departments:

Prevention Activities :

- Keep a list of earth moving and clearing vehicles / equipments (available with Govt. Departments, PSUs, and private contractors, etc.) and formulate a plan to mobilize those at the earliest
- Inspection and emergency repair of roads/ bridges, public utilities and buildings

Response Activities

- Clearing of roads and establish connectivity. Restore roads, bridges and where necessary make alternate arrangements to open the roads to traffic at the earliest
- Mobilization of community assistance for clearing blocked roads
- Facilitate movement of heavy vehicles carrying equipments and materials
- Identification and notification of alternative routes to strategic locations
- Filling of ditches, disposal of debris, and cutting of uprooted trees along the road
- Arrangement of emergency tool kit for every section at the divisional levels for activities like clearance (power saws), debris clearance (fork lifter) and other tools for repair and maintenance of all disaster response equipments.

Recovery Activities:

- Strengthening and restoration of infrastructure with an objective to eliminate the factor(s)
 - which caused the damage.
- Sharing of experiences and lessons learnt.
- Training to staff, Review and documentation.
- Development of checklists and contingency plans.

Energy: DGVCL

Prevention Activities:

- Identification of materials/tool kits required for emergency response.
- Ensure and educate the minimum safety standards to be adopted for electrical installation and equipments and organise training of electricians accordingly.
- Develop and administer regulations to ensure safety of electrical accessories and electrical installations.
- Train and have a contingency plan to ensure early electricity supply to essential services during emergencies and restoration of electric supply at an early date.
- Develop and administer code of practice for power line clearance to avoid electrocution due to broken / fallen wires.
- Strengthen high-tension cable towers to withstand high wind speed, flooding and earthquake, modernize electric installation, strengthen electric distribution system to ensure minimum damages during natural calamities.
- Conduct public/industry awareness campaigns to prevent electric accidents during normal times and during and after a natural disaster.

Response Activities:

- Disconnect electricity after receipt of warning.
- Attend sites of electrical accidents and assist in undertaking damage assessment.
- Stand-by arrangements to ensure temporary electricity supply.

- Prior planning & necessary arrangements for tapping private power plants like those belonging to ICCL, NALCO, RSP during emergencies to ensure uninterrupted power supply to the Secretariat, SRC, GSDMA, Police Headquarters, All India Radio, Doordarshan, hospitals, medical colleges, Collector Control Rooms and other vital emergency response agencies.
- Inspection and repair of high tension lines /substations/transformers/poles etc.
- Ensure the public and other agencies are safeguarded from any hazards, which may have occurred because of damage to electricity distribution systems.
- Restore electricity to the affected area as quickly as possible.
- Replace / restore of damaged poles/ salvaging of conductors and insulators.

Fisheries:

Prevention Activities

- Registration of boats and fishermen.
- Building community awareness on weather phenomena and warning system especially on Do's and Don'ts on receipt of weather related warnings.
- Assist in providing life saving items like life jackets, hand radios, etc.
- Certifying the usability of all boats and notifying their carrying capacities.
- Capacity building of traditional fishermen and improvisation of traditional boats which can be used during emergencies.
- Train up young fishermen in search & rescue operation and hire their services during emergency

Response Activities

- Ensure warning dissemination to fishing communities living in vulnerable pockets.
- Responsible for mobilizing boats during emergencies and for payment of wages to boatmen hired during emergencies.
- Support in mobilization and additional deployment of boats during emergencies.
- Assess the losses of fisheries and aquaculture assets and the needs of persons and communities affected by emergency.

Recovery Activities

Provide compensations and advice to affected individuals, community.

Forest Department:

Prevention activities

- Promotion of shelter belt plantation
- Publishing for public knowledge details of forest cover, use of land under the forest department, the rate of depletion and its causes
- Keep saws (both power and manual) in working conditions
- Provision of seedling to the community and encouraging plantation activities, promoting nurseries for providing seedlings in case of destruction of trees during natural disasters

Transport Department:

Prevention Activities

- Listing of vehicles which can be used for emergency operation.
- Safety accreditation, enforcement and compliance
- Ensuring vehicles follow accepted safety standards.

- Build awareness on road safety and traffic rules through awareness campaign, use of different IEC strategies and training to school children.
- Ensure proper enforcement of safety regulations Response Activities.
- Requisition vehicles, trucks, and other means of transport to help in the emergency operations.
- Participate in post impact assessment of emergency situation
- Support in search, rescue and first aid.
- Cooperate and appropriation of relief materials.

Recovery Activities

- Provision of personal support services e.g. Counseling.
- Repair/restoration of infrastructure e.g. roads, bridges, public amenities.
- Supporting the GPs in development of storage and in playing a key role and in the coordination of management and distribution of relief and rehabilitation materials.
- The G.P. members to be trained to act as an effective interface between the community,
- NGOs, and other developmental organizations.
- Provide training so that the elected representatives can act as effective supportive agencies for reconstruction and recovery activities.

Panchayati Raj Institutions:

Preventive Activities

- Develop prevention/mitigation strategies for risk reduction at community level.
- Training of elected representatives on various aspects of disaster management
- Public awareness on various aspects of disaster management
- Organize mock drills
- Promote and support community-based disaster management plans.
- Support strengthening response mechanisms at the G.P. level (e.g., better communication, local storage, search & rescue equipments, etc.).
- Clean drainage channels, trimming of branches before cyclone season.
- Ensure alternative routes/means of communication for movement of relief materials and personnel to marooned areas or areas likely to be marooned.
- Assist all the government departments to plan and priorities prevention and preparedness activities while ensuring active community participation.

Response Activities

- Train up the G.P. Members and Support for timely and appropriate delivery of warning to the community.
- Clearance of blocked drains and roads, including tree removal in the villages.
- Construct alternative temporary roads to restore communication to the villages.
- PRIs to be a part of the damage survey and relief distribution teams to ensure popular participation.
- Operation emergency relief centers and emergency shelter.
- Sanitation, drinking water and medical aid arrangements.
- IEC activities for greater awareness regarding the role of trees and forests for protection during emergencies and also to minimize environmental impact which results owing to deforestation like climate change, soil erosion, etc.

- Increasing involvement of the community, NGOs and CBOs in plantation, protection and
- other forest protection, rejuvenation and restoration activities.
- Plan for reducing the incidence, and minimize the impact of forest fire.
- **Response Activities:**
- Assist in road clearance.
- Provision of tree cutting equipments
- Units for tree cutting and disposal to be put under the control of GSDMA, SRC, Collectorduring Level 1.
- Provision of building materials such as bamboos etc for construction of shelters

Recovery Activities:

Take up plantation to make good the damage caused to tree cover.

Information & Public Relations Department:

Prevention Activities

- Creation of public awareness regarding various types of disasters through media campaigns.
- Dissemination of information to public and others concerned regarding do's and don'ts of various disasters
- Regular Liasoning with the media

Response Activities

- Setting up of a control room to provide authentic information to public regarding impending
- emergencies
- Daily press briefings at fixed times at district level to provide official version
- Media report & feedback to field officials on a daily basis from Level 1 onwards
- Keep the public informed about the latest emergency situation (area affected, lives lost, etc).
- Keep the public informed about various post-disaster assistances and recovery programmers.

Revenue Department

- Co-ordination with Govt. of Gujarat Secretariat and Officers of Govt. of India
- Overall control & supervision
- Damage assessment, finalization of reports and declaration of Level 1/Level 2 disasters
- Mobilization of finance

Home Department:

- Requisition, deployment and providing necessary logistic support to the armed forces
- Provide maps for air dropping, etc.

Gujarat Disaster Rapid Action Force

Response

- To be trained and equipped as an elite force within the Police Department and have the capacity to immediately respond to any emergency.

- Unit to be equipped with life saving, search & rescue equipments, medical supplies, security arrangements, communication facilities and emergency rations and be self-sufficient.
- Trained in latest techniques of search, rescue and communication in collaboration with international agencies

6.8: Reporting

Media & information Management:

Taskforce Leader: District Information Officer

Note: As per the above format the Media taskforce of the district will prepare its taskforce action plan.

➤ Activation of the Plan

The District Disaster Response structure is activated on warning or occurrence of a disaster. Task Forces are activate on a specific request of the District Collector or according to pre-determined SOPs, as appropriate for the nature of the hazard or disaster. Activation can be:

- In anticipation of a District level disaster, or
- Occur in response to a specific event or problem in the district.

On activation, coordination of warning and response efforts will operate from the District Control Room and Information Centre (DCIC). The DCIC operations plan and SOPs are providing in Annexure.

To activate a task force, the Collector or designated Incident Commander will issue an activation order. This order will indicate:

- The nature of needs to be addressed
- The type of assistance to be provided
- The time limit within which assistance is needed
- The District or other contacts for the provision of the assistance
- Other Task Forces with which coordination should take place, and
- Financial resources available for task force operations.

Special powers are conferred on Incident Controller during disasters. The Principle organization leading each task force is responsible for alerting the appropriate authority when use of these special powers is required to accomplish warning, relief or recovery objectives give to a task force.

End of Emergency

The end of emergency shall be declared through an ALL CLEAR siren/message. The Incident Controller in consultation with the ICS GROUP leaders shall declare the same once the situation is totally controlled and normalcy is restore.

6.9: Humanitarian Relief and Assistance

Response defines provision for assistance/ intervention during and after emergency. Response plan includes clear Incident Command System (ICS) operated through emergency operation centers (EOCs) with effective 3C (Command, Control and Communication) mechanism. ICS covers early warning, search and rescue, humanitarian assistance, medical response, relief, temporary shelter, water and sanitation, law and order, animal care, public grievance, recovery and rehabilitation.

Specific Task Forces should be formed for Food distribution, drinking water management, medicine and health related facility, clothes distribution and other essential needs.

Helpline

Establish Information/ reception centers and setting up telephone helpline numbers for public utility. True information must be release by media to the concerned person and in case of rescue activity public can call on help line number. in that point of view help line must be activate at DEOC

Arrangement of VIP Visit:

It is important that immediately inform to VIPs and VVIPs on impending disasters and current situation during and after disasters. Appeals by VIPs can help in controlling rumors and chaos during the disaster. Visits by VIPs can lift the morale of those affected by the disaster as well as those who are involved in the response. Care should be taken that VIP visits do not interrupt rescue and life saving work. Security of VIPs will be additional responsibility of local police and Special Forces. It would be desirable to restrict media coverage of such visits, in which case the police will liaise with the government press officer to keep their number to minimum.

6.10: Responsibility Matrix should be evolve for each response measures with period and responsibility matrix for major stakeholders should be given in annexure

Responsibility matrix for response functions

TASKFORCE ACTION PLANS

Coordination and Planning:

Coordinate early warning, response and recovery operations.

Task Force Leader: Collector

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|---|--|------------------------|
| Before a Disaster | | |
| Establish a disaster management structure to the village level. (DDMC) | Links to State level and establishment of ICS structure | On-going |
| Develop disaster plans at all levels down to the village level. (DDMC) | | On-going |
| Hold regular meetings on disaster management including government, NGOs and private sectors. (DDMC) | | Quarterly |
| Continual training, including public awareness. (DDMA and Media Task Force) | Involvement of GSDMA | On-going |
| Check warning, communications and other systems (DDMC), including the use of drills | | On-going |
| Warning | | |
| Hold Crisis Management Committee (Collector) | Communications between Districts and with State Control Room | On receipt of warning. |
| Mobilize task forces at all levels (District, Taluka, village depending on disaster) (CMC, Telecommunications, Media Task Forces) | Communications systems and procedures | As decided by CMC. |
| Disseminate Information (CMC, Media Task Force) | | As decided. |
| Mobilize resources to be positioned near vulnerable points depending on type of disaster. | Telecommunications systems, plans | As decided. |
| Establish alternate communications system (Telecommunications Task Force) | | As decided. |

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|--|-------------------------------|
| Disaster | | |
| Start Search, Rescue and Evacuation activities. (CMC) | SAR Task Force operational | Immediately |
| Begin Collecting Information on extent of damage and areas affected. (CMC) | Assessment teams have communications and transport | Started in 4 hours |
| Start plan development and provide instructions on where Task Forces should go and what they should do. (CMC, Collector) | Information on damage and areas affected | Started in 4 hours |
| Mobilize outside resources (CMC) | Information on damage and needs | Started in 5 hours |
| Provide Public Information (CMC, Media Task Force) | | should be started in 6 hours) |
| 12 Hours | | |
| Begin regular reporting on actions taken and status by Task Forces. (Task Forces) | Operating communications system | Started at 12 hours |
| Reassess damage information, resources, needs and problem areas/activities. (CMC) | | Started at 12 hours |
| Begin rotation of staff (CMC) | | Start at 12 hours |
| Establish regular liaison with State Control Room. | Working communications systems | Start at 12 hours |
| Shift focus of efforts to relief. (CMC) | | Open |
| Restore key infrastructure (CMC through Public Works and other Task Forces) | | Before 48 hours |
| 48 hours | | |
| Continue review and reassessment of operations (CMC) | Information on operations | |
| Conduct broad damage assessment (CMC and Damage Assessment Task Force) | | |
| Establish Temporary Rehabilitation Plan (CMC) | | |
| Begin demobilization based on situation. (CMC) | | |
| Focus on creating a sense of normalcy. (CMC) | | Before 72 hours |
| 72 hours | | |
| Start Rehabilitation activities. (CMC) | Plan | |
| Conduct detailed survey of damage and needs. (CMC and Damage Assessment Task Force) | | |
| Begin regular reporting on operations | Information on operations | As early as possible |
| Restore all public and private sector services (CMC) | | As early as possible |
| Lessons Learned meeting. (CMC and others) | | After 2 weeks |
| Final Report/Case Study (CMC) | | After activities completed |

Warning:

Collection and dissemination of warnings of potential disasters

Task Force Leader: Resident Additional Collector

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|---|--|-------------------------------|
| Before a Disaster | | |
| Verify communication and warning systems are functioning – drills | | Every 15 days |
| Have warning messages prepared in advance. | | |
| Warning | | |
| Receive and dispatch warnings. (Task Force) | Coordinate with Telecommunications Task Force | As received. |
| Verify warnings received and understood. (Task Force) | | Within 1-2 hours of dispatch. |
| Independently confirm warnings if possible (Task Force) | | As time allows. |

Law and Order:

Assure the execution of all laws and maintenance of order in the area affected by the incident.

Task Force Leader: District Superintendent of Police

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|---|-----------------------|
| Before a Disaster | | |
| Evaluate expected disaster needs verses normal resources. (Task Force) | | Completed in 8 days. |
| Estimate personnel and resources needed for disasters. (Task Force) | Based on standard for number of security personnel per population depending on severity of disaster | Completed in one week |
| Planning and coordination with Revenue Dept. (Task Force) | | |
| Conduct drills, including public awareness raising. (Task Force) | Includes participation of Media Task Force | Every 45 days |

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|---|---|-----------------------|
| Warning | | |
| Verify communications system. (Wireless Inspector) | | 1-2 hours of warning |
| Alert police and other Task Force members (Superintendent of Police) | | 1-2 hours of warning |
| Implement duty distribution SOP for personnel and other resources. (Superintendent of Police) | | 1-2 hours of warning |
| Develop preliminary estimate of requirements to support other Task Forces. (Superintendent of Police) | | 1-2 hours of warning |
| Disaster | | |
| Get orders on deploying personnel from Control Room. (Superintendent of Police) | Operating communications system | Immediately |
| Determine status of staff and facilities. (Superintendent of Police) | Operating communications system | 1-2 hours of disaster |
| Deploy additional staff. (Superintendent of Police) | Transport available | 2-3 hours of disaster |
| Monitor resources. (Superintendent of Police) | | 1 hour of disaster |
| Establish VVIP unit. (Superintendent of Police) | | Immediately |
| Request additional resources, if needed. (Superintendent of Police) | Operating communications system | 4 hours of disaster |
| 12 hours | | |
| Institute regular reporting. (Task Force) | Operating communications systems | At start of period |
| Begin staff rotation. (Task Force) | | At start of period |
| Address crowd control problems. (Task Force) | | As needed |
| Implement anti-looting/anti-theft SOP. (Task Force) | | As needed |
| Establish rumor control. (Task Force) | Involves Collector, Media Task Force, NGOs, and local eminent persons | As needed |

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|--|----------------------------------|
| Provide information to public, e.g., road status. (Task Force) | Involves Control Room, Media Task Force, and Deputy Magistrate | As needed. |
| 48 hours | | |
| Implement a Force Management Plan (increase, reduction, redeployment, of forces). (Superintendent of Police) | | From start of period |
| Plan for return to normal ((Superintendent of Police, Task Force, Control Room) | | From 72 hours after the disaster |
| Conduct Lessons Learned Session (Task Force with input from other parties.) | | 1 week after the disaster |
| Final Report | | 2 weeks after the disaster |

Search and Rescue (including evacuation):

Provide human and material resources to support local evacuation, search and rescue efforts.

Task Force Leader: Deputy Commander (Civil Defense) /Chief Fire Officer

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|--|----------------|
| Before a Disaster | | |
| Risk assessment and vulnerability mapping (Task Force) | | Before warning |
| Develop inventory of personnel and material resources. (Task Force) | | Before warning |
| Training (Task Force) | Input from GSDMA and NDMA | Before warning |
| Establish public education program. (Task Force) | Media Task Force | Ongoing |
| Establish adequate communications system. (Task Force) | Additional equipment required. | |
| Drills. (Task Force). | | Before warning |
| Establish transport arrangements for likely SAR operations. (Task Force) | With Logistics Task Force | Before warning |
| Develop Rescue SOP. (Task Force) | | Before warning |
| Action and (Who Should Take It) | Requirements or Conditions to be met for the action | Timeframe |

| | | |
|---|---|-----------------------|
| | can occur. | |
| Warning | | |
| Mobilize Task Force and SAR teams. (Task Force) | | On warning |
| Verify equipment is ready. (Task Force) | | On team activation |
| Confirm transport is ready. (Task Force) | Logistics Task Force. | On warning |
| Undertake precautionary evacuation. (Task Force) | Logistics and Shelter Task Forces | As directed. |
| Re-deploy teams and resources, if safe. (Task Force) | Logistics Task Force | Based on conditions |
| Start public awareness patrols. (Task Force) | Media, Law and Order and Logistics Task Forces. | As required |
| | | |
| Disaster | | |
| Assure safety of staff. | | Immediately |
| Restore own communications. (Task Force) | | Immediately |
| Dispatch rescue/evacuation teams based on assessments. (Task Force) | Input from Control Room. | Immediately |
| Call for additional resources if needed. (Task Force) | Communications systems in operation | 3-4 hours of disaster |
| Provide reports on operations. (Task Force) | | Starting at 3-4 hours |
| Begin handling of deceased per SOP. (Task Force) | Various Revenue officers and Police involved. | Starting at 3-4 hours |
| 12 Hours | | |
| Begin staff rotation system. (Task Force) | | Starter at 12 hours |
| Begin specialized rescue (may begin earlier). (Task Force) | May require outside resources, coordination with Logistics Task Force | Started at 12 hours |
| Begin debris removal in cooperation with Public Works Task Force. | Focus on critical infrastructure. Liaison with Control Room | Start at 12 hours |
| Secure additional resources (e.g., fuel, personnel) for continued operations. (Task Force). | | Start at 12 hours. |
| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
| 48 hours | | |
| Demolish/Stabilize damaged buildings in cooperation with Public Works Task Force. | Logistics Task Force, workers, | Starting at 48 hours. |

| | | |
|--|------------|-----------------------------------|
| | equipment. | |
| Demobilization, reconditioning, repair and replace equipment and other resources. (Task Force) | | Based on nature of disaster. |
| Remain on stand-by for additional operations, particularly related to safety of recovery work. (Task Force). | | As needed. |
| 72 hours | | |
| Lessons Learned meeting. (Task Force and others) | | After 2 weeks. |
| Final Report. (Task Force) | | After major activities completed. |

Public Works:

Provide the personnel and resources needed to support local efforts to re-establish normally operating infrastructure.

Task Force Leader: Executive Engineer, Roads and Buildings

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|---|---|------------------------------------|
| Before a Disaster | | |
| Inventory of personnel, equipment and status of infrastructure. (Task force) | Link to UNDP project data based development. | One week before warning. |
| Identify critical infrastructure. (Task Force) | Need to define what is critical infrastructure. | Before warning. |
| Identify alternate transport routes and publish map. (Task Force) | | Before warning. |
| Plan for prioritized post-disaster inspection of infrastructure. (Task Force) | | |
| Establish and maintain a resources and staffing plan. (Task Force) | | |
| Plan to provide sanitation and other facilities for shelters. (Task Force) | | |
| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
| Warning | | |
| Establish Control Room. (Task Force) | | No later than 6 hours from warning |
| Mobilize Task Force and personnel. | Requires communications | No later than 6 hours from warning |

| | | |
|--|---|------------------------------------|
| Liase with District Control Room. (Task Force) | | No later than 6 hours from warning |
| Verify status and availability of equipment and re-deploy if appropriate and safe. (Task Force) | Coordination with Logistics Task Force and Control Room. | 24 hours from warning |
| Review plans. (Task Force) | | No later than 6 hours from warning |
| Disaster | | |
| Begin damage assessment and inspections. (Task Force) | Coordination with Damage Assessment Task Force. | Within 12 hours of disaster |
| Develop operations plan and communicate to Control Room. | | Within 12 hours of disaster |
| Mobilize and dispatch teams based on priorities. Teams will (1) repair, (2) replace, (3) Build temporary structures (e.g., rest facilities, shelters). | Coordination with Logistics, Water, Power Task Forces and Control Room. | Within 12 hours of disaster |
| Collaborate with other Task Forces. | | Continuous |
| 12 Hours | | |
| Begin staff rotation system and manpower planning. (Task Force) | | Starter at 12 hours |
| Mobilize additional resources based on expected duration of operations. (Task Force). | Coordination with Logistics Task Force, Contractors. May need additional funding. | Started at 12 hours |
| Assure safety. (Task Force) | | Start at 12 hours |
| Establish security arrangements. (Task Force) | Law and Order Task Force. | Start at 12 hours. |
| Provide public information on roads, access and infrastructure. (Media Task Force) | Coordination with Control Room | Start at 12 hours. |
| 48 hours | | |
| Start detailed survey. (Task Force) | In cooperation with Damage Assessment Task Force | Starting at 48 hours. |
| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
| Begin reporting on operations (Task Force) | | Starting at 3 days |
| Reconditioning, repair and replace equipment and other resources. (Task Force) | | Based on nature of disaster |
| Plan and start demobilization. (Task Force) | | Starting at 3 days |
| 72 hours | | |
| Develop long term restoration plan and start | | From 72 hours |

| | | |
|--|--|----------------------------------|
| activities. (Task Force) | | |
| Lessons Learned meeting. (Task Force and others) | | After 2 weeks |
| Final Report. (Task Force) | | After major activities completed |

Water Supply:

Assure the provision of sufficient potable water for human and animal consumption (priority), and water for industrial and agricultural uses as appropriate.

Task Force Leader: Executive Engineer, Gujarat Water Supply Board

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|---|---|--------------------------|
| Before a Disaster | | |
| Establish water availability, capacities, reliabilities and portability. (Task Force) | Standard of 20 liters of drinking water per person per day. | 3 months before warning. |
| Plan for alternate water delivery and storage (Task Force) | May need tankers, tanks, generator set. | 3 months before warning. |
| Secure new and additional equipment. (Task Force) | Requires funding. | |
| Secure extra stocks of chemicals, expendable supplies and equipment. (Task Force) | May require additional funding. | 3 months before warning. |
| Open Water Control Room in Monsoon. (Task Force) | | Done. |

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|---|---|
| Warning | | |
| Establish staff rotation and shift system. (Task Force) | | No later than 24 hours from warning |
| Provide public awareness on use of water. (Task Force) | Media Task Force. | No later than 24 hours from warning |
| Provide instructions to government and private sectors on protection of water supplies. (Task Force) | | No later than 24 hours from warning |
| Mobilize Task Force members | | 24 hours from warning. |
| Mobilize additional personnel and vehicles. (Logistics Task Force) | May be difficult to locate additional personnel locally. Recourse to outside or contractor sources may be required. | 24 hours from warning. |
| Coordinate activities with Power and other Task Forces. | Involves District Control Room. | 24 hours from warning. |
| Verify water source status and protection. (Task Force). | | No later than 24 hours from warning. |
| Disaster | | |
| Plan and prioritize supply of water to users. (Task Force) | Requires information on needs, damage and demand. | Completed by 24 hours into disaster. |
| Assess status and damage to water systems. (Task Force) | Coordination with Damage Assessment Task Force. | Completed by 24 hours into disaster. |
| Mobilize water tankers. (Task Force) | Coordination with Logistics Task Force and Control Room. | Started by 24 hours into disaster. |
| Repair/restore water systems, based on plan. (Task Force) | Coordination with Power and Logistics Task Forces. | Started by 24 hours into disaster. |
| Assure supply point/distribution security. (Law and Order Task Force) | | Started as soon as distributions begin. |
| Coordinate distribution of water and storage and provision of information on safe water use. (Task Force). | Coordination with Media Task Force and Control Room | Started by 24 hours into disaster. |
| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |

| 12 Hours | | |
|--|--------------------------------|----------------------------------|
| Establish temporary water systems. (Task Force) | | Up to 72 hours from disaster. |
| Move toward permanent water supply system. (Task Force) | | After 72 hours. |
| Complete long term recovery plan and needs. (Task Force) | | After 72 hours. |
| Begin reporting and documentation. (Task Force) | | From 48 hours. |
| Begin demobilization. (Task Force) | Coordinated with Control Room. | From 48 hours. |
| Lessons Learned meeting. (Task Force and others) | | After 2 weeks. |
| Final Report. (Task Force) | | After major activities completed |

Food and Relief Supplies:

Assure the provision of basic food and other relief needs in the affected communities.

Task Force Leader: District Supply Officer

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|---|---------------------|
| Before a Disaster | | |
| Establish procedures and standards. (Task Force) | Need standards. | On-going. |
| Maintain two months stock of essential supplies. (Task Force) | | Done. |
| Develop transportation plan. (Task Force) | In cooperation with Logistics Task Force. | Completed in 8 days |
| Develop list of NGOs. (Task Force) | | Done |
| Plan staffing for disaster. (Task Force) | | Done |
| Identify locations, which can be isolated and increase stock as needed. (Task Force) | | On-going. |
| Identify food preparation locations. (Task Force) | | Done |

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|---|---|--|
| Warning | | |
| Pass on warning. (Task Force) | | Within 12 hours of receipt of warning. |
| Alert NGOs to prepare food. (Task Force) | Contact with NGOs. | Within 12 hours of receipt of warning. |
| Verify stock levels and make distribution plan. (Task Force) | Possible cooperation with Logistics Task Force. | Within 48 hours of receipt of warning. |
| Alert transport contractors to prepare for transport. (Task Force) | Coordinate with Logistics Task Force. | Within 5 hours of receipt of warning. |
| Mobilize staff. (Task Force) | | Within 6 hours of receipt of warning. |
| Disaster | | |
| Receive and respond to instructions from Control Room. (Task Force) | | As received. |
| Monitor conditions of stocks and facilities. (Task Force) | Need for communications. | |
| Develop distribution plan. (Task Force) | Need information on needs and locations. | As requested by Control Room. |
| Order food packets and provide supplies as needed. (Task Force) | Coordination with Logistics Task Force. | Per distribution plan. |
| Establish relief supplies receptions centers. (Task Force) | Coordinate with Control Room and Logistics Task Force. | As required. |
| 12 Hours | | |
| Start distribution operations. (Task Force) | In coordination with Logistics and Shelter Task Forces. | At beginning of period. |
| Formalize reporting, communications and monitoring. (Task Force) | | Completed by 48 hours. |
| Start staff rotation system. (Task Force) | | At beginning of period. |
| Begin mobilizing and managing additional supplies. | Coordination with Logistics and, Control Room. | Underway in 48 hours. |
| Establish security for all sites. (Law and Order Task Force) | | At beginning of period. |
| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |

| | | |
|--|--|---------------------------------|
| Begin public announcement of distribution plan and standards. (Media Task Force) | | Underway in 48 hours. |
| 48 Hours | | |
| Shift to normal operations. (Task Force) | | Within 1 week. |
| Reconcile receipts and distribution records. (Task Force) | | Within 30 days. |
| Continue providing relief to special areas/populations. (Task Force) | | For 15 days from the disaster |
| 72 Hours | | |
| Restore Public Distribution System. (Task Force) | | From 1 week after the disaster. |
| Lessons Learned meeting. | | Within 14 days |

Power:

Provide resources to re-establish normal power supplies and systems in affected communities

Task Force Leader: Superintending Engineer, Gujarat Electricity Board

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|--|------------|
| Before a Disaster and Warning Phases | | |
| Develop inventory of current status of power system and resources. (Gujarat Electricity Board – GEB) | | |
| Establish minimum stock levels and procure necessary additional stocks. (GEB) | | |
| Conduct monthly meetings. (GEB) | | On-going |
| Develop contact lists. (GEB) | | |
| Conduct informal hazard and risk assessment. (GEB) | | Completed. |
| Develop disaster plan. (GEB) | | |
| Disaster | | |
| Assess impact according to SOP. (GEB) | Coordinate with Control Room and Damage Assessment Task Force. | |
| Prioritize response actions. (GEB) | Need to establish priorities. | |
| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
| Collect more information. (GEB) | | |
| Mobilize additional resources. (GEB) | Coordination with Control Room and other | |

| | | |
|--|--|-------------------------|
| | Task Forces. | |
| Check for unforeseen contingencies. | | |
| 12 Hours | | |
| Revise plans based on feedback and assessments. (GEB) | | Continuous |
| Monitor status of actions. (GEB) | | Continuous |
| Begin staff rotation plan. (GEB) | | At beginning of period. |
| Disseminate public information. (Media Task Force) | | At beginning of period. |
| Secure support for staff (food, lodging) from NGOs. (GEB) | | |
| Assure security as needed. (Law and Order Task Force) | Coordinate with Control Room. | |
| Establish constant communications on needs, requirements and resources with Control Room and GEB/HQ. | | |
| 48 Hours | | |
| Look for improvements in efforts. (GEB) | | |
| Reinforce central coordination. (GEB) | | |
| Conduct regular coordination meetings with other actors. (GEB) | | |
| Begin formal documentation of efforts. (GEB) | | |
| 72 Hours | | |
| Review shift plan for safety. (GEB) | | |
| Plan for return to normal, including additional security if needed. (GEB) | Involvement of Law and Order Task Force. | |

Public Health and Sanitation

(Including first aid and all medical care):

Provide personnel and resources to address pressing public health problems and re-establish normal health care systems

Task Force Leader: Chief District Health Officer

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|---|------------------|
| Before a Disaster | | |
| Develop inventory of personnel, resources and facilities. (Task Force) | | 1 week. |
| Training. (Task Force) | Coordination with GSDMA | 6 months. |
| Establish Control Room. | | Completed. |
| Prepare for specific diseases by season (e.g., | | Completed. |

| | | |
|---|---|-------------------------------|
| monsoon) | | |
| Establish Epidemiological Reporting System (ERS). (Task Force) | | Completed. |
| Identify disease vulnerable areas. (CDHO) | | Completed. |
| Improve public awareness. (Media Task Force) | | |
| Warning | | |
| Send out warning to health facilities. (Task Force) | | As received. |
| Mobilize health teams to possible disaster areas. (Task Force) | In coordination with Control Room. | As needed. |
| Activate Task Force for whole district. (CDHO) | | On warning. |
| Disaster | | |
| Begin first aid efforts. (Task Force) | | Within 1 hour of disaster. |
| Establish status of health care system. (Task Force) | Requires communications. | Within 6 hours of disaster. |
| Begin referral of injured to upper-level facilities. (Task Force) | | Within 1 hour of disaster. |
| Implement SOP for management of deceased. (Task Force) | Involves cooperation with Law and Order and SAR Task Force. | Within 1 hour of disaster. |
| Coordinate efforts with Control Room and other Task Forces. | | Within 2-3 hours of disaster. |

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|---|--|-----------------------------|
| 12 Hours | | |
| Begin to call in outside resources. (Task Force) | Involves Telecommunications and Logistics Task Forces and Control Room. | Within 3 hours. |
| Establish temporary medical facilities where needed. (Task Force) | Coordination with Public Works, Power, Water, and Law and Order Task Forces. | Within 24 hours. |
| Expand surveillance of health status. (Task Force) | | Within 24 hours. |
| Establish shift system for staff. (Task Force) | | At beginning of period. |
| Visit and review health status in shelters. (Task Force) | | Within 24 hours. |
| Develop health care system recovery plan. (Task Force) | In coordination with Control Room. | 2-3 hours. |
| 48 Hours | | |
| Establish formal health care system reporting. (Task Force) | | At beginning of period. |
| Start solid waste and vector control management SOP. (Task Force) | | At beginning of period. |
| Start waste water management SOP. (Task Force) | | At beginning of period. |
| Focus health status surveillance on children 0 to 5 years. | | Implements in one week. |
| Establish public awareness and IEC efforts. (Task Force and Media Task Force) | | At beginning of period. |
| 72 Hours | | |
| Develop demobilization plan. | | By beginning of period. |
| Lessons Learned meeting. | | Within 14 days of disaster. |
| Final Report | | Within 14 days of disaster. |

Animal Health and Welfare:

Provision of health and other care to animals affected by a disaster

Task Force Leader: Deputy Director, Veterinary and Animal Husbandry

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|--|------------------------|
| Before a Disaster | | |
| Update animal list. List of staff & training for disposal of carcass. (Task Force) | | Done. |
| Stock medical supplies and vaccines. (Task Force) | | Done |
| Warning | | |
| Alert staff (by phone). (Task Force) | | As warnings received. |
| Distribute supplies to vulnerable areas. (Task Force) | | During warning period. |
| Contact Control Room. (Task Force) | | As required. |
| Disaster | | |
| Remove and destroy carcasses. (Task Force) | Need fuel and logistics. | As soon as possible. |
| Treat injured animals. (Task Force) | | As soon as possible. |
| Issue certification of death. (Task Force) | For insurance purposes. | Within 48 hours. |
| Call in staff from other districts as needed. (Task Force) | | As needed. |
| Assist local authorities in survey of damage and reconciliation of records. | | As required. |
| 48 Hours and Beyond | | |
| Assist local authorities in providing fodder as needed. | | As required. |
| Collect feedback. (Task Force) | | |
| Final Report. (Task Force) | | In 15 days. |

Shelter:

Provide materials and supplies to assure temporary shelter for disaster-affected populations.

Task Force Leader: District Primary Education Officer

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|--|----------------------------|
| Before a Disaster | | |
| Develop shelter operating procedures. (Task Force) | | |
| Develop inventory of shelters (location, capacity,). (Task Force) | SDRN updating, project inventory. | On going |
| Provide information to other Task Forces on location of shelters. (Task Force) | Logistics, Water, Power, SAR, Food/Relief Supplies Task Forces and Control Room | |
| Training for shelter managers. (Task Force) | Need training module. | |
| Warning | | |
| Mobilize shelter managers. (Task Force) | | Within 6 hours of warning. |
| Review shelter locations for operating status. (Task Force) | Communications needed. | Within 6 hours of warning. |
| Open shelters as instructed. | Coordination with Control Room. | Within 6 hours of warning. |
| Mobilize additional resources for shelters and camps. (Task Force) | Cooperation with Logistics, Food and Relief Supplies, Water and Power Task Forces. | Within 6 hours of warning. |
| Provide public announcements on locations and status of shelters. (Media Task Force) | | Within 6 hours of warning. |
| Disaster | | |
| Beginning logging-in of occupants. (Shelter managers). | | Immediately. |
| Report on status of shelters. (Task Force) | To Control Room. | As needed. |
| Plan for prioritization of shelter use. (Task Force) | Coordination with evacuation operations and Control Room. | Immediately. |
| Coordinate with other Task Forces on water, power, food, health, security. (Task Forces) | | Immediately. |

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|---|--|---|
| Provide support and assistance to occupants. (Task Force) | Liaise with Animal Task Force on management of animal and with Health Task Force on health care. | |
| 12 Hours | | |
| Continue operations. (Task Force) | | Continuously |
| Monitor shelter status and movement of people. (Task Force) | | Continuously |
| Mobilize additional resources. (Task Force) | Coordinate with Control Room and Logistics Task Force. | Continuous. |
| 48 Hours and Beyond | | |
| Begin Demobilization as appropriate. (Task Force) | | |
| Begin reconditioning/repairs to shelters. (Task Force) | In cooperation with Public Works Task Force. | As needed. |
| Lessons Learned session. (Task Force) | Involvement of other Task Forces and evacuees. | 14 days after completion of operations. |
| Final Report. (Task Force) | | 1 month after completion of activities. |

Logistics:

Provide air, water and land transport for evacuation and for the storage and delivery of relief supplies in coordination with other Task Forces and competent authorities.

Task Force Leader: District Development Officer

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|---|--------------------------------------|
| Before a Disaster | | |
| Conduct resource inventory (air/land/water transport and storage; inside and outside district.). (Task Force) | | 1 month. |
| Establish deployment requirements, procedures and alternate options. (Task Force) | | 1 month. |
| Conduct drills. (Task Force) | | 1 month. |
| Coordinate with other Task Forces. | Work through Control Room. | As needed. |
| Warning | | |
| Alert and mobilize Task Force members. (Task Force) | | Within 1 hour of receiving warning. |
| Mobilize transport and other resources for action on short notice depending on disaster expected. (Task Force) | Coordination with Control Room | Within 2-3 hours of warning. |
| Liaise with Control Room and SAR, Shelter and Food/Relief Supplies Task Forces. | | Within 1 hour of receiving warning. |
| Review plan and determine if outside resources are needed. (Task Force) | | Within 6 hours of receiving warning. |
| Plan for logistics based depending on nature of disaster. (Task Force) | Coordinate with Control Room and Food and Relief Supplies Task Force. | As needed. |
| Disaster | | |
| Take action based on instruction from Control Room. (Task Force) | | Within 2 hours of receiving warning. |

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|--|---|--------------------------------------|
| Continually review requirements and resources. (Task Force) | | Continuous. |
| Develop operations plan. (Task Force) | Coordinate with Control Room and Food and Relief Supplies Task Force. | Within 2 hours of receiving warning. |
| Strengthen liaison with Control Room and key Task Forces. (Task Force) | | Within 2 hours of receiving warning. |
| Verify quality of service. (Task Force) | Requires set standard of service and information on operations. | Daily. |
| 12 Hours | | |
| Respond to increased demand for logistics. (Task Force) | | Continuous. |
| Begin rotation of staff. (Task Force) | | At start of period. |
| Establish logistics bases as needed. (Task Force) | Coordinate with Control Room and Food and Relief Supplies Task Force. | Continuous. |
| Review plans and communicate with other Task Forces. (Task Force) | | Continuous. |
| Begin regular reporting and documentation. (Task Force) | | At start of period. |
| 48 Hours | | |
| Reassess needs and requirements. (Task Force) | | Continuous. |
| Begin demobilization as appropriate. (Task Force) | | |
| 72 Hours | | |
| Lessons Learned meeting. | Include Shelter, Food and Relief Supplies in meeting. | Within 14 days of disaster. |
| Final Report | | Within 14 days of disaster. |

Damage Assessment and Survey:

Collect and analyze data on the impact of the disaster, develop estimates of resource needs and relief plans, and compile reports on the disaster as required for District and State authorities and other parties as appropriate.

Task Force Leader: Resident Additional Collector

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|---|---|---|
| Before a Disaster | | |
| Establish assessment procedures and forms. (Task Force) | Collaboration with GSDMA and COR. | |
| Compile baseline data. (Task Force) | Collaboration with GSDMA project. | |
| Establish assessment groups and teams. (Task Force) | | |
| Develop an assessment coordination plan. (Coordination and Planning Task Force) | | |
| Develop a communications plan. (Task Force) | In cooperation with Telecommunications Task Force | |
| Warning | | |
| Mobilize Task Force. (Task Force) | | Within 6 hours of warning. |
| Review Plan. (Task Force) | | Within 6 hours of warning. |
| Consider pre-disaster impact assessment. (Task Force) | Based on expected nature of disaster. | Within 6 hours of warning. |
| Active village-level assessment teams. (Task Force) | | Within 6 hours of warning. |
| Disaster | | |
| Consider safety of assessment teams. (Task Force) | | Immediately. |
| Start planning for assessment. (Task Force) | | As initial impact information is available. |
| Begin initial assessment procedures. (Task Force) | | When conditions allow. |
| Communicate assessment plans to Control Room. (Task Force) | | Once initial plan is developed. |
| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |

| 12 Hours | | |
|--|--|-----------------------------|
| Publicly disseminate assessment plans and reports. (Media Task Force) | | As available. |
| Initiate continual up-dating of assessment information. (Task Force) | Coordinate with Coordination and Planning Task Force. | |
| Initiate continual up-dating of assessment plans. (Task Force) | Coordinate with Coordination and Planning Task Force. | |
| Coordinate with other Task Forces. (Task Force) | | |
| Begin staff rotation and secure more staff as needed. | | At beginning of period. |
| 48 Hours | | |
| Prepare detailed damage, losses, needs assessment and long term recovery plans. (Task Force) | Coordinate with other Task Forces. | 3-5 days after disaster. |
| Coordination of requirements, plans and activities. | Working through Control Room and Coordination and Planning Task Force. | Continuous. |
| 72 Hours | | |
| Lessons Learned meeting. | Include Shelter, Food and Relief Supplies in meeting. | Within 14 days of disaster. |

Telecommunications:

Coordinate and assure operation of all communications systems (e.g., radio, TV, phones, wireless) required to support early warning or post-disaster operations.

Task Force Leader: Resident Additional Collector

| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
|---|---|------------------|
| Before a Disaster | | |
| Develop telecommunications inventory and SOPs. (Task Force) | Telecommunications training. | |
| Coordinate with other Task Forces. (Task Force) | | |
| Identify sites of vulnerable system components (e.g., switches). (Task Force) | | |
| Ensure redundancy in communications systems. (Task Force) | May require close liaison with private sector providers. | |
| Action and (Who Should Take It) | Requirements or Conditions to be met for the action can occur. | Timeframe |
| Training in communication skills and methods. (Task Force) | | |

| Warning | | |
|--|---|---|
| Verify communication systems are working. (Task Force) | | Within 24 hours of warning. |
| Mobilize Task Force. | | Within 24 hours of warning. |
| Repair down systems and establish alternate communications systems. (Task Force) | Coordinate with Control Room. | Within 24 hours of warning. |
| Mobilize resources. (Task Force) | | Within 24 hours of warning. |
| Facilitate telecom demands of other Task Force members. (Task Force) | | |
| Disaster | | |
| Check status of communications systems. (Task Force) | | In 2-3 hours. |
| Identify damage to systems. (Task Force) | | First information available in 2-3 hours. |
| Contact Control Room and other Task Forces on telecom needs. (Task Force) | | In 2-3 hours. |
| Start repairs. (Task Force) | | In 2 hours. |
| 12 Hours | | |
| Mobilize outside resources (may start earlier). (Task Force) | | Continuous. |
| Complete plans for repairs and re-establishment of systems. (Task Force) | Coordinate with Control Room. | Continuous. |
| Liaise with Control Room and other Task Forces. | | |
| Start shift system for staff. (Task Force) | | At beginning of period. |
| 48 Hours and Beyond | | |
| Continue to assist other Task Forces. (Task Force) | | |
| Continue repair work. (Task Force) | | |
| Begin demobilization. (Task Force) | | |
| Lessons Learned meeting. | Include Shelter, Food and Relief Supplies | Within 14 days of disaster. |
| Final Report. (Task Force) | Involve other Task Forces. | Within one months of end of operations. |

Chapter-7

Recovery Measures

Recovery is defined as decisions and actions taken after a disaster with a view to “restoring or improving life and assets of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk. Recovery and reconstruction (R&R) or comprehensive rehabilitation is the last step in cycle of disaster management. In addition, this is the phase of new cycle, where the opportunity to reconstruction and rehabilitation should be utilized for building a better and more safe and resilient society. Strategies for restoring physical infrastructure and lifeline services may be:

Build Back Better:

This ensures greater resilience, preparedness; and minimum loss in an event of future disaster.

Participatory Planning:

Infrastructure improvement measures need to be balanced with, or at least be in line with, the social and cultural needs and preferences of beneficiaries

Coordination:

A plan of recovery will help better coordination between various development agencies.

Damage Assessment and Needs Assessment shall be the basis of recovery planning

Various Sectors for recovery process may be

- Essential Services- Power, Water, Communication, Transport, Sanitation, Health
- Infrastructural: Housing, Public Building and Roads
- Livelihood: Employment , Agriculture, Cottage Industry, Shops and Establishments

Basic services such as power, water supply, sanitation, wastewater disposal etc. should be restored in shortest possible time. Alternate arrangement of water supply, temporary sanitation facilities can be sought with help of special agencies.

Special arrangements for provision of essential services should be ensured. It can include creating temporary infrastructure for storage and distribution of water supply, running tankers, power supply and sanitation facilities

7.1: Damage Loss Assessment

Restoration of Essential Services and Infrastructure

Following tables are to be filled after an event of disaster

Table No. 7.1
Power

| Item/ Services | No. of unit damage d | No of villages affected | Populat ion affected | Recovery measures | Implementi ng agency | Tentativ e Duration (Months) | Budget |
|-------------------|-------------------------------|-------------------------------|----------------------------|----------------------|-------------------------|---------------------------------------|--------|
| Feeder | | | | | | | |
| Transformers | | | | | | | |
| HT Lines | | | | | | | |
| LT Lines | | | | | | | |
| Electric Poles | | | | | | | |

Note: To be planned after initial damage assessment by departments

Table No. 7.1
Health

| Item/ Services | PHC (village name) | CHC | Sub Centre | Drug Store | Recovery Measure s | Implementin g agency | Tentative Duration (Months) | Budget |
|--|---------------------------|-----|---------------|---------------|--------------------------|-------------------------|-----------------------------------|--------|
| No of buildings damaged | | | | | | | | |
| No of health centres inaccessibl e | | | | | | | | |
| Refrigerati on and other vital equipment for storage | | | | | | | | |
| Drugs and medicines perished | (Locatio n and qty) | | | | | | | |
| No of Ambulance damaged | | | | | | | | |

Note: To be planned after initial damage assessment by departments

Table No. 7.3
Social

People in need of immediate rehabilitation including psychosocial support (due to disaster)

| Village | Men | Women | Children | Total | Recovery Measures | Implementing agency | Tentative Duration (Months) | Budget |
|----------------|------------|--------------|-----------------|--------------|--------------------------|----------------------------|------------------------------------|---------------|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Table No. : 7.4
Water Supply

| Type | Village | No. of unit affected | Faliya/ Population affected | Recovery Measures | Implementing agency | Tentative Duration (Months) | Budget |
|------------------------|----------------|-----------------------------|------------------------------------|--------------------------|----------------------------|------------------------------------|---------------|
| Well | | | | | | | |
| Bore wells | | | | | | | |
| Pond | | | | | | | |
| Water Supply Disrupted | | | | | | | |
| Contamination | | | | | | | |
| ESR damaged | | | | | | | |
| GLR Damaged | | | | | | | |
| Sump damaged | | | | | | | |
| Pipe lines damaged | | | | | | | |
| Stand post damaged | | | | | | | |
| Cattle trough damaged | | | | | | | |
| Hand pump | | | | | | | |

Table No. 7.5
Road and Transport

| Road damage | Location | Severity | Km | Recovery Measures | Implementing agency | Tentative Duration (Months) | Budget |
|------------------|----------|----------|----|-------------------|---------------------|-----------------------------|--------|
| Panchayat | | | | | | | |
| State Roads | | | | | | | |
| National Highway | | | | | | | |
| Nagar Palika | | | | | | | |

| Item/ services | Village /Ward | Population | Alternate road/route | Recovery Measures | Implementing Agency | Tentative Duration (Months) | Budget |
|-------------------|---------------|------------|----------------------|-------------------|---------------------|-----------------------------|--------|
| Road Cut off | | | | | | | |
| Rail Connectivity | | | | | | | |

Table No. : 7.6
Communication

| Type | Office/Tower Damaged | Villages affected | Recovery Measures | Implementing Agency | Tentative Duration (Months) | Budget |
|-----------------------|----------------------------|-------------------|-------------------|---------------------|-----------------------------|--------|
| Landline connectivity | (No. of unit and location) | | | | | |
| Mobile connectivity | | | | | | |
| Wireless Tower | | | | | | |
| Radio | | | | | | |

Table No. : 7.7

Food Supply

List of village affected by disruption in food supply

| Type | No. of godown damage | Type of grains perished (Ton) | Qty of grain perished (Ton) | Qty of grain at risk (Ton) | Recovery Measures | Implementing Agency | Tentative Duration (Months) | Budget |
|--------------|----------------------|-------------------------------|-----------------------------|----------------------------|-------------------|---------------------|-----------------------------|--------|
| Civil Supply | | | | | | | | |
| APMC | | | | | | | | |
| Other | | | | | | | | |

**Table No. :7.8
Housing**

| Partial Damage | | Fully Damaged / Collapsed | | Recovery Measures | Prog. / Scheme | Implementing Agency | Tentative Duration (Months) | Budget |
|----------------|-------|---------------------------|-------|-------------------|----------------|---------------------|-----------------------------|--------|
| Kucha | Pucca | Kucha | Pucca | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**Table No. :7.9
Public Utilities**

| Public Buildings | Partial damage (No. of units) | Fully Damaged / Collapsed (No. of Unit) | Recovery Measures | Prog/ Scheme | Implementing Agency | Tentative Duration (Months) | Budget |
|---------------------------------|-------------------------------|---|-------------------|--------------|---------------------|-----------------------------|--------|
| Panchayat | | | | | | | |
| Educational Buildings | | | | | | | |
| Aanganwadi | | | | | | | |
| Hospitals | | | | | | | |
| Office Buildings | | | | | | | |
| Market | | | | | | | |
| Police station | | | | | | | |
| Community Halls/ Function plots | | | | | | | |

**Table No. : 7.10
Restoration of Livelihood
Provisioning of Employment**

| Occupational category | No. of workers | Implementing Agency | Tentative Duration (Months) | Budget |
|-------------------------------------|----------------|---------------------|-----------------------------|--------|
| Skilled laborers | | | | |
| Unskilled and Agricultural laborers | | | | |
| Small and marginal | | | | |

| | | | | |
|----------------------|--|--|--|--|
| farmers | | | | |
| Construction workers | | | | |
| Salt pan workers | | | | |
| Fisher folk | | | | |
| Weavers | | | | |
| Other artisans | | | | |

**Table No. : 7.11
Land Improvement**

| Land erosion / siltation (Hectare) | HHs affected | Recovery Measures | Implementing Agency | Tentative Duration (Months) | Budget |
|---|---------------------|--------------------------|----------------------------|------------------------------------|---------------|
| | | | | | |
| | | | | | |

**Table No.:7. 12
Agricultural**

| Crop failure (Hectare) | HHs affected | Recovery Measures | Implementing Agency | Tentative Duration (Months) | Budget |
|-------------------------------|---------------------|--------------------------|----------------------------|------------------------------------|---------------|
| | | | | | |
| | | | | | |

Table No. : 7.13

Nonfarm livelihood

| Cottage Industry | Extent of damage/disruption | | Recovery Measures | Implementing Agency | Tentative Duration (Months) | Budget |
|-------------------------|---|--|--------------------------|----------------------------|------------------------------------|---------------|
| | Tools and equipment (Specify no. and type) | Goods and material (Specify type and qty) | | | | |
| Handloom | | | | | | |
| Pottery | | | | | | |
| Food Processing | | | | | | |
| Diamond sorting etc | | | | | | |
| Printing/ Dying | | | | | | |
| Other | | | | | | |

Table No. :7.15
Shops and establishment

| Extent of damage/disruption | | | Recover y Measure s | Implementin g Agency | Tentativ e Duratio n (Months) | Budge t |
|---|--|---|------------------------------|-------------------------|---|------------|
| Buildin g (No. and location) | Tools and equipment s (Specify no. and type) | Goods and materials (Specif y type and qty) | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

7.2: Long-term recovery program

Disaster recovery typically occurs in phases, with initial efforts dedicated to helping those affected meet immediate needs for housing, food and water. As homes and businesses are repaired, people return to work and communities continue with cleanup and rebuilding efforts. Many government agencies, voluntary organizations, and the private sector cooperate to provide assistance and support.

Some individuals, families and communities that are especially hard hit by a disaster may need more time and specialized assistance to recover, and a more formalized structure to support them. Specialized assistance may be needed to address unique needs that are not satisfied by routine disaster assistance programs. It may also be required for very complex restoration or rebuilding challenges. Community recovery addresses these ongoing needs by taking a holistic, long-term view of critical recovery needs, and coordinating the mobilization of resources at the, and community levels.

Oftentimes, committees, task forces or other means of collaboration formed with the goals of developing specific plans for Community recovery, identifying and addressing unmet or specialized needs of individuals and families, locating funding sources, and providing coordination of the many sources of help that may be available to assist. Some collaboration focuses on the community level and relies on the expertise of community planning and economic development professionals. Other collaborations focus on individual and family recovery and are coordinated by social service and volunteer groups. All such efforts hope to lay the groundwork for wise decisions about the appropriate use of resources and rebuilding efforts.

Under the National Response Framework, Emergency Support Function (ESF) #14 Community Recovery coordinates the resources of federal departments and agencies to support the long-term recovery of States and communities, and to reduce or eliminate risk from future incidents. While consideration of long-term recovery is imbedded in the routine administration of the disaster assistance and mitigation programs, some incidents, due to the severity of the impacts and the complexity of the recovery, will require considerable interagency coordination and technical support.

ESF #14 efforts are driven by State/local priorities, focusing on permanent restoration of infrastructure, housing, and the local economy. When activated, ESF #14 provides the coordination mechanisms for the Federal government to:

- Assess the social and economic consequences in the impacted area and coordinate Federal efforts to address Community recovery issues resulting from an Incident of National Significance;
- Advise on the Community recovery implications of response activities, the transition from response to recovery in field operations, and facilitate recovery decision-making across ESFs;
- Work with State, local, and tribal governments; NGOs; and private-sector organizations to conduct comprehensive market disruption and loss analysis and develop a forward looking market-based comprehensive long-term recovery plan for the affected community;
- Identify appropriate Federal programs and agencies to support implementation of the Community recovery plan, ensure coordination, and identify gaps in resources available;
- Avoid duplication of assistance, coordinate to the extent possible program application processes and planning requirements to streamline assistance, and identify and coordinate resolution of policy and program issues; and
- Determine/identify responsibilities for recovery activities, and provide a vehicle to maintain continuity in program delivery among Federal departments and agencies, and with State, local, and tribal governments and other involved parties, to ensure follow-through of recovery and hazard mitigation efforts.

Grievances Redressed System

Grievance redressed is important aspect in the context of providing need based assistance to affected communities with transparency and accountability. It also ensures the protection of their rights and entitlements for disaster response services.

Grievance Redressed System

| No. | Key Person/ Establishment | Contact No | Address |
|-----|---------------------------|--------------|---|
| 1 | DEOC/ RAC | 02626-223332 | Collector Office-District Emergency Operation centre |
| 2 | DDO | 02626-222141 | District Panchayat |
| 3 | Police | 02626-222700 | S.P.Office, Surat |

Matrix form of Sort term and long-term recovery programme

Disaster recovery has three distinct but interrelated meanings. First, it is a goal that involves the restoration of normal community activities that were disrupted by disaster impacts – in most people’s minds, exactly as they were before the disaster struck. Second, it is a phase in the emergency management cycle that begins with stabilization of the disaster conditions (the end of the emergency response phase) and ends when the community has returned to its normal routines. Third, it is a process by which the community achieves the goal normal life.

7.3: SHORT TERM AND LONG TERM RECOVERY TIME TABLE

Recovery and Reconstruction

| Activity/Action | Estimate of Duration | Estimate of Duration |
|---|-----------------------------|-----------------------------|
| Period | Short-Term | Long-Term |
| Warning | Hours to a few days | |
| Response/Operations | Ongoing | Ongoing |
| Emergency | 1-15 days | 1-60 days |
| Preparation of damage assessment | 1-4 days | 4-8 days |
| Disaster declaration (state or federal) | 1-10 days | 0-30 days |
| Federal/State mitigation Strategy | 1-15 days | 15-30 days |
| Recovery | 7-150 days | 150-365 days |
| Temporary building moratorium | <=30 days | <=60 days |
| Letter of intent to submit HM Grant | <=60 days | <=60 days |
| Short-term reconstruction | <= 1 year | 200-365 days |
| State mitigation | <= 180 days | 365 days |
| HMGP proposal | 70-200 days | 200-365 days |
| Long-term reconstruction | 100 days to 5 years | 5 to 10 years |

Chapter-8

Financial Arrangement

To ensure the long-term sustenance and permanency of the organization funds would be generated and deployed on an ongoing basis. There are different ways to raise the fund in the State as described below

8.1: State Disaster Response Fund

To carry out Emergency Response & Relief activities after any disaster the State Disaster Response Fund is making available to Commissioner of Relief, Revenue Department under which the Central Government will share 75% and the Govt. of Gujarat has to share 25% as per the recommendation of 13th Finance Commission.

8.2: State Budget

The Authority, submit to the State Government for approval a budget in the prescribed form for the next financial year, showing the estimated receipts and expenditure, and the sums which would be required from the State Government during that financial year. As per the provisions of The Gujarat State Disaster Management Act, 2003 the Authority may accept grants, subventions, donations and gifts from the Central or State Government or a local authority or any individual or body, whether incorporated or not.

8.3: District Planning Fund

For preparedness, mitigation, capacity building and recovery fund can be raised from MP or MLA grant as received for developmental work .also from departmentally arrangement.

8.4: Partnerships

There are projects/schemes in which funding can be done by a public sector authority and a private party in partnership (also called on PPP mode funding). In this State Govt. along with Private organizations and with Central Govt., share their part.

8.5: Centrally Sponsored scheme

| Name | Purpose | Finance Arrangements | Activities that can be take under scheme | Nodal Agency |
|--|-------------------|-----------------------------|---|---------------------|
| NDRF (NCCF) | Relief Assistance | 100% Central Govt | Cash and kind relief | Revenue Department |
| SDRF (CRF) | Relief Assistance | 75% Centre, 25% State | Cash and kind relief | Revenue Department |
| Planning Commission (13 Finance commission) Year 2011-15 | Capacity Building | 100% Centre | Trainings Awareness Generation IEC material Mock drills | Revenue Department |

8.6: Disaster Insurance

Risk Transfer / Risk Distribution

Risk transfer or risk distribution refers to compensation cover against loss of life or assets in case of any disaster event. Insurance and reinsurance mechanisms and products against natural and manmade disasters have rapidly evolved in last decade. According to UNISDR, “Insurance is a well-known form of risk transfer, where coverage of a risk is obtained from an insurer in exchange for ongoing premiums paid to the insurer. Risk transfer can occur informally within family and community networks where there are reciprocal expectations of mutual aid by means of gifts or credit, as well as formally, where governments, insurers, multi-lateral banks and other large risk-bearing entities establish mechanisms to help cope with losses in major events. Such mechanisms include insurance and re-insurance contracts, catastrophe bonds, contingent credit facilities and reserve funds, where the costs are covered by premiums, investor contributions, interest rates and past savings. Linkages with government insurance schemes like Rashtriya Swasthya Bima Yojana, Aam Admi Bima Yojana can be extensively taken up for risk transfer. Linkages can be done for teaching staff and children with existing insurance schemes. Livestock insurance can also be taken up through animal husbandry department. Coverage of crop insurance should be increased specifically for small and marginal farmers. Weather/rainfall insurance can also be explored with various existing schemes. *(DDMC should draw up their own risk transfer/distribution framework and action plan in this regard)*

Chapter-9

Maintenance of Plan

9.1: Annual Plan Maintenance

DDMC shall compile its learning and proposed new mechanisms for improvement of the capacity to deal with disasters.

Schedule for updation of plan

Every year as a part of pre monsoon DDMC will update plan in the month of May-June and revise in the month of October-November every year

Plan Maintenance is a dynamic process of updating pal on a periodic basis. It is based on learning and from the last disaster (As per under Mention)and mockdrill exercise.

| Major Learning based on experience of last disasters and mock drills (on planning/implementation/compliance) | Revisions adopted/proposed | Remarks |
|---|-----------------------------------|--|
| Flood | May-June | Highly affected area of the district |
| Chemical disaster | Jan, Feb | Due to MAH unit (Under Factory act-1947) |
| Tsunami | June, Oct | Due to coastal belt |
| Cyclone | May-June and Oct.Nov. | Due to Coastline |

Prepared By DDMC Members, Surat

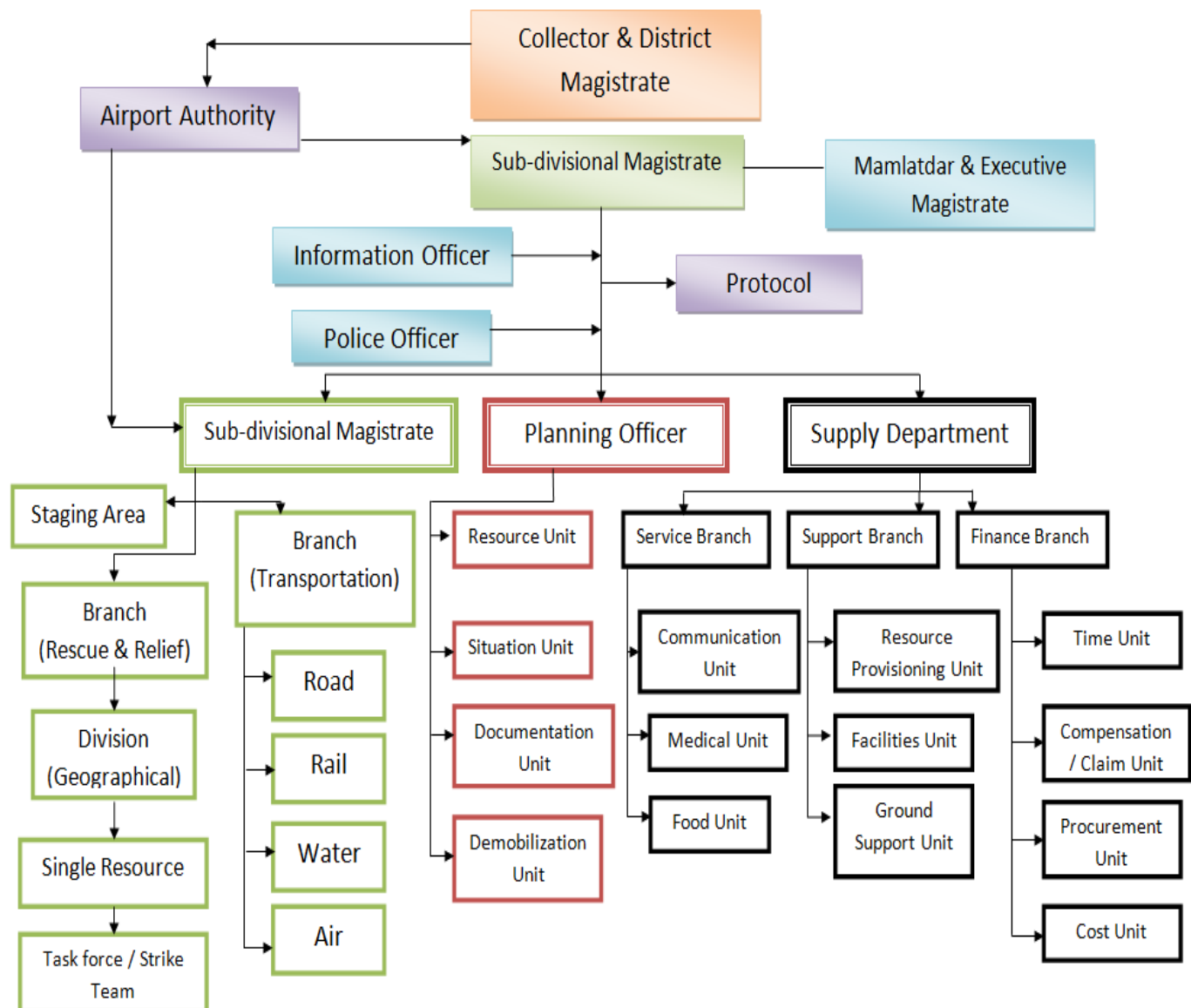
Certified/ Approved By _____ Collector Surat

Emergency Contact Details:

| Sr. No. | Sub No. | Sr. | EOCs/ Control rooms | Contact Numbers |
|---------|---------|-----|---|---|
| 1 | | | State EOC | 079-23251902 079-23251914 079-23251900 079-23251900 Dy.Col. 079-23251907 Mam. |
| 2 | | | Relief Commissioner | 9978406109 (M) 23251509 |
| 3 | | | Director of Relief | 9978406087 (M) 23251612 |
| 4. | | | CEO,GSDMA Jt. CEO, GSDMA | 9978405600 (M) 23259502 9978407003 (M) 23259451 |
| 5 | | | SURAT District EOC | 0261- 2663200 (fax-2664800) |
| 6 | | | TASKFORCE Operation Room | |
| | 6.1 | | Warning and Communications | 9978405220 |
| | 6.2 | | Law & Order | 0261-2463976 0261-2463978 |
| | 6.3 | | Search & Rescue | 2414195/962423751 101, 102, 972434508 |
| | 6.4 | | Public Works | R&B-1 02612474162 9824107339 R&B-2 02612471097 |
| | 6.5 | | Shelter | 0261-2667007 |
| | 6.6 | | Water Supply | 0261-2782088 |
| | 6.7 | | Food & Relief supplies | 0261-2465114, 8758401001 |
| | 6.8 | | Public Health & Sanitation | 0261-2425751,2425751-55 |
| | 6.9 | | Power | 0261-2804491/99 |
| | 6.10 | | Logistics | 2422160-2425751-55 |
| | 6.11 | | Animal Health & Welfare | 0261-2425751 |
| | 6.12 | | Damage assessment/Survey | 0261-2472211,2463819 9978405220 |
| | 6.13 | | Media/public Information | 0261-2465541,2474423 |
| | 6.14 | | Planning and coordination | 0261-2472471, 2471121 |
| | 6.15 | | Finance/ Administration/ protocol | 0261-2472211,2463819 9978405220 |
| | 6.16 | | madadnish niyamakshree matstoudhyog | 0261 2463946 9879335412 |
| 7 | 6.17 | | Transport and migration management | 9426560574 |

| | | |
|----------|--------------------|----------------------|
| 7 | Taluka EOCs | |
| 7.1 | Bardoli | 02622-220024 |
| 7.2 | Choryasi | 0261-2663800 |
| 7.3 | Kamrej | 02621-252078 |
| 7.4 | Mahuva | 02625-255721/255366 |
| 7.5 | Mandvi | 02623-221023 |
| 7.6 | Mangrol | 02629-220227 |
| 7.7 | Olpad | 02621-221245 |
| 7.8 | Palsana | 02622-264228 |
| 7.9 | Surat City | 0261-2650335/2650337 |
| 7.10 | Umarpada | 02629-253399 |

District Level Response Structure (IRS)



Disaster Specific Action Plan

1) Flood Action Plan

Surat district is situated on the banks of the Arabian Sea. After that water is synchronized to the Gulf of Khambhat. Geographically, Surat is located in the west of the Dakden peninsula and the west is Kharland area. Sahayadri's direct slope is found in the lower part of the district, which is safe. The main nallahs of Surat district are found in the Tapi, Kim, Mindhola, and Ambika river. Length of Tapi river is approximately 725 km. The main branches of the Tapi river are Purna, Vagur, Girer Bori, Anar, Panjar, Gumar and Gomai. The last 51 km of the river is under the influence of the sea. On Tapi river, there are two major dams Kakrapar Weir and Ukai Dam built.

In the monsoon season, there is heavy rainfall recorded in Surat district over time. In the study of meteorological data, due to heavy winds of Tapi river water, the rainfall in the catchment area of Tapi river is likely to cause heavy flood even in low rainfall. Due to heavy rainfall, it is also flooded.

General Terminology Used in Weather Bulletins

(A) Intensity of Rainfall Terminology Used

| Sr. No. | Rain in mm”(24 hrs) | Terminology |
|----------------|----------------------------|------------------------|
| 1 | 0.1.mm to 2.4 mm” | Very light rain |
| 2 | 2.5 mm to 7.5 mm” | Light rain |
| 3 | 7.6 mm to 34.9 mm” | Light to Moderate rain |
| 4 | 35.0 mm to 64.9 mm” | Moderate rain |
| 5 | 65.0 mm to 124.9mm” | Heavy rain |
| 6 | Exceeding 125 mm” | Very Heavy rain |

(B) Special distribution of weather phenomenon

| Sr. No. | Percentage Area Covered | Terminology Used |
|----------------|--------------------------------|-------------------------|
| 1 | 1 to 25 | Isolated |
| 2 | 26 to 50 | Few Places |
| 3 | 51 to 75 | Many Places |
| 4 | 76 to 100 | At most Places |

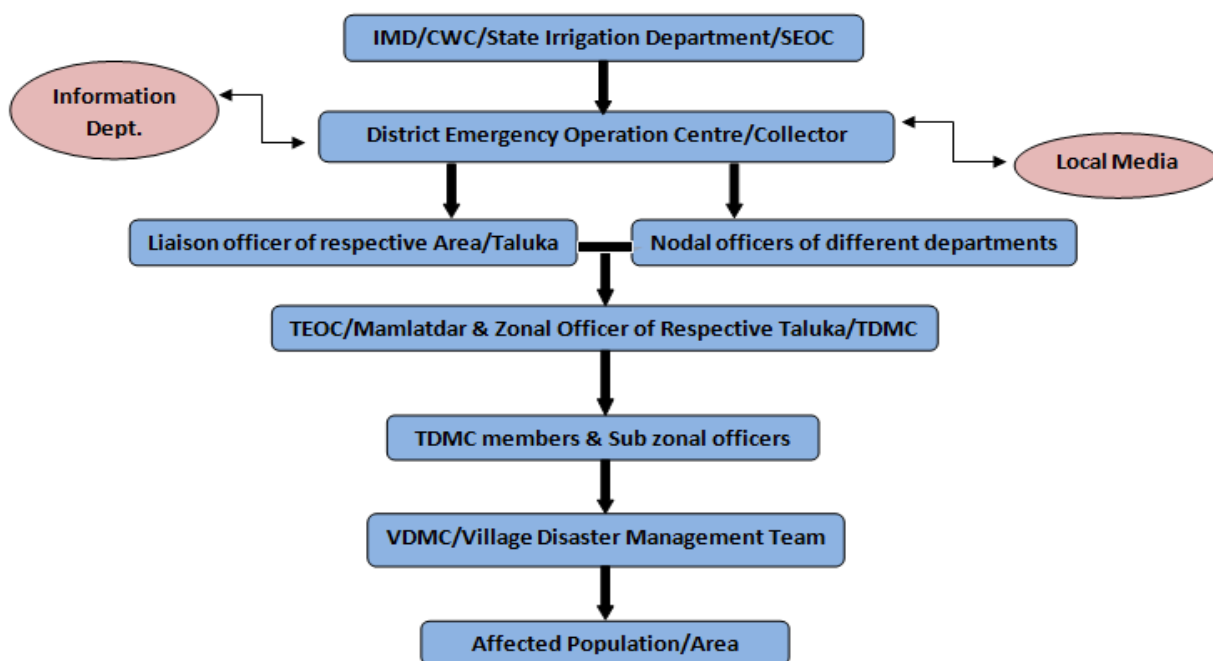
(C) Emergency Situation

1. When water level is rising above the danger of H.F.L
2. When intensity of rainfall is above 65 mm /hr
3. When breaches are anticipated and may lead to disaster.
4. When water levels are rising alarmingly.

(D) Evacuation

| Sr. No. | Signal | Activity |
|---------|--------------|----------------------|
| 1 | White Signal | Alert condition |
| 2 | Blue Signal | Ready for Evacuation |
| 3 | Red Signal | Immediate Evacuation |

Early Warning & Communication Flow

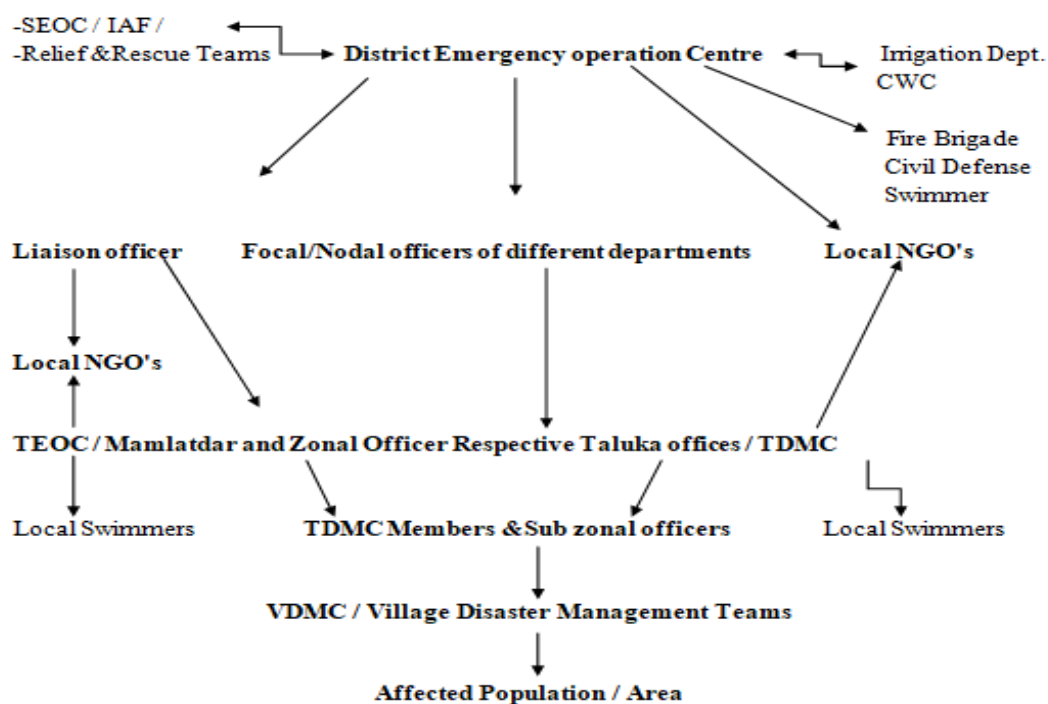


Response

- ❖ As disaster declares the response managed and monitored through DEOC,
- ❖ All the concerned DDMC members along with the Liaison officers and response group members are intimated to respond to the situation as described in the below chart.
- ❖ As per the impact of disaster it will manage through DEOC / TEOC and if needed support of State or Central departments will be requested to deal with the situation.

- ❖ DM Plan of Irrigation Department, Flood memorandum, TDMP, CDMP and other DM Plan will be referred as an when it is required to respond in case of floods.
- ❖ The list of trained swimmers is incorporated with Annexures.
- ❖ Equipments for flood rescue like boats Life rings, Life buoys, Dewatering pumps etc. details are incorporated in Annexures.
- ❖ Database of SDRN and IDRN (Manually and Electronic) will be referred for flood response.

Response Chart



List of Dams at Surat District and their Danger Level

| Sr. No. | Name Of Dam | Danger Level |
|---------|--------------|-----------------|
| 1. | Ukai Dam | 345.00 (Feet) |
| 2. | Kakrapar Dam | 176.00 (Feet) |
| 3. | Aamli Dam | 115.80 (Meters) |
| 4. | Laakhi Dam | 74.10 (Meters) |
| 5. | Hop Pool | 9.50 (Meters) |
| 6. | Couze Way | 6.00 (Meters) |
| 7. | Hathnur Dam | 213.00 (Meters) |

List of villages likely to be affected by following rivers

| Sr. No. | River | Taluka | Affected Villages | Population |
|----------------|--------------|---------------|--------------------------|-------------------|
| 1 | Tapi | Olpad | Pinjarat | 5173 |
| | | | Tena | 1119 |
| | | | Barbodhan | 2496 |
| | | | Tunda | 595 |
| | | | Dabhaari | 535 |
| | | | Aadmor | 1076 |
| | | | Lawaachha | 2218 |
| | | | Bhandut | 1191 |
| | | | Kudiyana | 1740 |
| | | Bardoli | Kadod | 13398 |
| | | | Haripura | 1714 |
| | | | Waaghecha Kadod | 897 |
| | | Choryasi | Kawas | 6500 |
| | | | Limla | 3683 |
| | | | Malgama | 960 |
| | | | Bharthana Kosad | 7171 |
| | | | Bhensaan | 2195 |
| | | | Bhatha | 5122 |
| | | | Bhatpor | 3449 |
| | | | Ichchhapor | 12097 |
| | | | Saniya Hemad | 3964 |

| | | | | |
|--|--|--------|--------------|-------|
| | | | Kumbhariya | 5850 |
| | | | Saroli | 3268 |
| | | Kamrej | Kamrej | 11329 |
| | | | Bhairav | 1004 |
| | | | Derod | 1666 |
| | | | Kholwad | 10687 |
| | | | Kathor | 13258 |
| | | | Choryasi | 1143 |
| | | | Aamboli | 4186 |
| | | | Ghala | 4713 |
| | | | Karjan | 2529 |
| | | | Dhoran Pardi | 2803 |
| | | | Navipardi | 3961 |
| | | | Kholeswar | 1474 |
| | | | Dungra | 2744 |
| | | | Dhatwa | 1382 |
| | | | Machhi | 462 |
| | | | Timba | 2418 |
| | | | Antroli | 1088 |
| | | | Tharoli | 186 |
| | | | Velanja | 2804 |
| | | | Abrama | 3041 |
| | | | Bhada | 1842 |

| | | | | |
|---|----------|----------|------------|------|
| | | | Walak | 1644 |
| | | | Laskana | 8452 |
| | | | Aakhakhol | 541 |
| | | | Jiyor | 204 |
| | | | Shaampura | 3560 |
| | | | Dethli | 267 |
| | | | | |
| 2 | Mindhola | Palsana | Kanaav | 1609 |
| | | | Malekpor | 2531 |
| | | | Amalsadi | 1610 |
| | | | Maakhinga | 874 |
| | | | Vanjhodiya | 1176 |
| | | Bardoli | Madhi | 7650 |
| | | | Surali | 9286 |
| | | | Karchaka | 1033 |
| | | | Ten | 6251 |
| | | Choryasi | Saamrod | 1060 |
| | | | Kachholi | 2149 |
| | | | Lajpor | 7920 |
| | | | Popda | 1017 |
| | | | Kapthela | 3312 |
| | | | | |
| 3 | Kim | Mangrol | Luwara | 2322 |

| | | | | |
|--|--|--|--------------|------|
| | | | Kantwa | 2246 |
| | | | Wansoli | 839 |
| | | | Sava | 774 |
| | | | Velachha | 2138 |
| | | | Kathwada | 1040 |
| | | | Hathoda | 3735 |
| | | | Mota Borsara | 1871 |
| | | | Walesa | 568 |
| | | | Moti Naroli | 1060 |
| | | | Palod | 2558 |
| | | | Kothwa | 1478 |
| | | | Shenthi | 791 |
| | | | Panetha | 584 |
| | | | Siyalaj | 1711 |
| | | | Kosadi | 3328 |
| | | | Simodara | 1676 |
| | | | Vadoli | 732 |
| | | | Aasarma | 941 |
| | | | Ranakpor | 1004 |
| | | | Limbada | 2434 |
| | | | Mangrol | 5354 |
| | | | Aamandera | 900 |
| | | | Gijram | 1814 |

| | | | | |
|---|--------|---------|-------------|-------|
| | | | Aankdod | 1355 |
| | | Olpad | Kadrama | 1695 |
| | | | Umrachhi | 991 |
| | | | Vadoli | 1862 |
| | | | Kim | 18638 |
| | | | Kimamali | 1067 |
| | | | Kathodara | 3628 |
| | | | Anita | 1110 |
| | | | Bolav | 1223 |
| | | | | |
| 4 | Bhukhi | Mangrol | Vaankal | 5629 |
| | | | | |
| 5 | Purna | Mahuva | Mahuva | 5775 |
| | | | Ranat | 1209 |
| | | | Ondach | 2728 |
| | | | Amroli | 539 |
| | | | Shekhpur | 4689 |
| | | | Vadiya | 1372 |
| | | | Miyapur | 1220 |
| | | | Budhleshwar | 664 |
| | | | Kavitha | 1201 |
| | | | Sewasan | 270 |
| | | | Aamchak | 1423 |

| | | | | |
|---|-----------------------|---------|------------|-------|
| | | Bardoli | Chhitra | 603 |
| | | | Kharad | 81 |
| | | | | |
| 6 | Ambika | Mahuva | Valvada | 5233 |
| | | | Haladwa | 3242 |
| | | | Mahuvariya | 5567 |
| | | | Umraa | 5641 |
| | | | Vaheval | 7595 |
| | | | Kaankariya | 1332 |
| | | | | |
| 7 | Sena Creek (Khadi) | Olpad | Gothan | 3035 |
| | | | Umraa | 2233 |
| | | | Delad | 4028 |
| | | | Sayan | 15324 |
| | | | Saadhiyer | 3207 |
| | | | Achharan | 1025 |
| | | | Gola | 832 |
| | | | Olpad | 15898 |
| | | | Haathisa | 597 |
| | | | | |
| 8 | Low Lying Areas | Olpad | Siwaan | 2134 |
| | | | Vaswaari | 949 |
| | | | Atodara | 1755 |

| | | | | |
|--|--|--|----------|------|
| | | | Karmala | 957 |
| | | | Kosam | 1412 |
| | | | Sonsak | 1128 |
| | | | Balkas | 846 |
| | | | Saroli | 1946 |
| | | | Kudsad | 9407 |
| | | | Dihen | 2636 |
| | | | Ariyana | 1419 |
| | | | Kunkani | 856 |
| | | | Obhala | 430 |
| | | | Kaachhab | 385 |
| | | | Bhaadol | 1373 |
| | | | Takrama | 1687 |
| | | | Maadhar | 607 |
| | | | Morthan | 948 |

2) Industrial/Chemical Action Plan

Manufacture, storage and use of hazardous substances pose a serious risk to industry, people in the neighbourhood and the environment. Accidental release of hazardous chemicals, which are flammable, explosive or toxic, may lead to emergencies. Depending upon the nature of the substance and magnitude of the release, emergency could either be confined within the industry (On-site Emergency) or could transgress the boundary of the industry and affect the public in the neighbourhood in which case it would be an Off-site Emergency. The Off-site emergency Plan is a document detailing how emergencies relating to a possible major accident involving a hazardous chemical in an industry, which may have ramifications outside the boundary walls of that industry will be dealt with.

Under the chairmanship of DM & Collector the response will be managed and monitored

from DEOC and Off site control room, department wise response mechanism and response structure lied with Offsite emergency plan prepared by Director Industrial Health and Safety and will be referred the same at the time of chemical disasters which includes industrial fire, oil spill etc.

Response Activities

- ❖ As Chemical disaster declares the response will be managed and monitored through DEOC / OCR
- ❖ All concerned DCG members with Liaison officers and response group members are intimated to respond to the situation as described in the below chart.
- ❖ As per the impact of disaster it will manage through DEOC / OCR / TEOC and if needed support of State or Central departments will be requested to deal with the situation.
- ❖ Offsite Emergency Plan, TDMP, CDMP and other Industries DM Plan will be referred as and when required to respond in case of chemical disaster.
- ❖ The list of Expert persons, indicative list of medicines and equipments, trained first responders for Search; Rescue & Medicare etc. are available with offsite emergency plan.
- ❖ Database of SDRN and IDRN (Manually and Electronic) will be referred if needed in response.

3) Earthquake Action Plan

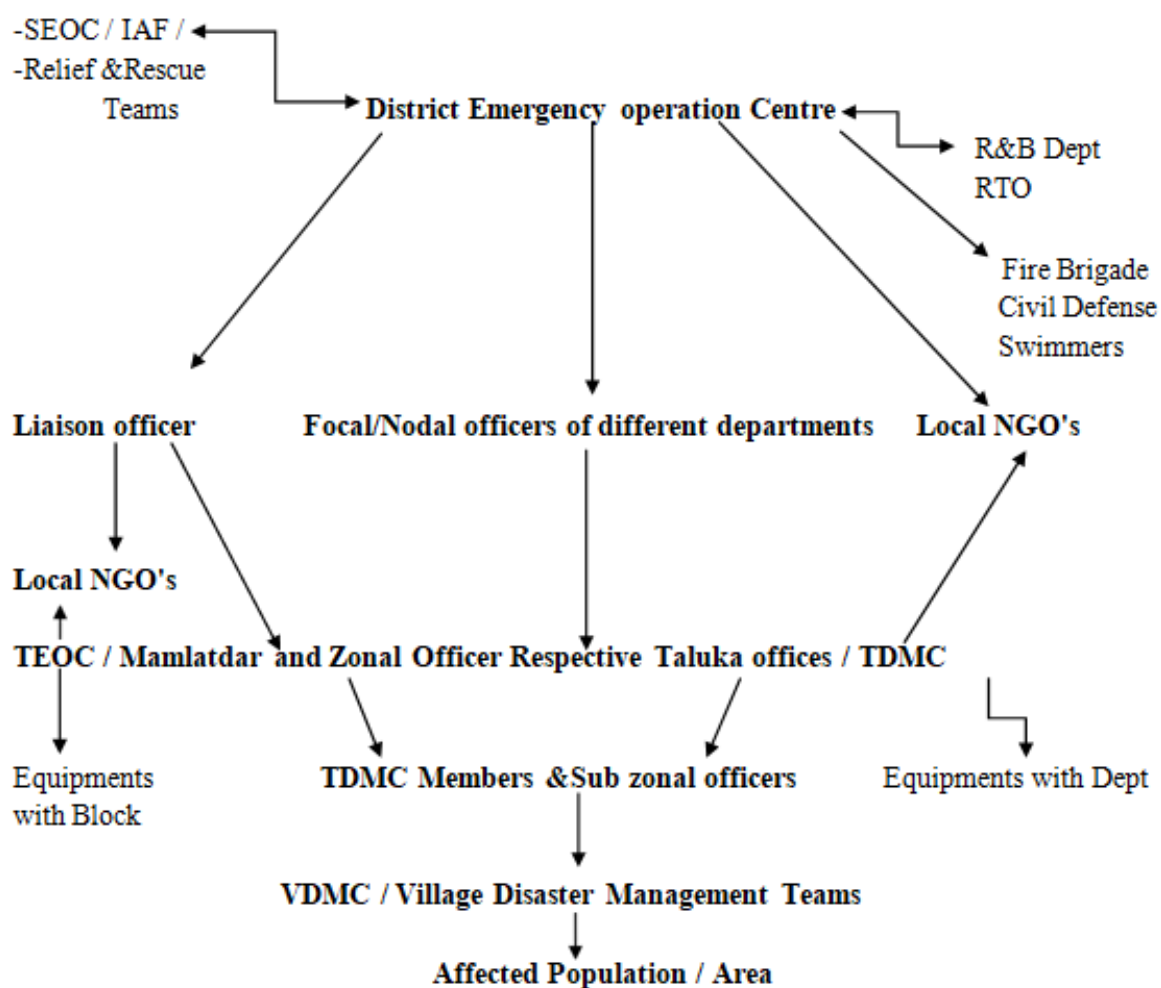
According to the Bureau of Indian Standards, the town falls under seismic zone-III, in a scale of I to V (in order of increasing vulnerability to earthquakes).

The response mechanism would be the same as describes with the general response mechanism chapter, here the focus will be on well-populated areas in particular city areas and the District disaster response group.

- ❖ As disaster declares the response managed and monitored through DEOC.
- ❖ All concerned DDMC members with Liaison officers and response group members are intimated to respond the situation as described in the below chart.
- ❖ As per the impact of disaster it will manage through DEOC / TEOC and if needed support of State or Central departments will be requested to deal with the situation.
- ❖ Departmental DM Plan of all concerned departments, TDMP, CDMP and other DM Plan will be referred as an when it is required to respond in case of Earth quake.
- ❖ Database of SDRN and IDRN (Manually and Electronic) will be referred for flood response.

| ZONES | MAGNITUDE |
|------------|---|
| Zone - V | Greater than 7 |
| Zone - IV | Greater than 5, Less than or equal to 7 |
| Zone - III | Greater than 4, Less than or equal to 5 |
| Zone - II | Greater than 3, Less than or equal to 4 |
| Zone - I | Less than 3 |

Response Chart



Temporary Shelter

- ❖ For temporary shifting of affected persons, temporary shelter is used during the effect of earth quake.
- ❖ In city area, in case of devastating earth quake the temporary shelters available with DEOC (Tarpaulin sheet with iron blades) can be used, tents with forest and other department and caterers can also be used as temporary shelter.
- ❖ None damaged / safe government establishments can also be used as per the directions of chairperson.

4) Cyclone Action Plan

Surat district has a coastal length of 83.00 km. There are 26 villages in this marine area. Surat district has experienced heavy rains over a period of time. But there was no effect of hurricanes in the near future. Based on the historical record, there was a major storm in 1782. And a large number of human casualties were casualties. The Tapi bat sank in the hurricane at that time, resulting in the death of 2000 people who died on the bat and lost in the sea. Another hurricane struck Surat in 1800 and 1872. The impact of hurricanes is low in Surat. But precautions are necessary.

All the talukas of the district with major wards of the city are the possible site which can be affected during the heavy wind flow. Majorly the flood action plan will be referred at the time of cyclone.

5) Oil Spills and Mine Disasters Action Plan

State level action plan / department specific action plan / Industries specific action plan will be referred at the time of the above stated Disasters. The response mechanism would be the same as describes with the general response mechanism chapter.

- ❖ As disaster declares the response managed and monitored through DEOC.
- ❖ All concerned DDMC members with Liaison officers and response group members are intimated to respond the situation.
- ❖ As per the impact of disaster it will manage through DEOC / TEOC and if needed support of State or Central departments will be requested to deal with the situation.
- ❖ Database of SDRN and IDRN (Manually and Electronic) will be referred for response.

6) Tsunami Action Plan

The possibility of the above stated disaster is very less with respect to Surat District, but if the effect of it is felt by the nearby district / state, will accordingly respond as per the State directions.

7) Heat Wave Action Plan

The seasons of Surat district is broadly divided into summer, winter and monsoon with fluctuation in temperature. Due to proximity to sea, it is predominately humid and hot and represents as sub-humid of tropical climate. Summer months (March, April, and May) are relatively hot with temperatures ranging from 37.78 to 44.44°C. The maximum humidity is around 80%. Winters are not very cold and the climate is pleasant during the monsoon.

Criteria for Heat Wave

(As defined by Indian Meteorological Department)

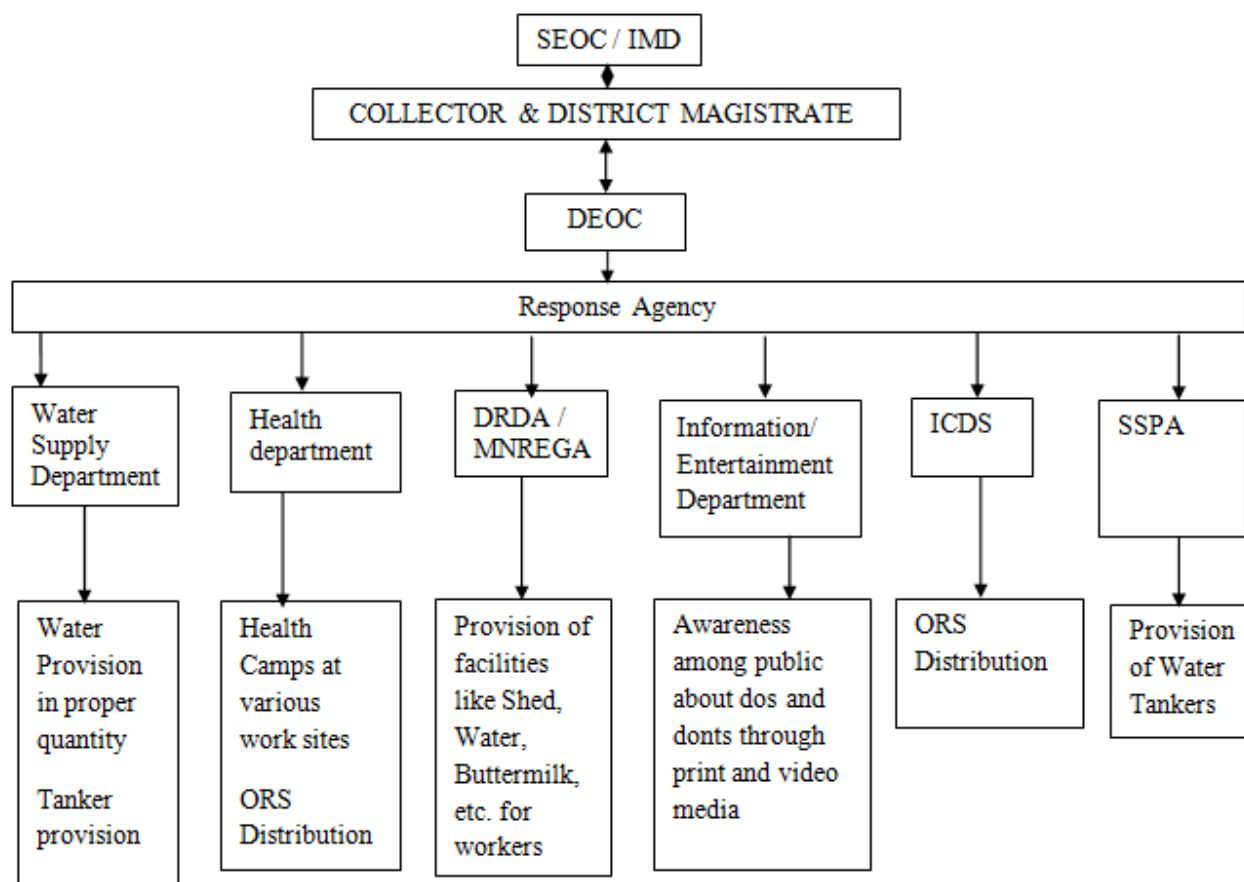
Heat wave need not be considered till maximum temperature of a station reaches at least 40° C for Plains and atleast 30° C for Hilly regions.

- A. When normal maximum temperature of a station is less than or equal to 40°C
- Heat Wave Departure from normal is 5° C to 6° C
 - Severe Heat Wave Departure from normal is 7° C or more
- B. When normal maximum temperature of a station is more than 40°C
- Heat Wave Departure from normal is 4° C to 5° C
 - Severe Heat Wave Departure from normal is 6° C or more
- C. When actual maximum temperature remains 45° C or more irrespective of normal maximum temperature
- Heat wave should be declared.

Colour Signals for Heat Alert

The DDMA will issue heat alerts, based on thresholds determined, as an additional means of communication by using the following colour signal system:

| | | |
|--------------|------------------------|------------------|
| Yellow Alert | Hot Day Advisory | 41.1°C - 43°C |
| Orange Alert | Heat Alert Day | 43.1°C – 44.9 °C |
| Red Alert | Extreme Heat Alert Day | ≥ 45°C |



The above table represents the responsibilities of different Departments for various provisions that will help public reduce the impact on their health. In addition to that, DO's and DONT's for reducing the impact of Heat Wave, has been issued by Gujarat State Disaster Management Authority, Govt. of Gujarat.

SOP (Roles and Responsibilities)

The Present plan document identifies the roles and Responsibilities of the organization, in key identified sector. Taskforces have constituted for taking response measures in sectors. Action plan has been prepared for each taskforce which covers their roles & responsibilities in development of incident / emergency. It is expected that each taskforce shall develop the standard operating procedures for specific disaster / emergency. District collector has to ensure that all the members acquire knowledge and skills to perform their assigned roles.

A) District Magistrate & Collector

Being chairperson and Incident commander of the district for Disaster Management, he will be in overall command & emergency action to control a kind of emergency effectively for the district.

The Chair person has to perform the role as follows:

- Preparation and updating of District Disaster Management Plan for the District.
- To ensure that everyone is able to perform the role involved in emergency service effectively.
- To activate and maintain the District Control Room round the clock. To provide essential facilities with the District control room.
- To access emergency situation and have to declare the emergency, call and direct the emergency services to respond the emergency by providing reinforcement and support by pooling the resources from the District and if required from the State.
- The arrangement for rescue, evacuation, shelter, food, water, clothing, and transportation to affected area, announcement to the public.
- To keep inform to the higher authority time to time to declare the withdrawal or termination of emergency.
- Rehabilitation, Restoration, Cleaning, etc. on post emergency actions.
- To submit the reports on emergency. To conduct the meetings.
- To conduct the mock drill.

B) Municipal Commissioner

On receiving the information from the Collector, the Surat Municipal Corporation will help by making arrangements like:

- To receive casualties during an emergency in the corporation run Hospitals.
- To mobilize the firefighting equipments for Civil Hospital.
- To check for expected effected effects to the citizens of Surat and to take actions accordingly.
- To make schools available for shelters.
- To blow the city sirens for alarming the public.

- To inform the concerned department heads such as water and sewage supply, electricity section, hospitals, education department etc. about their DCPC plans and their functions and preparedness during emergencies. To rehabilitate evacuated city population after the emergency.

C) District Development Officer

Being a responsible person of Taluka / District the following actions are to be given prime importance for emergency purpose.

- To ensure the different authorities, agencies, organization persons, as specified their role, should participate immediately during emergency in district pocket area.
- To advice and guide different panchayat department and local representatives for mitigate and preventives aspects of disaster management and coordinative approach at the time of emergency.
- To participate in the meeting, mock drill & training.
- To prepare own detailed action plan to ensure effective control on emergency.
- To liaison & co-ordination with chair person, Central Control Room, emergency services, organization, agencies, agencies person etc.
- To support all other duties as specified by District Collector.

D) Police Department

Another authority who gets the first information on incident / accident is police department. The following actions are to be carried out by police department.

- To access the situation and report immediately.
- To maintain the law and order during the emergency to control the traffic and control the affected area.
- To protect the life of people, inside, outside as well as road movers.
- To protect the property & environment & public announcement.
- Evacuation, rehabilitation, shelter & transportation work during the emergency as per prevailing situation.
- To help & assist to make area clean, removing of any structure and other similar work as required during actual emergency.
- To participate the meetings & Mock Drill / Rehearsal & Training.
- To liaison with Central Control Room and other emergency services / organization / agencies.
- To prepare their own details action plan & to ensure the provisions to handle the emergency.

E) Responsibilities of City Liason Officers

- Take action against the precautionary statement regarding the flood clearance in connection with the police officers fixed in their Liaison officer, municipal zonal officer and zonal area in all zones of Bardoli, Mandvi, Kanakpur, Kansad and Tarsadi municipality. Every area is timely informed.

F) Police Department

Another authority who gets the first information on incident / accident is police department. The following actions are to be carried out by police department.

- To access the situation and report immediately.
- To maintain the law and order during the emergency to control the traffic and control the affected area.
- To protect the life of people, inside, outside as well as road movers.
- To protect the property & environment & public announcement.
- Evacuation, rehabilitation, shelter & transportation work during the emergency as per prevailing situation.
- To help & assist to make area clean, removing of any structure and other similar work as required during actual emergency.
- To participate the meetings & Mock Drill / Rehearsal & Training.
- To liaison with Central Control Room and other emergency services / organization /agencies.
- To prepare their own details action plan & to ensure the provisions to handle the emergency.

G) Fire Services

Most probably, the first information regarding any incidence / event is received by the fire services. Thus, fire service being first informant has to play the major role during the emergency.

- Inspection, survey & assess the situation where incident occur & give the report.
- To decide the proper & effective actions and immediate response actions to control the emergency, under intimation to Central Control Room or Chair Person.
- Proper training to fight against different hazards
- Rescue, Evacuation, Remove of debris, and other emergency work as directed or instructed.
- To maintain the proper and adequate firefighting, equipments, neutralizing media, selfbreathing apparatus, emergency equipments, personnel protective equipments with keeping in working order.
- The knowledge & information on different type of alternative resources, various types of extinguishing media, neutralizing media, chemical properties and their hazards with safe

handling procedure.

- To participate the meetings Mock Drill / Rehearsal & training.
- To liaison with Central Control Room and other emergency services.
- To prepare their own details action plan & to ensure the provisions to handle the emergency.
- Other duties as required during actual emergency.

H) Health Department

The health and medical services have to play vital role following the emergency. One fold is proper & timely treatments to the victims injured or affected persons. Other fold is to safe guard the public health.

- To ensure the arrangement & preparedness for special medical treatment antidotes and trained doctor Para-medical staff as specified in toxicology at the time of industrial emergency in local pocket area.
- On declaration of emergency or on receiving the message or information, prompt medical facilities should be set up e.g. first aid post, casualty receiving center/ camp, as per gravity of situation at site. Similarly, arrangement for emergency operation or special treatment on chemical burn, injury, gas dispersion etc. with adequate arrangement, which will can serve the purpose of Base Hospital.
- Identification of dead bodies and post mortem arrangement.
- To maintain up to-date list with telephone nos. of services of doctors, hospitals,
- Ambulance, primary health center, Para-medical staff, vehicle to meet the emergency situation.
- Arrangement to inform the up to-date status time to time to DEOC, Chair Person, and Relatives of injured or admitted patients, emergency services etc.
- Arrangement to safe guard the public health in case of development of epidemic situation & announcement on safety measure to be taken by public at the time of emergency situation.
- To advice & guide the different stake holders in respect of medical & health part time to time.
- Provision for proper and adequate medicines, lifesaving drugs, equipments, antidotes etc. related to different hazards.
- To participate meetings, mock drills / examine and training.
- To prepare own detailed action plan to ensure the effective handling of different kinds of emergencies.
- To liaison with DEOC, Chairperson, emergency services organization, agency and other related person.
- Other duties as required during actual emergency.

I) RTO

- To respond to collector and police instructions in different kinds of emergency
- To provide adequate requirements for both persons and material.
- To arrange for deployment of vehicles with full fuel levels.
- To streamline traffic flow and parking yard movement.
- To co-ordinate in deployment of vehicles, if required.
- To participated meeting, mock drills & training.
- To prepare own detailed action plan to ensure effective handing at the time of actual emergency.

J) Civil Supplies Department

- To arrange to provide cooked food and clothing to evacuees and others involved in emergency controlling operation.
- To ensure availability of sufficient cooked food, water ready for distributaries at various locations.
- To participate in the meeting, mock drills & training.
- To prepare own detailed action plan to ensure effective handling of emergency.

K) Joint Director - Information

The proper and correct news should be reach to the public to avoid rumours and panicky. The role of District information officer is to create awareness and preparedness amongst the public for different hazards because of wide & fast spreading news.

- To participate in the meeting, mock drill / exercises and training.
- To assist the public in case of rescue operation and authentic news.
- To liaison & Co-ordination with Chair person, Central Control Room and emergency services.
- Ensure to safe guard the public at large during actual emergency by providing correct reliable authentic guideline and news.

L) Dy. Controller (Civil Defence)

- To participate in meeting, mock drills & training.
- To prepare own detailed action plan to ensure effective handling of emergency
- To assist police in rescue and evacuation work during emergency.
- To provide security, cordoning the area, and other Services.

M) Electricity Board (DGVCL & Torrent)

- To arrange for un-interrupted power supply, if needed.

- To arrange for lighting at temporary medical camps, rallying points and parking yards.
- To take care of electrical equipment within affected zone.
- Arrange for switching off power supply if requested by authority.
- To participate in the meeting, mock drills & training
- To prepare own detailed action plan to ensure effective handling of emergency

N) Regional Officer (GPCB)

- To participate in the meetings, mock drill / exercises and training.
- To prepare own detailed action plan to ensure the effective control of industrial emergency & subsequent action.
- Liaison with central control Room, chairperson, Emergency Services, Organization agencies & other related persons.
- Advice & Guidance to the District Crisis Group in Respect of environment protection in the industrial pocket.
- To provide the technical input regarding environment and evaluate the contamination or adverse effect during industrial emergency.
- To provide the details & information on development of emergency situation regarding in safe level to the life and suggest area to be evacuated and other safety measures.
- To suggest the safe level for restoration & restarting of work on termination of emergency services & expert persons etc.
- Other duties or work as directed by District crisis group or chair person.

O) Representative Form MAH Units

The management of major accident hazardous unit has to maintain updated onsite emergency plan with necessary details with accurate information and a correct assessment of the situation. The site main controller is responsible to provide immediately on occurrence of crisis at his unit with specific details, development and needed help from local crisis group & district crisis group. He will arrange & provide all the resources, equipments, manpower, and communication network from his own unit and co-ordinate with local crisis group & district crisis Group to combat the industrial emergency.

P) Role of other members of District Crisis Group

The other members like controller of explosives, trade union representative, agriculture department, municipal commissioner and other government agencies, etc. have to perform the various duties. However, the following are the suggested duties as required during the emergency:

- To participate in the meeting, mock drill / exercise and training.
- To assist the public in proper way in case of rescue and evacuation during actual emergency.
- To advice and guidance to the District crisis group & Chair person.

- To arrange and help the supporting actions and duties in respect of industrial emergency
- To provide more and adequate resources & various requirement to tackle the industrial emergency immediately.
- Liaison & co-ordination with Central Control Room and emergency services.

Q) Volunteer Organizations (N.G.O.)

The voluntary organization / services can play vital role in relief & rescue operations like arrangement of food packets & packing up of the same, distribution of the food packets and water pouches, arrangements of life saving drugs & distribution of the same, can play a major role in awareness generation, to convince the person / public to evacuate the residence / place and to shift to safe shelter timely during emergency. Otherwise it may result more serious effect. To save the life of public is more important factor, which will be successfully carried out by the voluntary organization. The list of such organization with address, telephone no. organization etc. will be prepared and up-dated time to time.

R) Railway Authority

On getting information at the time of disaster from Central Control Room, the Divisional Manager, western Railway, Surat will take following actions:

- To issue the standing instruction to all railway gates to take actions on receiving the message from the Station Master.
- To decide authority level of railway staff to take actions.
- To carry out evacuation by railway, if required.
- To take care of floating population at railway stations and on board travelers.
- To issue the standing instruction to station Masters on up and down railway stations to stop the train as soon as emergency message is received from DEOC and CCR.

S) Irrigation Department

- Play vital role in pre, during and post form of emergencies particularly in floods.
- Proper management of dams, irrigation canals, ponds and timely maintenance of the same.
- Inform DEOC and respective stake holders in case of water release from the dams.
- Start their control room at the time of monsoon.
- Follow the instructions mentioned with the Flood memorandum.
- To participate in the meetings, mock drill / exercises and training.
- To prepare own detailed action plan to ensure the effective handling of different kinds of emergencies.
- Liaison with DEOC, Chairperson, emergency services organization, agency and other related person.
- Other duties as required during actual emergency.

T) R&B Department

- To play vital role in pre, during and post form of emergencies.
- Proper management of roads and buildings and timely maintenance of the same.
- Inform DEOC and respective stake holders' diversion of routes, closing status of the roads etc.
- Ensure safety terms while establishing or developing of bridges, dams, roads, buildings etc.
- To participate in the meetings, mock drill / exercises and training.
- To prepare own detailed action plan to ensure the effective handling of different kinds of emergencies.
- Liaison with DEOC, Chairperson, emergency services organization, agency and other related person.
- Other duties as required during actual emergency.

U) Citizen:

It is a duty of every citizen to assist the District Administration or such other person entrusted with or engaged in disaster management whenever his aid is demanded generally for the purpose of disaster management.

ANNEXURE

Annexure: 1

Profile of Surat District

Historical Background

Surat finds mention in the Mahabharata when Lord Krishna stopped here during his journey from Mathura to Dwarka with his cows. According to the Sanskrit scriptures, this area was under the control of the western Chalukyas in AD 610 and remained under Hindu kings till 12th century when a general of Qutub-ud-din Aibak captured the city. The wealth and prosperity of the city started in the 12th century when Parsis first settled here. Akbar captured the city in 1573 after a long siege and it became an important Mughal trading point. Arabian traders started calling this place Bunder-E-Khubsoorat (the beautiful port), which later shortened to Surat. In 1612, the British established their trading factory here, soon to be followed by the Dutch and French. Due to political and climatic problems and growing importance of Mumbai, Surat lost its prominence. In 1852, Surat became the first municipality of Gujarat and gradually it became a major business city famous for its textile industry. Now a days it is also called a Diamond City.

Introduction

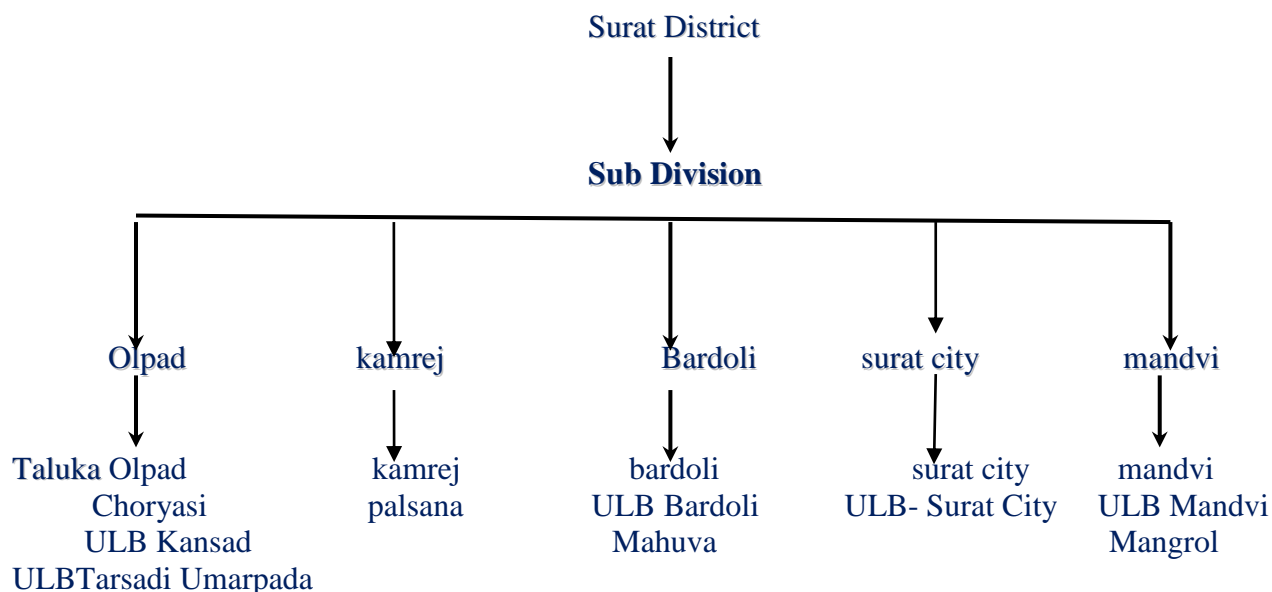


The city of Surat is situated on the bank of river Tapi in the West Indian state of Gujarat. The city extends from latitude 21°15' in the North to longitude 72°52' in the East. It occupies a pivotal position on the Ahmedabad-Mumbai corridor and is well connected by railway.

Surat is a district in the state of Gujarat with Surat city as the administrative headquarters of this district. It is surrounded by Bharuch, Narmada (North), Navsari and Dang (South) districts. To the west is the Gulf of Cambay. It is the second-most advanced district in Gujarat. It had a population of 4,995,174 of which 59.97% were urban as of 2001. On 2nd October 2007 Surat district is parted in to two by forming of Tapi district under the Surat district re-organisation act 2007.

Administrative Set up:

Surat district consists of 10 Talukas under 5 sub divisions. Surat City is district head quarter. Surat is having 5 Urban Local Bodies namely Surat Municipal Corporation, Bardoli Nagarpalika (Bardoli), Mandvi Nagarpalika (Mandvi), Tarsadi Nagarpalika (Mangrol) and Kansad-Kanakpur Nagarpalika (Choryasi) and Surat has also a Urban Development Authority, namely SUDA i.e Surat Urban Development Authority.



CLIMATE

The climate of Surat is mild due to its nearness to the Arabia Sea. There is not much change in the winter and summer temperature, which ranges between 10°C to 38°C. Although one can visit Surat in any season, the best time to do so would be between October and March. Average rainfall of Surat district is 1570.42 mm and last season average rainfall is 989.1mm.

Statement showing Taluka wise Villages & Population of District

| Sr. No. | Taluka | No. of Villages | Total Population |
|---------|--------------|-----------------|------------------|
| 1 | Bardoli | 86 | 224164 |
| 2 | Choryasi | 51 | 165564 |
| 3 | Kamrej | 69 | 172295 |
| 4 | Mahuva | 69 | 144906 |
| 5 | Mandvi | 123 | 1,85,911 |
| 6 | Mangrol | 92 | 209054 |
| 7 | Olpad | 105 | 196846 |
| 8 | Palsana | 49 | 145052 |
| 9 | Surat City | 65 | 2433835 |
| 10 | Umarpada | 55 | 83723 |
| | Total | 765 | 15,22,232 |

(Census-2011)

Talukawise Rainfall Data(in mm) of Surat District (Year 2008 to Year 2018)

| Year Taluka | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------------------|---------------|--------------|---------------|---------------|--------------|---------------|---------------|--------------|---------------|---------------|---------------|
| Bardoli | 1780 | 1460 | 1580 | 1556 | 925 | 2074 | 929 | 864 | 876 | 934 | 1504 |
| Choryasi | 1332 | 1332 | 1539 | 959 | 837 | 2303 | 762 | 1111 | 1231 | 1479 | 1258 |
| Kamrej | 1547 | 1638 | 1720 | 1695 | 964 | 2088 | 1120 | 959 | 830 | 1115 | 1118 |
| Mahuva | 1780 | 1868 | 1743 | 1601 | 1024 | 1961 | 1047 | 842 | 1075 | 1146 | 1560 |
| Mandvi | 1632 | 959 | 1238 | 1317 | 763 | 1886 | 797 | 689 | 945 | 1292 | 1130 |
| Mangrol | 1286 | 880 | 1383 | 1049 | 1121 | 1970 | 1480 | 1207 | 1551 | 1987 | 1645 |
| Olpad | 1334 | 1030 | 1491 | 1196 | 519 | 1861 | 958 | 728 | 729 | 883 | 885 |
| Palsana | 1601 | 1472 | 1668 | 1157 | 727 | 2054 | 785 | 838 | 1106 | 1135 | 1192 |
| Umarpada | 2017 | 2371 | 1792 | 2444 | 1483 | 3397 | 1406 | 1542 | 1547 | 1952 | 1293 |
| Surat City | 1476 | 1470 | 1837 | 1019 | 920 | 2135 | 965 | 1111 | 961 | 1329 | 1484 |
| Total | 15785 | 14480 | 15991 | 13993 | 9283 | 21729 | 10249 | 9891 | 10851 | 13252 | 13069 |
| Average | 1578.5 | 1448 | 1599.1 | 1399.3 | 928.3 | 2172.9 | 1024.9 | 989.1 | 1085.1 | 1325.2 | 1306.9 |

Flood History in Surat

| Sr No | Year | Date & Month | Max. Level at Nehru Bridge (Feet) | Max. Level at Kakrapar Weir (Feet) | Discharge from Kakrapar (in Lac Cusec) |
|-------|------|----------------------------|---|--|--|
| 1 | 1954 | - | 96.50 | 172.80 | 7.04 |
| 2 | 1958 | 2 nd September | 97.00 | 173.00 | 7.40 |
| 3 | 1959 | 17 th September | 101.75 | 179.20 | 12.94 |
| 4 | 1968 | 6 th August | 103.50 | 187.50 | 15.60 |
| 5 | 1969 | 8 th Septemebr | 95.75 | 174.30 | 8.56 |
| 6 | 1970 | 6 th September | 100.00 | 181.00 | 13.00 |
| 7 | 1978 | 31 st August | 8.59 mtr | - | - |
| 8 | 1979 | 12 th August | 8.22 mtr | - | - |
| 9 | 1990 | 25 th September | 94.20 | 174.80 | 3.70 |
| 10 | 1994 | 8 th September | 97.64 | 175.80 | 5.25 |
| 11 | 1998 | 16 th September | 101.30 | 178.00 | 6.73 |
| 12 | 2002 | 7 th September | 8.10 mtr | 172.30 | 3.30 |
| 13 | 2006 | 9 th August | 12.50 mtr | 182.70 | 9.10 |
| 14 | 2013 | 25 th September | | 176.00 | 4 |

Details of Tapi Basin

| Sr No | Name of Gauge Station | Danger Level) | | Warning Level | |
|-------|--------------------------|---------------|---------|---------------|---------|
| | | In Meter | In Feet | In Meter | In Feet |
| 1 | Ukai | 105.15 | 345.00 | 103.32 | 339.00 |
| 2 | Kakrapar | 53.66 | 176.05 | 53.15 | 174.33 |
| 3 | Surat Nehru Bridge | 9.50 | 31.16 | 8.50 | 27.88 |

Maximum Discharge Capacity and Spillway of the schemes

| No | Scheme | Type | FRL Meter | Crest Level | SpillWay (Meter) | Details of Gates | Max. Discharge (Cum) |
|----|----------|----------|--------------|----------------|---------------------|------------------------|----------------------------|
| 1 | Ukai | Gated | 105.15 | 91.23 | 425.00 | 22 15.54 X 14.78 | 49490 |
| 2 | Kakrapar | Un Gated | 48.77 | - | 613.38 | - | 1083 |
| 3 | Doswada | Un Gated | 123.44 | - | 207.00 | - | 899 |
| 4 | Ver – 2 | Gated | 115.80 | 109.75 | 30.00 | 8 9.10 X 6.10 | 2155 |
| 5 | Lakhigam | Un Gated | 74.10 | - | 25.00 | - | 434 |

Annexure: 2

List of vulnerable talukas and villages with risk ranking

| List of villages likely to be affected by floods in Tapi River on the basis of Gauge & Discharge at Kakrapar weir site, Surat | | | | |
|---|--------------------------|------------|-------------|-----------|
| SR | CHORYASI & Surat City | MANDVI | KAMREJ | BARDOLI |
| NO. | TALUKA | TALUKA | TALUKA | TALUKA |
| 1 | MAGDALLA | KAKRAPAR | KAMREJ | MIYAWADI |
| 2 | NANA VARACHHA | TARSADA | KHOLWAD | KADOD |
| 3 | KATARGAM | VAR JAKHAM | KHOLESHWAR | UCHHARE |
| 4 | GAVIER | MANDVI | TIMBA | NASURA |
| 5 | SURAT CITY | KHEDAPUR | KATHOR | HARIPARA |
| 6 | DABHOLI | PATHA | CHORYASI | ZARIMORA |
| 7 | PIPLOD | VASHIGAM | ANTROLI | VADHVANIA |
| 8 | UMRA | VAGHACHA | THAROLI | SAMTHARI |
| 9 | TUNKI | VAROLI | VARADI | |
| 10 | KATHODRA | MOTICHER | BHADAD | |
| 11 | SINGAPUR | PIPALTHA | VALST | |
| 12 | VED | KAKADAWA | SARTHANA | |
| 13 | VESU | KOSAMDI | LASKANA | |
| 14 | ABHAVA | PIPARIA | VELANJA | |
| 15 | MAJURA | GOVACHHI | SARASANA | |
| 16 | ANJANA | RUPEN | ANKHAKHOL | |
| 17 | PARWAT | THUTWATI | GIOR | |
| 18 | SAMDOD | BOTHAN | KARJAN | |
| 19 | MAGOB | ZANKHIA | BHERAV | |
| 20 | FULPADA | NANI CHER | AMBOLI | |
| 21 | ATHWA | RATANIA | AMBHARAMA | |
| 22 | JHANGIRPURA | UMARSADI | NAVIPARDI | |
| 23 | ADAJAN | VARELI | ABRAMA | |
| 24 | BAIRAV | KAMALAPUR | DEROD | |
| 25 | BHATAR | VARETH | GHALA | |
| 26 | BAMROLI | RAJWAD | DHORANPARDI | |
| 27 | KHAJOD | KHAROLI | DUNGRA | |
| 28 | BHIMROD | UNN | DHATVA | |
| 29 | UDHANA | VIRPOR | MACHHI | |
| 30 | SIMADA | VANKLA | NANSAD | |
| 31 | KUMBHARIA | ROSWAD | DEWALI | |

| | | | | |
|----|----------------------|------------|----------------|--|
| 32 | KARANJ | KHANJIROLI | SAMPURA | |
| 33 | DUMAS | KHALER | GHADULI | |
| 34 | SARASANA | KOSDI | LIMODERA | |
| 35 | KAWAS | GODAWADI | PASODRA | |
| 36 | BHATHA | UNA | NAVAGAM | |
| 37 | PALANPUR | VAGHNERIA | TIMBA | |
| 38 | BHARTHANA | VARETHI | KATHODRA | |
| 39 | KOSAD | VADI | KOLI BHARTHANA | |
| 40 | MORA | VADOD | NETRANG | |
| 41 | MOTA VARACHHA | NOGAMA | | |
| 42 | AMROLI | KEVADIA | | |
| 43 | UTRAN | VEGHI | | |
| 44 | VANTA | NAREN | | |
| 45 | RUNDH | KHAROLI | | |
| 46 | BHARTHANA(VESU) | NANDAPUR | | |
| 47 | ALTHAN | ANDHATRI | | |
| 48 | NAVAGAM | UNCHA MALA | | |
| 49 | PUNA | BED KUA | | |
| 50 | SAROLI | | | |
| 51 | ICHHAPUR | | | |
| 52 | RANDER | | | |
| 53 | SARSANA | | | |
| 54 | PARDESARA | | | |
| 55 | KOSAMBA | | | |
| 56 | GOVALAK | | | |
| 57 | PAL | | | |
| 58 | CHHAAPRABHATHA | | | |
| 59 | BHARTHANA (KOSAD) | | | |
| 60 | MALGAMA | | | |
| 61 | LIMLA TOWNSHIP | | | |
| 62 | BHESAN | | | |
| 63 | VANSAVA | | | |
| 64 | BHATALAI | | | |
| 65 | DAMKA | | | |
| 66 | MORA | | | |
| 67 | SUWALI | | | |
| 68 | BHATPOR | | | |
| 69 | ABHAVA | | | |
| 70 | LIMBAYAT | | | |
| 71 | PARVAT | | | |
| 72 | SANLA HEMAD | | | |

| | | | | |
|----|-----------|--|--|--|
| 73 | SARASANA | | | |
| 74 | PANDESARA | | | |
| 75 | KOSAMBA | | | |

Flood:

Choryasi taluka passes Tapi and mindhola Rivers. It creates the flood. The detail is shown below.

| River Name | Affected Village | Total Population | Vulnerable Population | Animal Population | Residential Place | Capacity Of Relief Area |
|------------|------------------|------------------|-----------------------|-------------------|------------------------|-------------------------|
| 1.Tapi | Kavas | 6500 | 1600 | 412 | Pri.Comm. Hall | 1600 |
| | Limla | 6612 | 0 | 0 | | |
| | Malgama | 960 | 200 | 489 | Pri.Comm. Hall/ Temple | 200 |
| | Bharthana Kosad | 7171 | 500 | 616 | Pri.School | 500 |
| | Bhesan | 2195 | 200 | 1139 | Pri.School | 200 |
| | Bhatha | 5122 | 100 | 1286 | Pri.School | 100 |
| | Bhatpor | 3449 | 2800 | 458 | Pri.Comm. Hall | 2800 |
| | Ichhapor | 12097 | 2500 | 862 | Pri.School | 2500 |
| | Saniyahemad | 3964 | 100 | 748 | Pri.Comm. Hall | 300 |
| | Kumbharia | 5850 | 250 | 411 | Pri.School | 300 |
| | Saroli | 3268 | 200 | 200 | Pri.Comm. Hall | 300 |
| 2.Mindhola | Samrod | 1060 | 0 | 310 | Pri.School | 1100 |
| | Kachholi | 2149 | 300 | 479 | Pri.School | 300 |
| | Lajpor | 7920 | 300 | 1157 | Pri.School | 300 |
| | Popada | 1070 | 150 | 436 | Pri.Comm. Hall | 200 |

Olpad:

| River Name | Affectad Village | Total Population | Affected Population | Animal Population | Residental Place | Capacity Of Relif Area |
|---------------------------|------------------|------------------|---------------------|-------------------|---------------------|------------------------|
| 1. Sena Khadi (Kim River) | Kadrama | 1811 | | 1128 | Takrama High School | 914 |
| | Umarchha | | | | | |

| | | | | | | |
|----------------------------|-----------|------|------|-----|-------------------|------|
| | Vadoli | | | | | |
| | Kim | | | | | |
| | Kimamli | | | | | |
| | Kadodra | | | | | |
| | Anita | | | | | |
| | Bolav | | | | | |
| | Sayan | | 1710 | 974 | Sayan High School | 1771 |
| | Saroli | | 115 | 856 | Talad High School | 615 |
| | Kosam | | 381 | 482 | Talad High School | 615 |
| 2. Tena Khadi (Tapi River) | Pinjrat | 5173 | | | | |
| | Tena | 1119 | | | | |
| | Barbodhan | 2496 | | | | |
| | Tunda | 595 | | | | |
| | Dabhari | 535 | | | | |
| | Aadmor | 1076 | | | | |
| | Lavachha | 2218 | | | | |
| | Bhadut | 1191 | | | | |
| | Kudiyana | 1740 | | | | |
| | Hathisa | 473 | | | | |

Kamrej:

| River Name | Affected Village | Total Population | Vulnerable Population | Animal Population | Evacuation Centre | Capacity Of Relif Centre | Highest Flood Level |
|------------|------------------|------------------|-----------------------|-------------------|-------------------|--------------------------|---------------------|
| 1.Tapi | Kamrej | 11329 | 6500 | 2218 | Primary School | 900-1200 | 5 TO 19 |
| | Bhairav | 1004 | 820 | 192 | Kalbhairav Temple | 100-400 | 14 TO 19 |
| | Derod | 1666 | 1400 | 425 | Primary School | 500 | 5 TO 12 |
| | Kholvad | 10687 | 3530 | 1157 | High School | 350-900 | 3 TO 17 |
| | Kathor | 13258 | 10000 | 538 | High School | 400-600 | 3 TO 10 |
| | Choryasi | 1143 | 600 | 1215 | Primary School | 300 | 3 TO 10 |
| | Aamboli | 4186 | 2000 | 718 | Primary School | 300 | 3 TO 5 |
| | Dhala | 4713 | | 1569 | High School | 500-1200 | 7 TO 9 |
| | Karjan | 2529 | 420 | 1089 | Primary School | 200 | 3 TO 5 |
| | Dhoran Pard | 2803 | 450 | 259 | Primary School | 400 | 3 TO 5 |

| | | | | | | | |
|--|------------|------|------|------|----------------|---------|---------|
| | Navi Pardi | 3961 | 600 | 1804 | Primary School | 600 | 2 TO4 |
| | Kholeswar | 1474 | 350 | 387 | Primary School | 250 | 2 TO 5 |
| | Dungra | 2744 | 500 | 514 | Primary School | 400 | 2 TO 8 |
| | Dhatva | 1382 | 400 | 321 | Primary School | 200 | 2 TO 5 |
| | Machhi | 462 | 150 | 218 | Primary School | 150 | 2 TO 6 |
| | Timba | 2418 | 500 | 1052 | Primary School | 500 | 4 TO 6 |
| | Antroli | 1088 | 400 | 319 | Primary School | 400 | 4 TO 7 |
| | Tharoli | 186 | 110 | 69 | Community Hall | 100 | 4 TO 9 |
| | Velanja | 2804 | 800 | 400 | Primary School | 400 | 3 TO 6 |
| | Abrama | 3041 | 1860 | 700 | Dharamsala | 700-300 | 5 TO8 |
| | Bhada | 1842 | 1000 | 300 | Primary School | 300 | 2 TO 5 |
| | Valak | 1644 | 850 | 200 | Primary School | 200 | 4 TO 6 |
| | Laskana | 8452 | 2459 | 500 | Public Temple | 500-700 | 6 TO 10 |
| | Aakhakhol | 541 | 419 | 350 | Zoo | 350 | 3 TO 5 |
| | Jiyor | 204 | 175 | 150 | Community Hall | 100-150 | 4 TO6 |
| | Shampura | 3560 | 970 | 100 | Primary School | 100-200 | 2 TO4 |
| | Dethli | 267 | 115 | 100 | Primary School | 100 | 3 TO 5 |

Bardoli:

| River Name | Affected Village | Total Population | Vulnerable Population | Animal Population | Evacuation Centre | Capacity Of Relief Centre |
|-------------------|-------------------------|-------------------------|------------------------------|--------------------------|--------------------------|----------------------------------|
| 1.Tapi | Kadod | 11442 | 11401 | 545 | Kadod School | 3000 |
| | Haripura | 1741 | 1714 | 345 | Primary School | 300 |
| | Vaghecha | 1100 | 897 | 690 | Vageshwar Temple | 250 |
| | Madhi | 7240 | 3100 | 1277 | Primary & Tech.School | 400 |
| | Surali | 10724 | 9286 | 11618 | Primary School | 2300 |
| | Karchka | 1162 | 1033 | 252 | Primary School | 300 |
| | Ten | 4613 | | 1217 | Suruchi Printing School | 350 |
| | Kharad | 72 | 9 | 241 | Primary School | |
| | Chhitra | 411 | | 156 | Primary School | |
| | | | | | | |

Mandvi:

| Sr. No. | River Name | Affected Villages | | Total Population | Danger Level |
|---------|------------|-------------------|-------------|------------------|--------------|
| 1 | 2 | 3 | | 4 | 5 |
| 1 | Tapi | 1 | Balaltirth | 232 | 346 ft |
| | | 2 | Kakrapar | 2441 | |
| | | 3 | Wareth | 2212 | |
| | | 4 | Nanicher | 1479 | |
| | | 5 | Moticher | 2278 | |
| | | 6 | Rataniya | 2579 | |
| | | 7 | Tarsadabar | 1465 | |
| | | 8 | Mandvi | 18214 | |
| | | 9 | Waghnera | 466 | |
| | | 10 | Ushkerkhurd | 516 | |
| | | 11 | Puna | 1743 | |
| | | 12 | Kaakadva | 815 | |
| | | 13 | Khedpur | 954 | |
| | | 14 | Warjakhan | 1614 | |
| | | 15 | Jaakhla | 780 | |
| | | 16 | Kosadi | 1411 | |
| | | 17 | Unn | 1265 | |
| | | 18 | Umarsadi | 1066 | |
| | | 19 | Kamlapor | 1485 | |
| | | 20 | Pipariya | 764 | |
| | | 21 | Patana | 344 | |
| | | 22 | Wareli | 1101 | |
| | | 23 | Boudhan | 5729 | |
| 2 | Vareh | 1 | Picharwan | 344 | 115.80 m)Tr |
| | | 2 | Aamli | 653 | |
| | | 3 | Soli | 392 | |
| | | 4 | Devgadh- | 2470 | |

| | | | | | |
|--|--|----|------------|------|--|
| | | | Andharwadi | | |
| | | 5 | Maldha | 1586 | |
| | | 6 | Kim Dungra | 1083 | |
| | | 7 | Fulwadi | 1519 | |
| | | 8 | Godadha | 1962 | |
| | | 9 | Moritha | 1809 | |
| | | 10 | Saalaiya | 1724 | |
| | | 11 | Valargadh | 460 | |
| | | 12 | Amalsadi | 2775 | |
| | | 13 | Karvali | 1514 | |
| | | 14 | Godsamba | 1382 | |
| | | 15 | Bori | 1053 | |
| | | 16 | Nandpor | 1157 | |
| | | 17 | Kharoli | 1928 | |
| | | 18 | Godawadi | 3915 | |
| | | 19 | Gawachhi | 1811 | |
| | | 20 | Wareli | 1101 | |
| | | 21 | Pimpariya | 764 | |

Mahuva:

| River Name | Affectad Village | Total Populatio n | Affected Populatio n | Animal Population | Relief Centre | Capacity Of Relief Centre |
|-------------------|-------------------------|--------------------------|-----------------------------|--------------------------|------------------------|----------------------------------|
| 1.Purna | Mahuva | 4924 | 565 | 1489 | G.H.Bhakt | 700 |
| | Ratan | 1031 | 565 | 286 | Pri.School Odach | 300 |
| | Odach | 2326 | 325 | 557 | Pri.School Ratan | 350 |
| | Amroli | 460 | 110 | 110 | Pri.School Amroli | 200 |
| | Aamchak | 1213 | 250 | 250 | Pri.School Aamchak | 300 |
| | Kavitha | 1024 | 250 | 250 | Pri.School Kavitha | 300 |
| | Sevasan | 230 | 50 | 56 | Pri.School Sevasan | 150 |
| | Vadiya | 1170 | 155 | 574 | Pri.School Vadiya | 150 |
| | Miyapur | 1040 | 215 | 541 | Pri.School Miyapur | 200 |
| | Sekhpur | 3998 | 225 | 1563 | Pri.School Sekhpur | 300 |
| | Budhleshwar | 566 | 55 | 143 | Pri.School Budhleshwar | 200 |
| | Umra | 4810 | 2100 | 2264 | Pri.School Umra | 2000 |

| | | | | | | |
|----------|------------|------|-----|------|-----------------------|-----|
| | Haldava | 2764 | 550 | 1179 | Pri.School Haldava | 600 |
| | Mahuvaliya | 4747 | 550 | 2939 | Pri.School Mahuvaliya | 600 |
| | Vaheval | 6476 | 110 | 2090 | Pri.School Vaheval | 300 |
| 2.Ambika | Valvada | 4462 | 550 | 2508 | Pri.School Valvada | 600 |
| | Kankariya | 1136 | 500 | 624 | Pri.School Kankariya | 600 |
| | Samba | 2129 | 540 | 898 | Pri.School Samba | 600 |
| | Bhoriya | 1722 | 250 | 858 | Pri.School Bhoriya | 300 |
| | Velanpur | 2689 | 110 | 996 | Pri.School Velanpur | 300 |

Palsana:

| River Name | Affected Villages | Total Population | Affected Population | Animal Population | Relief Centre | CAPACITY OF RELIEF CENTRE |
|------------|-------------------|------------------|---------------------|-------------------|-----------------------------|---------------------------|
| 1.Mindhola | Kanav | 1609 | 50 | 430 | Pri.School Prin. | 200 |
| | Malekpor | 2531 | 22 | 957 | Pri.School Prin.9998927960 | 200 |
| | Amalsadi | 1610 | 300 | 468 | Pri.School Prin.9909196911 | 350 |
| | | | | | Utt.Buni.School | 250 |
| | Makhiga | 874 | | | Pri.School Prin. 9601674776 | 200 |
| | Vanzodia | 1176 | | 248 | Pri.School Prin.9909681914 | 400 |

Mangrol:

| River | Village | Population | Affected | Animal | Relief | Capacity |
|-------|--------------|------------|------------|--------|----------------|----------|
| | | | Population | | Centre | |
| Kim | | 2322 | 85 | 945 | Primary School | 110 |
| | Luvara | | | | | |
| | Kantva | 2246 | 30 | 850 | | 70 |
| | Vansoli | 839 | 25 | 320 | | 40 |
| | Sava | 774 | 25 | 470 | | 50 |
| | Velachha | 2138 | 45 | 925 | | 100 |
| | Kathwada | 1040 | 45 | 435 | | 70 |
| | Hathoda | 3735 | 45 | 1200 | | 100 |
| | Mota Borsara | 1871 | 45 | 831 | | 100 |
| | Vasesa | 568 | 45 | 265 | | 60 |

| | | | | | | |
|--------|-------------|------|-----|------|--|-----|
| | Moti Naroli | 1060 | 45 | 730 | | 60 |
| | Palod | 2558 | 45 | 630 | | 70 |
| | Kothva | 1478 | 45 | 30 | | 70 |
| | Shethi | 791 | 45 | 475 | | 70 |
| | Panetha | 584 | 45 | 275 | | 60 |
| | Siyalaj | 1711 | 45 | 885 | | 100 |
| | Kosadi | 3328 | 135 | 715 | | 200 |
| | Simodara | 1676 | 75 | 665 | | 120 |
| | Vadoli | 732 | 45 | 400 | | 70 |
| | Asarama | 941 | 45 | 415 | | 100 |
| | Ranakpore | 1004 | 45 | 395 | | 100 |
| | Limbada | 2434 | 85 | 815 | | 100 |
| | Mangrol | 5354 | 65 | 845 | | 100 |
| | Amandera | 900 | 45 | 325 | | 60 |
| | Gijaram | 1814 | 65 | 645 | | 80 |
| | Ankdod | 1355 | 40 | 400 | | 70 |
| Bhukhi | Vankal | 5629 | 45 | 1245 | | 100 |

Umarpada:

| River | Affected Villages | Total Population |
|--------------|--------------------------|-------------------------|
| | Aamlidabda Wahar | 1529 |
| | Pada | 1448 |
| | Maandan | 528 |
| | Nasharpur | 586 |
| | Umarkhadi | 4311 |
| | Umarpada | 1399 |
| | Uchwaaan | 2300 |
| | Kevdi | 2642 |
| | Sharda | 1583 |
| | Velavi | 1090 |
| | Nanasutkhadka | 1393 |
| | Wadpada | 816 |
| | Bardipada | 1025 |
| | Sevlaan | 677 |
| | Chakraa | 1028 |

➤ **List of villages likely to be affected by floods in the basin of Gauge and Discharge at Kakrapar Weir Site, Surat.**

NOTE:- WHITE SIGNALS :ALERT

BLUE SIGNALS : READY FOR EVACUATION

RED SIGNALS : IMMEDIATE EVACUATION

| Sr . N o | Discharge At Kakrapar weir in (CUS/CUM) | Gaug e level at kakra par weir in feet | Gauge level at kakrapar weir in Meter | Name Of Taluka | Signal for Villages | | |
|----------------|---|--|---|----------------------|---------------------|---------------------|---------------|
| | | | | | White Signal | Blue Signal | Red Signal |
| 1 | 3,91,100(CUS) 11,074(CUM) | 174.4 0 | 53.15 | Chorya si | Magdalla | | |
| | | | | | Nava Varacha | | |
| | | | | | Gavir | | |
| | | | | | Surat City | | |
| | | | | | Umra | | |
| | | | | | Tunki | | |
| | | | | | Singapor | | |
| | | | | | Ved | | |
| | | | | | Bharthana (Vesu) | | |
| | | | | | Althan | | |
| | | | | | Rander | | |
| | | | | | Katr Gam | Magdala | |
| | | | | | Dabholi | Nava varacha | |
| 2 | 4,40,400(CUS) 12,740(CUM) | 175.5 0 | 53.40 | Chorya si | Piplod | Gavier | |
| | | | | | Khatodra | Surat City | |
| | | | | | Vesu | Umra | |
| | | | | | Majura | Tunki | |
| | | | | | Anjana | Singapor | |
| | | | | | Parvat | Ved | |
| | | | | | Dhamrod | Bharthana (vesu) | |
| | | | | | Fulpada | Althan | |
| | | | | | Athva | Rander | |
| | | | | | Jahnagirpura | | |
| | | | | | Adajan | | |
| | | | | | Parvat | | |
| | | | | | Dhamrod | | |
| | | | | | Bhimrad | | |
| | | | | | Udhna | | |
| | | | | | Simada | | |

| | | | | | | | |
|---|----------------|--------|-------|----------|-------------------|--------------|------------------|
| | | | | | Kumbhariya | | |
| | | | | | Karjan | | |
| | | | | | Dumas | | |
| | | | | | Sarsana | | |
| | | | | | Kavas | | |
| | | | | | Bhatha | | |
| | | | | | Palanpor | | |
| | | | | | Bharthana | | |
| 3 | 4,60,640(CUS) | 176.05 | 53.60 | Corasi | Runda | Katargam | Magdalla |
| | 13,044 (CUM) | | | | Navagam | Dabholi | Nava Varacha |
| | | | | | Puna | Piplod | Gavier |
| | | | | | Saroli | Kathodra | Surat City |
| | | | | | Ichhapor | Vesu | Umra |
| | | | | | | Majura | Tunki |
| | | | | | | Anjana | Singapor |
| | | | | | | Parvat | Ved |
| | | | | | | Dhamrod | Bharthana (Vesu) |
| | | | | | | Fulpada | Althan |
| | | | | | | Athva | Rander |
| | | | | | | Jahangirpora | |
| | | | | | | Adajan | |
| | | | | | | Vairav | |
| | | | | | | Bhatar | |
| | | | | | | Bamroli | |
| | | | | | | Bhimrod | |
| | | | | | | Udhna | |
| | | | | | | Simada | |
| | | | | | | Kumbhariya | |
| | | | | | | Karanj | |
| | | | | | | Dumas | |
| | | | | | | Sarsana | |
| | | | | | | Kavas | |
| | | | | | | Bhatha | |
| | | | | | | Palanpor | |
| | | | | | | Bharthana | |
| | | | | | | Kosad | |
| 4 | 5,20,375 (CUS) | 177.25 | 54.04 | Choryasi | Chhaaprabhatha | Rander | Katargam |
| | 14,735 (CUM) | | | | Bharthana (Kosad) | Navagam | Dabholi |
| | | | | | Malgama | Puna | Piplod |

| | | | | | | | |
|----------|----------------------|---------------|--------------|---------------|-----------------------|------------------|--------------------|
| | | | | | Limla Township | Saroli | Kathodra |
| | | | | | Bhesan | Ichhapoor | Vesu |
| | | | | | Bhatpor | | Majura |
| | | | | | | | Anjana |
| | | | | | | | Parvat |
| | | | | | | | Dhamrod |
| | | | | | | | Fulpada |
| | | | | | | | Athva |
| | | | | | | | Jahngirpora |
| | | | | | | | Adajan |
| | | | | | | | Vairav |
| | | | | | | | Bhatar |
| | | | | | | | Bamroli |
| | | | | | | | Bhimrod |
| | | | | | | | Udhna |
| | | | | | | | Simada |
| | | | | | | | Kumbhariya |
| | | | | | | | Karanj |
| | | | | | | | Dumas |
| | | | | | | | Sarsana |
| | | | | | | | Kavas |
| | | | | | | | Bhatha |
| | | | | | | | Palanpor |
| | | | | | | | Bharthana |
| | | | | | | | Kosad |
| | | | | Mandvi | Kakrapar | | |
| | | | | Kamrej | Kamrej | | |
| | | | | | Kholvad | | |
| | | | | | Kholeswar | | |
| | | | | | Laskana | | |
| | | | | | Bherav | | |
| | | | | | Amboli | | |
| 5 | 5,80,740(CUS) | 178.50 | 54.52 | Mandvi | Mandvi | Kakrapar | |
| | 16,444 (CUM) | | | | Khedapor | | |
| | | | | | Patha | | |
| | | | | | Vishgam | | |
| | | | | | Vagacha | | |
| | | | | | Varoli | | |

| | | | | | | | |
|--|--|--|--|----------|-----------|-------------------|----------|
| | | | | | Moti Cher | | |
| | | | | | Pipaltha | | |
| | | | | | Kakadva | | |
| | | | | Bardoli | Miyavadi | Sarthana | Kamrej |
| | | | | Kamrej | Timba | Aakhakhhol | Kholvad |
| | | | | | Choryasi | | Koleswar |
| | | | | | Antroli | | Laskana |
| | | | | | Tharoli | | Bhairav |
| | | | | | Pardi | | Amboli |
| | | | | | Bhada | | |
| | | | | | Sarthana | | |
| | | | | Olpad | Sayan | | |
| | | | | | Vasvari | | |
| | | | | | Atodra | | |
| | | | | | Asnad | | |
| | | | | | Saroli | | |
| | | | | | Gothan | | |
| | | | | | Jothan | | |
| | | | | | Umra | | |
| | | | | | Sivan | | |
| | | | | | Delad | | |
| | | | | | Segva | | |
| | | | | | Madhar | | |
| | | | | | Karamla | | |
| | | | | | Ariyana | | |
| | | | | | Sonsak | | |
| | | | | | Balkas | | |
| | | | | | Gola | | |
| | | | | | Kosam | | |
| | | | | | Mahmadpur | | |
| | | | | | Earthan | | |
| | | | | | Setul | | |
| | | | | | Ambehta | | |
| | | | | | Kunkai | | |
| | | | | | Veluk | | |
| | | | | | Pinjrat | | |
| | | | | Choryasi | | Chhaaprabhatha | Runha |
| | | | | | | Bharthana (Kosad) | Navagam |
| | | | | | | Malgama | Puna |
| | | | | | | Limla-Township | Saroli |

| | | | | | | | |
|---|----------------|--------|-------|----------|-----------|--------------|----------------|
| | | | | | | bhesan | Ichhapor |
| | | | | | | Bhatpor | |
| 6 | 6,90,370(CUS) | 180.50 | 55.03 | Choryasi | | Mora | Chhaaprabhatha |
| | 19,449 (CUM) | | | | | Mota Varacha | Bharthana |
| | | | | | | Amroli | Limla Township |
| | | | | | | Utran | Malgama |
| | | | | | | Vanta | Bhesan |
| | | | | | | | Bhatpor |
| | | | | Mandvi | Kosamdi | Mandvi | Kakrapar |
| | | | | | | Khedapor | |
| | | | | | | Pathan | |
| | | | | | | Vashigam | |
| | | | | | | Vagacha | |
| | | | | | | Varoli | |
| | | | | | | Moticher | |
| | | | | | | Pipaldha | |
| | | | | | | kakadwa | |
| | | | | Kamrej | | Chorashi | Kamrej |
| | | | | | | Antroli | Kholvad |
| | | | | | | Tharoli | Kholeswar |
| | | | | | | Pardi | Laskana |
| | | | | | | Bhada | Bhairav |
| | | | | | | Valsat | Amboli |
| | | | | | | Sarthana | |
| | | | | | | Sarsana | |
| | | | | | | Aakhakhhol | |
| | | | | Olpad | Olpad | Sayan | |
| | | | | | Asnabad | Vasvari | |
| | | | | | Barbodhan | Atodra | |
| | | | | | Pariya | Asnaad | |
| | | | | | Vadod | Saroli | |
| | | | | | Sandhiar | Gothan | |
| | | | | | Sithana | Jothan | |
| | | | | | Masama | Umra | |
| | | | | | Andhi | Sivan | |
| | | | | | Kalipur | Delad | |
| | | | | | Isnapor | Segva | |
| | | | | | | Madhar | |

| | | | | | | | |
|---|-------------------|------------|-------|--------------|-------------|--------------|--------------|
| | | | | | | Karamla | |
| | | | | | | Ariana | |
| | | | | | | Sonsak | |
| | | | | | | Balkas | |
| | | | | | | Gola | |
| | | | | | | Kasom | |
| | | | | | | Mahmadpora | |
| | | | | | | Earthan | |
| | | | | | | Setul | |
| | | | | | | Ambheta | |
| | | | | | | Kunkai | |
| | | | | | | Veluk | |
| | | | | | | Pinjrat | |
| 7 | 7,60,150(CUS) | 181.7 5 | 55.41 | Chorya si | | Mora | |
| | 21,524(CUM) | | | | | Mota Varacha | |
| | | | | | | Amroli | |
| | | | | | | Utran | |
| | | | | | | Vanta | |
| | | | | Mandv i | Rataniya | Kosmadi | Mandvi |
| | | | | | Umarsadi | | Khedpor |
| | | | | | Vareli | | Patha |
| | | | | | Kamalpor | | Vashiga m |
| | | | | | Varthan | | Vagacha |
| | | | | | Rajwad | | Varoli |
| | | | | | Kharoli | | Moticher |
| | | | | | Unn | | Pipaldha |
| | | | | | Virpor | | Kakadva |
| | | | | | Vanakla | | |
| | | | | Bardoli | Kadod | | Miyavad i |
| | | | | | Uchrael | | |
| | | | | Kamre j | Jiyor | | Timba |
| | | | | | Karjan | | Choryasi |
| | | | | | Bhairav | | Antroli |
| | | | | | Amboli | | Tharoli |
| | | | | | Abrama | | Pardi |
| | | | | | Navi pardi | | Bhada |
| | | | | | Derod | | Valsat |
| | | | | | Ghala | | Sarthana |
| | | | | | Dhoranpardi | | Amboli |
| | | | | | Dungra | | |

| | | | | | | | |
|---|-------------------|------------|-------|------------|-----------|--------------|---------------|
| | | | | | Dhatva | | |
| | | | | | Machi | | |
| | | | | | Nansad | | |
| | | | | | Dethli | | |
| | | | | | Shampora | | |
| | | | | Olpad | Dihen | Olpad | Sayan |
| | | | | | Kundlana | Asnabad | Vasvani |
| | | | | | Acharana | Barbodhan | Atodara |
| | | | | | Kamaj | Pariya | Asnad |
| | | | | | Saroli | Vadod | Saroli |
| | | | | | Talad | Sandhiyar | Gothan |
| | | | | | Sherdi | Sithana | Jothan |
| | | | | | Orma | Masma | Umra |
| | | | | | | Andhi | Sivan |
| | | | | | | Kalipur | Delad |
| | | | | | | Isanapur | Segva |
| | | | | | | | Madhar |
| | | | | | | | Karamal a |
| | | | | | | | Ariyana |
| | | | | | | | Sonsak |
| | | | | | | | Balkash |
| | | | | | | | Gola |
| | | | | | | | Kosam |
| | | | | | | | Mahmad pur |
| | | | | | | | Erthan |
| | | | | | | | Setul |
| | | | | | | | Ambheta |
| | | | | | | | Kunkai |
| | | | | | | | Veluk |
| | | | | | | | Pinjrat |
| 8 | 8,90,760(CUS) | 184.0 0 | 56.10 | Mandv i | Roswad | Rataniya | Kosmadi |
| | 25,223(CUM) | | | | Khanjroli | Umarsadi | |
| | | | | | Khelar | Vareli | |
| | | | | | Kosadi | Kamalapur | |
| | | | | | Godavadi | Vareth | |
| | | | | | Una | Rajvad | |
| | | | | | Vagnera | Kharoli | |
| | | | | | Varethi | Unn | |
| | | | | | Vadi | VirporVankal | |
| | | | | Bardoli | Nasura | Kadod | |
| | | | | | | Uchrel | |
| | | | | Kamre | Gaduli | Giyor | |

| | | | | | | |
|--|--|--|----------|-----------------|-------------|--------------|
| | | | j | | | |
| | | | | Limodra | Karjan | |
| | | | | Pasodranavagam | Bhairav | |
| | | | | Timba | Amboli | |
| | | | | | Abrama | |
| | | | | | Navipardi | |
| | | | | | Derod | |
| | | | | | Ghala | |
| | | | | | Dhoranpardi | |
| | | | | | Dungra | |
| | | | | | Dhatva | |
| | | | | | Machhi | |
| | | | | | Nansad | |
| | | | | | Dethli | |
| | | | | | Shampura | |
| | | | Olpad | Bhandut | Dihen | Olpad |
| | | | | Kaslakhurd | Kundalana | Asnabad |
| | | | | Kachhol | Achharna | Barbodhan |
| | | | | Tena | Kamaj | Pariya |
| | | | | Kasla Bujrang | Saroli | Vadod |
| | | | | Saras | Talad | Sandhiar |
| | | | | Vadila | Sherdi | Sithana |
| | | | | Sejpura | Orma | Masma |
| | | | | Halthisa | | Andhi |
| | | | | Matkol | | Kalipur |
| | | | | Bhatgam | | Isanpur |
| | | | | Ansad | | |
| | | | | Sarsana | | |
| | | | | Sondla Mitha | | |
| | | | | Morthana | | |
| | | | | Takrama | | |
| | | | | Hasanpor | | |
| | | | | Kanbhai | | |
| | | | | Obhla | | |
| | | | | Bharunda | | |
| | | | | Shekhpor | | |
| | | | Choryasi | Bharthana(Vesu) | | Mora |
| | | | | Althan | | Mota Varacha |
| | | | | Pandesara | | Amroli |
| | | | | Kosmada | | Utran |
| | | | | Govlak | | Vanata |

| | | | | | | | |
|---|-------------------|------------|-------|------------|----------|------------|-----------------|
| | | | | | Vanasva | | |
| | | | | | Bhatlai | | |
| | | | | | Dsmka | | |
| | | | | | Mora | | |
| | | | | | Suwali | | |
| | | | | | Abhva | | |
| 9 | 9,50,950(CUS) | 180.5 5 | 56.40 | Mandv i | Vadod | Roswad | Rataniya |
| | 26,927(CUM) | | | | Nogama | Khanjroli | Umarsad i |
| | | | | | Kevadiya | Khaler | Vareli |
| | | | | | Veghi | Kosdi | Kamlapo r |
| | | | | | Naren | Godwadi | Vareth |
| | | | | | Kharoli | Unn | Rajvad |
| | | | | | Nanpora | Vagnera | Karoli |
| | | | | | Andharti | Varethi | Unn |
| | | | | | | Vadi | Virpor |
| | | | | | | | Vanakla |
| | | | | Bardoli | Haripora | Nnsura | Kadod |
| | | | | | | | Uchrael |
| | | | | Kamre j | | Galudi | Gior |
| | | | | | | Limodara | Karjan |
| | | | | | | Pasodra | Bhaira |
| | | | | | | Navagam | Amroli |
| | | | | | | Timba | Abrama |
| | | | | | | | Navi pardi |
| | | | | | | | Derod |
| | | | | | | | Ghala |
| | | | | | | | Dhoranp ardi |
| | | | | | | | Dungra |
| | | | | | | | Dhatva |
| | | | | | | | Machi |
| | | | | | | | Nansad |
| | | | | | | | Dethli |
| | | | | | | | Shampur a |
| | | | | Olpad | Lavachha | Bhandut | Dihen |
| | | | | | Admor | Kaslakhurd | Kundlan a |
| | | | | | Kudiyan | Kachhol | Achharn a |
| | | | | | Kuwad | Tena | Kmarej |

| | | | | | | | |
|----|--------------------|------------|-------|--------------|--------------|---------------------|---------------|
| | | | | | Kapasai | KaslaBujrang | Saroli |
| | | | | | Kunbhari | Saras | Talad |
| | | | | | Naghoi | Vadila | Sherdi |
| | | | | | | Sejpor | Orama |
| | | | | | | Hathisa | |
| | | | | | | Motkol | |
| | | | | | | Bhat Gam | |
| | | | | | | Asnad | |
| | | | | | | Sarsana | |
| | | | | | | Sondhla Mitha | |
| | | | | | | Morthana | |
| | | | | | | Takarma | |
| | | | | | | Hasnpor | |
| | | | | | | Kanbhai | |
| | | | | | | Obhala | |
| | | | | | | Bharunda | |
| | | | | | | Shekhpor | |
| | | | | | | Lavacha | |
| | | | | Chorya si | Limbayat | Bharthana (Vesu) | |
| | | | | | Parvat | Althan | |
| | | | | | Sanla Ahemad | Pandesara | |
| | | | | | | Kosmada | |
| | | | | | | Govalak | |
| | | | | | | Vanasva | |
| | | | | | | Bhatlai | |
| | | | | | | Damka | |
| | | | | | | Mora | |
| | | | | | | Suwali | |
| | | | | | | Abhva | |
| 10 | 10,00,000(CU S) | 185.7 0 | 56.40 | Mandv i | Tarsada | Vadod | Roswad |
| | 28,317(CUM) | | | | Varjakhan | Nogama | Khanjrol i |
| | | | | | Uncha-Mala | Kevadia | Khaler |
| | | | | | Bedkuva | Vegi | Kosdi |
| | | | | | | Naren | Godavri |
| | | | | | | Kharoli | Unn |
| | | | | | | Nandpur | Vagnera |
| | | | | | | Andhatri | Varethi |
| | | | | | | | Vadi |
| | | | | Bardoli | Zarimora | Haripura | Nasura |
| | | | | | Vadhvaniya | | |
| | | | | Kamre | Kathor | | Ghaludi |

| | | | | | | |
|--|--|--|--------------|---------------|-------------|---------------------|
| | | | j | | | |
| | | | | Kathodra | | Limodra |
| | | | | Kolibharthana | | Pasodra |
| | | | | Netrang | | Navaga m |
| | | | | | | Timba |
| | | | Olpad | Delasa | Lavachha | Bhandut |
| | | | | Sondhlkhara | Admor | Kaslakh urd |
| | | | | Mirzapor | Kudiyana | Kachhol |
| | | | | Mindhi | Kuwad | Tena |
| | | | | Morbhava | Kapasi | Kasla Bujrang |
| | | | | Syabha | Kumbhari | Saras |
| | | | | | Naghoi | Vadila |
| | | | | | Koba-pardi | Sejpura |
| | | | | | Kachhab | Hathisa |
| | | | | | Delasa | Matkoi |
| | | | | | | Bhatgam |
| | | | | | | Ansad |
| | | | | | | Sarsana |
| | | | | | | Sndhla Mitha |
| | | | | | | Morthan a |
| | | | | | | Takarma |
| | | | | | | Hasanpo r |
| | | | | | | Kanbhai |
| | | | | | | Obhala |
| | | | | | | Bharund ra |
| | | | | | | Shekhpo r |
| | | | Chorya si | Abhva | Limbayat | Bhartha n (Vesu) |
| | | | | Magob | Parvat | Althan |
| | | | | Khajod | Sanla Hemad | Pandesar a |
| | | | | Althan | | Kosmad a |
| | | | | Sarsana | | Govalak |
| | | | | Pandesara | | Vansava |
| | | | | Kosamba | | Bhatlai |
| | | | | | | Damka |
| | | | | | | Mora |

| | | | | | | | |
|----|--------------------|------------|-------|--------------|--|-------------------|----------------|
| | | | | | | | Suvali |
| | | | | | | | Abhva |
| 11 | 11,00,000(CU S) | 187. 20 | 57.20 | Mandv i | | Tarsada | Vadod |
| | 31,148(CUM) | | | | | Varjakhan | Nogama |
| | | | | | | Uncha-Mala | Kevadiy a |
| | | | | | | Bedkuva | Veghi |
| | | | | | | | Naren |
| | | | | | | | Kharoli |
| | | | | | | | Nandapu r |
| | | | | | | | Andhatri |
| | | | | Bardoli | | Zarimora | Haripur a |
| | | | | | | VAdhvaniya | |
| | | | | Kamre j | | Kathor | |
| | | | | | | Kathodra | |
| | | | | | | Koli Bharthana | |
| | | | | | | Netrang | |
| | | | | Olpad | | Delsaa | Lavachh a |
| | | | | | | Sondhlakhara | Admor |
| | | | | | | Mirzapor | Kudhiya na |
| | | | | | | Mindhi | Kuwad |
| | | | | | | Morbhava | Kapasi |
| | | | | | | Sayabha | Kunbhar i |
| | | | | | | | Naghoi |
| | | | | | | | Koba- Pardi |
| | | | | | | | Kachhab |
| | | | | Chorya si | | Abhva | Limbaya t |
| | | | | | | Mogab | Parvat |
| | | | | | | Khajod | Sanla Hemad |
| | | | | | | Althan | |
| | | | | | | Sarsana | |
| | | | | | | Pandesara | |
| | | | | | | Kosmba | |
| 12 | 12,00,000(CU S) | 188.7 0 | 57.51 | Mandv i | | | Tarsada |

| | | | | | | | |
|--|-------------|--|--|--------------|--|--|-------------------|
| | 33,980(CUM) | | | | | | Varjakh an |
| | | | | | | | Uncha- Mala |
| | | | | | | | Bedkuva |
| | | | | Bardoli | | | Zarimor a |
| | | | | | | | Vadhvan iya |
| | | | | Kamre j | | | Kathor |
| | | | | | | | Kathodr a |
| | | | | | | | Kolibhar thana |
| | | | | | | | Netrang |
| | | | | Olpad | | | Delasa |
| | | | | | | | Sondhla khara |
| | | | | | | | Mirzapo r |
| | | | | | | | Mindhi |
| | | | | | | | Morbhav a |
| | | | | | | | Syabha |
| | | | | Chorya si | | | Abhva |
| | | | | | | | Magob |
| | | | | | | | Khajod |
| | | | | | | | Althan |
| | | | | | | | Sarsana |
| | | | | | | | Pandesar a |
| | | | | | | | Kosamb a |

Cyclone:

Choryasi, Olpad & Surat City are cyclone affected talukas of the District.

| Olpad Taluka | Village Name | Affected Population | Village Name | Affected Population |
|--------------|-----------------|------------------------|-----------------|------------------------|
| | Pardi Zakhri | 1233 | Bhadol | 1657 |
| | Nesh | 500 | Kadrama | 1811 |
| | Karanj | 1652 | Bhadunt | 1191 |
| | Mor | 5646 | Pinjrat | 5173 |

| | | | | |
|-------------------|------------|------|------------|------|
| | Jinod | 1142 | Tena | 1119 |
| | Mirzapur | 838 | Koba | 854 |
| | Bhagva | 679 | Thothab | 700 |
| | Dandi | 2758 | Ansad | 1607 |
| | Delasa | 1256 | Kamroli | 944 |
| | Kapasi | 365 | Hathisa | 473 |
| | Kudiyana | 1740 | Kuvad | 1086 |
| | Lavachha | 2218 | Saras | 2562 |
| | Admor | 1076 | Kachhol | 498 |
| | Mandroi | 1616 | Barbodhan | 2496 |
| Choryasi | | | | |
| | Vansva | 2239 | Hazira | 6934 |
| | Rajgari | 1176 | Mora | 6115 |
| | Suvali | 900 | Damka | 4386 |
| | Junagam | 2000 | | |
| Surat City | | | | |
| | Dumas | 7735 | Vanta | 661 |
| | Bhimpore | 7553 | Magdalla | 5257 |
| | Sultanabad | 3263 | Abhva | 2881 |
| | Gaviar | 2449 | Rundh | 2155 |
| Mangrol | | | | |
| | Boriya | 132 | Mandan | 156 |
| | ghodbaar | 147 | selaarpur | 152 |
| | khareda | 122 | dholikui | 125 |
| | kantvaav | 192 | amarkui | 132 |
| | paataldevi | 130 | sandhara | 152 |
| | oganisi | 123 | kevadikund | 102 |

Earthquake:

Surat District is under Seismic Zone III. The Surat City, Choryasi, Olpad, Kamrej taluka have a multistoried buildings. Bardoli , Palsana having some multistoried buildings. These are the vulnerable talukas for Earthquake.

Old Surat city is PAUL type and old constructions. It requires retrofitting. Even in slum areas the construction is from clay, not to follow the constructions guidelines. So, surat city is highly vulnerability of Surat city is higher than all other taluka.

In taluka level most of the construction was not regulated by government authorities. Even in lower economic conditions, the equipments/Material used was not qualitative. The constructions unable to suffer the earthquake.

Mandvi, Mahuva, Umarpada taluka having in constructions of using wood & leaf .So, it decrease the vulnerability.

Road Accidents:

Surat passes Broad-gauge railway lines 1.Western railways from Ahmedabad to Mumbai and 2.Central railway lines from Surat-Bhusaval-Amaravati lines. The national Highway No-8 Ahmedabad-Mumbai passes from Surat. Most of the cities & Villages of the district connected with state highways and local roads. Surat city, Mangrol, Olpad are vulnerable for road accidents.

Mangrol taluka passes N.H-8, kim char rasta to Tadkeshwar passes state road, Kosamba char rasta to Jankhvav passes state road. Here the places occur highly accidents in the district. Most accidents occur on NH-8 at this taluka. Mangrol taluka having 12 km Broad gauge lines and 33 km Nero gauge lines passes, there is no over bridge on it. N.H-8 & state road passes most of the vehicles from Hazira Notified Area with gas, Chemical & Highly Flammable gases/Liquids. So, these are these are the points which are highly vulnerable for Road & Chemical disaster.

Olpad passes S.H -6 on turn of NH-6 at Vadoli Chokadi and Cyanide turn occurs most of Road accidents. Near saroli bridge is also sensitive for road accidents.

Palsana and Bardoli pass NH 8 & 6. Near Kadodara chokadi is sensitive for road accidents.

Industries & Chemical Hazards:

Choryasi taluka is highly vulnerable for Industries & Chemical Hazards because of Hazira Notied Area and MAH units under the area. As per the district offsite plan, it affects the 11 villages the detail is mention below.

Choryasi Taluka:

| Sr. No | Name of Village | Population | Sr. No | Name of Village | Population |
|--------|-----------------|------------|--------|-----------------|------------|
| 1 | Limla | 5675 | 7 | Dumas | 7266 |
| 2 | Mora | 7416 | 8 | Sunvali | 2573 |
| 3 | Kawas | 2215 | 9 | Rajgari | 1009 |
| 4 | Bhatpor | 2327 | 10 | Damka | 4039 |
| 5 | Ichchapor | 5144 | 11 | Bhatlai | 1303 |
| 6 | Vanta | 472 | | | |

Mangrol Taluka:

| Sr. No. | Village | Population | Village | Population |
|------------------------|-------------|------------|-------------|------------|
| ઓદોગિક / કેમિકલ 16 ગામ | પીપોદરા, | ૩૪૨ | મોટાબોરસરા, | ૪૨૩ |
| | કોસંબા, | ૩૦૨ | પાલોદ, | ૩૨૩ |
| | ધામડોદ, | ૪૦૧ | કોઠવા, | ૩૨૪ |
| | નાનાબોરસરા, | ૩૨૧ | સિયાલજ, | ૩૫૭ |

| | | | |
|-----------|-----|------------|-----|
| મહુવેજ, | ૨૯૬ | મોટીનરોલી, | ૨૫૬ |
| લીંડીયાત, | ૩૪૨ | વાલેસા, | ૨૩૨ |
| ભાટકોલ, | ૨૦૨ | નાનીનરોલી | ૫૮૮ |
| લીમોદરા | ૨૫૬ | કુંવારદા, | ૫૬૪ |

Cities pandsara, Udhana, Limbayat & athwa zone is vulnerable for chemical disaster. In pandesara, Udhna the powerlooms, Dying-Printing Mills& Embroidery factories creates the chemical disaster. Some of them storage the chemical which created the chemical disaster probability. Athwa & Rander zone is near the Hazira Notifies Area, & also near having Magdalla port. Resident near the area vulnerable for chemical & Industrial Hazard. The detail of affected villages and evacuation centers which is linked from Offsite Plan Surat-2010.

Gas pipelines, Chemical plants & industrial units in olpad taluka. The cyanide chemical company which produce potassium cyanide, Potassium pharos cyanide, Sodium cyanide, Sodium Pharos cyanide & other chemicals, If any hazard occurs in the company the processing chemical ammonia gas & other dangerous gases creates the disaster in nearby area.

Nuclear Power Radiation :

Bardoli Taluka:

| ન્યૂક્લીયર એકમનું નામ | 16 કી.મી.ના પરિઘમાં આવતા ગામોની યાદી | પરિઘમાં આવતી કુલ વસ્તી (૨૦૧૧ વસ્તી ગણતરી આધારે) |
|---|--|---|
| કાકરાપાર વિદ્યુત અણુમથક તા. માંડવી . જી. સુરત | (૧) બાલ્દા (૮થી ૧૬કિમી.) (૨)બામણી (૮થી ૧૬કિમી.) (૩) ભેંસુદલા (૮થી ૧૬કિમી.) (૪) હરિપુરા (૮થી ૧૬કિમી.) (૫) જુનવાણી (૮થી ૧૬કિમી.) (૬) કડોદ (૮થી ૧૬કિમી.) (૭) મઢી (૮થી ૧૬કિમી.) (૮) મસાડ (૫થી ૮કિમી.) (૯) મીંચાવાડી (૮થી ૧૬કિમી.) (૧૦)નવીભટલાવ (૮થી ૧૬કિમી.) (૧૧) નસુરા (૫થી ૮કિમી.) (૧૨) ઓરગામ (૮થી ૧૬કિમી.) (૧૩) સમથાણ (૮થી ૧૬કિમી.) (૧૪) સીંગોદ (૮થી ૧૬કિમી.) (૧૫) સુરાલી (૮થી ૧૬કિમી.) | ૨૭૯૦ ૧૪૨૨ ૧૩૦૧ ૧૭૧૪ ૭૫૪ ૧૧૪૦૧ ૭૬૫૦ ૨૦૫૪ ૫૩૫ ૮૭૦ ૮૪૦ ૧૬૩૨ ૧૧૧૭ ૨૧૭૨ ૮૨૮૬ |

| | | |
|--|------------------------------|------|
| | (૧૬) ઉછરેલ (૮ થી ૧૬ કિમી.) | ૧૩૧૪ |
| | (૧૭) વઢવાણીયા (૫ થી ૮ કિમી.) | ૧૭૯૭ |
| | (૧૮) વાંસકુઈ (૫ થી ૮ કિમી.) | ૩૦૧૦ |
| | (૧૯) રજવાડ (૫ થી ૮ કિમી.) | ૧૪૬૮ |

Annexure: 3

List of resources available in district

૩) જિલ્લામાં ઉપલબ્ધ સ્ત્રોતોની યાદી:

(તાકીદના સમયે વાહનો, અર્થમુવર્સ જેવા ભારે વાહનો ભાડેથી આપતી બહારની સંસ્થાઓની યાદી)

| ક્રમ | કોન્ટ્રાક્ટરનું નામ અને સરનામું | વાહનોની વિગત |
|------|---|---|
| ૧ | એન.વી.પટેલ અર્થમુવર્સ, ૧૪, ગાયવાલા ચેમ્બર, કિજ્જા પેટ્રોલપંપની બાજુમાં, સુરત મો.૯૮૨૫૧૩૩૧૫૧ | એસ્કેવેટર/ટીપર ટ્રેઈલર |
| ૨ | જયકિશન બી. રેતીવાલા, મક્કાઈ સર્કલ, નાનપુરા સુરત, ફોન નં.૨૪૩૯૯૯૩, મો.૯૮૨૫૧૨૦૪૩૯, | એસ્કેવેટર/ટીપર ટ્રેઈલર |
| ૩ | કિષ્ણા અર્થ મુવર્સ, અનાથ બાળાશ્રમનીએ સામે, કતારગામ રોડ, સુરત, ફોન નં. રે.સી.૨૫૧૦૫૯૬, મો.૯૮૨૫૧૪૪૩૩૬ | એસ્કેવેટર/પોકલેન/ટ્રેક્ટર /રોડ રોલર/ટીપર ટ્રેઈલર |
| ૪ | શ્રી હિન્દુસ્તાન ફેબ્રિકેશન, ૧૦૭, ચાંસેલર, આર.ટી.ઓ.સામે, રીંગ રોડ સુરત, ફોન નં.૨૬૬૦૧૮૪, રે.સી.૨૨૩૬૭૧૧ મો.૯૮૯૮૦૧૩૬૩૫ | એસ્કેવેટર/પોકલેન/મોબાઈલ કેઈન/ટીપર ટ્રેઈલર/ટીપર ટ્રક |
| ૫ | યંત્રમેન ઓટોમેક પ્રા.લી. ૨૪,૨૫, એન.જે.કોમ્પ્લેક્સ, પુણા કુભારીયા રોડ, મગોબ ગામ પાસે, સુરત , ફોન નં.(ઓ)૮૨૪૨૧૨૯, મો.૯૮૨૪૦૭૯૮૭૫, ૯૮૨૪૦૩૬૦૪૫ | એસ્કેવેટર |
| ૬ | ભવસાગર ટ્રેડર્સ, સુતરીયા બિલ્ડીંગ, નાનપુરા, સુરત ફોન રેસી.૨૪૭૪૬૧૩, મો.૯૮૨૫૧૧૩૯૭૩ | ટીપર ટ્રેઈલર/ટીપર ટ્રક |
| ૭ | સુકાની ટ્રાણ-સ્પોર્ટ અને ટ્રાવેલ્સ, યુ-૧૬, ટ્રેડ હાઉસ, આલ્હાબાદ બેંક પાસે, નાનપુરા, સુરત ફોન નં.(ઓ).૨૪૭૬૮૨૦, રેસી.૨૪૭૬૦૦૯, મો.૯૮૨૫૧૪૮૭૫૧ | એસ્કેવેટર/રોડ રોલર/ટીપર ટ્રેઈલર/ટીપર ટ્રક |
| ૮ | બી.કે પરમાર, ૧લો માળ, ૧-સી, એપાર્ટ, જલદર્શન સામે નાનપુરા, સુરત ફોન નં.-૨૪૭૦૭૯૭, ૨૪૭૧૮૧૪, ૩૦૦૩૩૯૯ ,રેસી:-૨૩૩૮૦૦૪ , મો.નં.૯૮૨૪૧૩૮૧૩૮, ૯૮૨૪૧૩૩૦૦૩૩ | એસ્કેવેટર/પોકલેન/કાઈલ ટાઈપ/ટીપર ટ્રેઈલર/ટીપર ટ્રક |

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| ૯ | તીરૂપતી કન્સ્ટ્રક્શન, નાનપુરા, સુરત ફોન નં.૨૪૬૨૮૫૮, મો.૯૮૨૫૧૨૭૦૧૮ | ટીપર ટ્રક/રોડ રોલર |
| ૧૦ | એચ.જી.સારંગ, નાનપુરા, સુરત. ફોન નં.૨૪૬૨૮૫૮ | ટીપર ટ્રક/રોડ રોલર |
| ૧૧ | ધનસુખભાઈ રેતીલાલ, સ્વામી વિવેકાનંદ બ્રીજ પાસે, મક્કાઈપુલ, નાનપુરા, સુરત મો.૯૮૨૫૧૨૦૪૩૯ | લોડર/એસ્કેવેટર/ટીપર ટ્રક |
| ૧૨ | અમિત ટ્રાન્સપોર્ટ સુતરીયા બિલ્ડીંગ, સિવિલકોર્ટની સામે, નાનપુરા, સુરત ફો નં.૦૨૬૧-૩૪૭૪૬૧૩, મો.૯૮૨૫૧૧૩૯૭૩ | ટીપર ટ્રક |
| ૧૩ | રાકેશકુમાર દુબે પ્લોટ નં.૧૨, ગોવર્ધનનગર, બમરોલી રોડ, પાંડેસરા, સુરત, | ટીપર ટ્રક |
| ૧૪ | શાંતિ કોર્પોરેશન ૧૪, ગુરૂનગર સોસાયટી, વરાછા રોડ, સુરત મો.૯૪૨૯૦૫૭૨૦૧ | ટીપર ટ્રક |
| ૧૫ | શ્રી નવીનભાઈ આગાવાળા, ૨૦૧, યશ એપાર્ટમેન્ટ, મક્કાઈપુલ, નાનપુરા, સુરત મો.૯૮૨૫૯૦૦૭૦૭ | વ્યક્તિગત બોટ |
| ૧૬ | અમૃતભાઈ નવસારી વાલા યશ એપાર્ટમેન્ટ, મક્કાઈપુલ, નાનપુરા, સુરત | વ્યક્તિગત બોટ |
| ૧૭ | મોહનભાઈ પી. ટંડેલ ઓંજલ માછીવાડ, નુતન ફળીયા, જી.નવસારી મો.૯૯૭૪૨૨૬૭૪૧ | વ્યક્તિગત બોટ |
| ૧૮ | અમીતભાઈ પી. ટંડેલ ઓંજલ માછીવાડ, નુતન ફળીયા, જી.નવસારી મો.૯૯૭૪૨૨૬૭૪૧ | વ્યક્તિગત બોટ |
| ૧૯ | કીર્તીભાઈ પી.કોન્ડ્રાકટર પેરેડાઈઝ એપાર્ટમેન્ટ, દિવાળીબાગ, અઠવાલાઈન્સ, સુરત | વ્યક્તિગત બોટ |
| ૨૦ | કીલકો કાં, હજીરા | મોબાઈલ કેઈન |
| ૨૧ | સાર્થી કેઈન એન્ડ કાર્ગો, હજીરા ઓ.એન.જી.સી ચાર રસ્તા, સુરત | મોબાઈલ કેઈન |
| ૨૨ | પોલોમી રોડ બિલ્ડર્સ યુ-૧, અમરકૃતિ એપાર્ટમેન્ટ, પાર્લે પોઈન્ટ, સુરત ફોન.ઓ.૨૨૨૯૩૧૬, રે.સી.૨૨૨૦૬૯૬, મો.૯૮૨૫૦૧૫૨૭૪, | મોબાઈલ કેઈન/લોદર એસ્કેવેટર/પોકલેન/ટીપર ટ્રક/ટીપર ટ્રેઈલર/રોડ |

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| | ૯૩૭૬૯૭૮૭૯, ૯૯૨૫૦૦૩૮૫૬, ૯૯૦૯૯૫૫૬૨૦ | રોલર |
| ૨૩ | બાવરી અર્થ મુવર્સ એલ-૧૪, જે.કે.ટાવર, અડાજણ રોડ, સુરત મો.૯૮૨૫૧૪૨૩૮૫ | એક્સેવેટર |
| ૨૪ | શ્રી કોર્પોરેશન ૭૫, સરદાર કોમ્પ્લેક્સ, અડાજણ રોડ સુરત ફોન નં.(ઓ).૨૬૮૬૩૪૨ રે.સી.૨૨૫૮૫૭૮, મો.૯૮૨૫૧૧૩૫૮૮ | લોડર/પોકલેન/ચેઈન ડોઝર |
| ૨૫ | સોના કંટ્રક્શન એલ-૭, જે.કે.ટાવર સબજેલ પાસે રીંગરોડ સુરત.ફોન નં.(ઓ).૨૬૩૨૯૧૭, રે.સી.૨૪૭૩૦૧૦ મો.૯૮૨૫૧૧૫૭૭૬ | એક્સેવેટર/ટ્રીપર ટ્રક |
| ૨૬ | ગાયત્રી ટ્રાન્સપોર્ટ ૧/૬૭૭૨, રામજીમંદિરની ગલીમાં ખારવાવાડ, નાનપુરા,સુરત ફોન નં.૨૪૬૨૮૬૫, મો.૯૮૭૯૦૩૮૨૫૮ | ટ્રીપર ટ્રક/રોડ રોલર |
| ૨૭ | પટેલ અર્થમુવર્સ કૈલાસનગરપાસે, મજુરાગેટ, સુરત | લોડર/એક્સેવેટર/ટ્રીપર ટ્રક/ ટ્રીપર ટ્રેઈલર |
| ૨૮ | ચંદુભાઈ સી.પટેલ ગાયવાલા ચેમ્બર, ઉધના મેઈન રોડ, કિષ્ણા પેટ્રોલપંપની બાજુમાં, સુરત | લોડર/એક્સેવેટર/ટ્રીપર ટ્રેઈલર |
| ૨૯ | ડી.ડી.કન્સ્ટ્રક્શન(દિપેશ) ડી-૩૦૩, ગ્રીન એવન્યુ ફ્લેટ એલ.પી સવાણી રોડ, અડાજણ સુરત. મો.૯૮૨૫૨૨૧૨૧૧ | લોડર/એક્સેવેટર/ટ્રીપર ટ્રક/ ટ્રીપર ટ્રેઈલર |
| ૩૦ | ભરતકુમાર એચ.પટેલ, ૧૫૪-ગોપાલ નગર ગુ.હા.બોર્ડની સામે. પાંડેસરા, સુરત. મો.૯૮૨૫૪૨૦૦૬૪ | એક્સેવેટર/ટ્રીપર ટ્રક/ ટ્રીપર ટ્રેઈલર |
| ૩૧ | યુ.એન.આઈ.કન્સ્ટ્રક્શન ૪/એફ, નટરાજ એપાર્ટમેન્ટ, ભાગ-૦૨, મોટા મંદિર, ભાગાતળાવ, સુરત. મો.૯૮૨૪૧૧૨૦૬૨ | લોડર/એક્સેવેટર/ટ્રીપર ટ્રક/ ટ્રીપર ટ્રેઈલર |
| ૩૨ | ભવાની કન્સ્ટ્રક્શન ૧૮, ગીરધર દ્વારા સોસાયટી વિભાગ-૦૪, નિતિનગરની બાજુમાં અલથાણ, સુરત મો.૯૮૨૫૧૨૧૫૦૪ | એક્સેવેટર/ટ્રીપર ટ્રક/રોડ રોલર |
| ૩૩ | મહેન્દ્ર એ.પટેલ ડી-૪, ઈન્દ્રલોક બંગ્લોઝ, નિતી નગર નજીક, સાંઈ આશીષ | એક્સેવેટર/ટ્રીપર ટ્રક/રોડ રોલર |

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| | સોસાયટી, અલથાણ, સુરત મો.૯૭૨૫૧૨૫૩૩૪ | |
| ૩૪ | આર.એસ.શિંગાળા, લેક્યુ એપાર્ટમેન્ટ, મહાદેવ ફળીયુ, કતારગામ, સુરત. મો.૯૦૯૯૦૫૭૪૨૧, | એક્સેવેટર/ટ્રીપર ટ્રક/ ટ્રીપર ટ્રેઈલર |
| ૩૫ | એ.પી.પટેલ ૨૫/૨૬,બ્રહ્માણીનગર, સાયણ રોડ, સુરત, મો.૯૮૨૫૬૦૩૪૮૧ | એક્સેવેટર/ટ્રીપર ટ્રક/ ટ્રીપર ટ્રેઈલર |
| ૩૬ | નિલમ કન્સ્ટ્રક્શન ૩૦૩, વિશ્વનગર સોસાયટી, સાયણ રોડ, સુરત મો.૯૮૨૫૨૩૪૮૧૨ | એક્સેવેટર/ટ્રીપર ટ્રક/ ટ્રીપર ટ્રેઈલર/રોડ રોલર |
| ૩૭ | મારૂતિનંદન સુરેશભાઈ, અડાજણ, સુરત મો.૮૧૪૧૮૩૧૮૪૯ | પોકલેન્ |
| ૩૮ | સંધુ ટ્રાન્સપોર્ટ (પ્રકાસભાઈ) ફોન નં.૦૨૬૧-૨૮૪૦૫૮૦ મો.૯૩૭૪૫૫૩૨૧૭ | પોકલેન મશીનમાટેના ટ્રેઈલર |
| ૩૯ | બાબા રામદેવ ટ્રેઈલર સર્વિસ(ઓમ પ્રકાસભાઈ) મો.૯૮૨૫૬૮૭૩૪૪ | પોકલેન મશીનમાટેના ટ્રેઈલર |
| ૪૦ | પાર્થ કાર્ટીક મો.૯૮૭૯૧૫૬૫૯૨ | પોકલેન/લોડર |
| ૪૧ | ગુડલક કેઈન સર્વિસ (સલીમભાઈ પટેલ) મો.૯૮૨૫૨૯૫૭૮૬ | કેઈન |
| ૪૨ | રાજુભાઈ મો.૯૮૨૫૩૩૭૬૦૩, ૯૮૯૮૬૧૪૭૦૮ | કેઈન |
| ૪૩ | બાબા મો.૯૮૨૫૪૩૪૨૧૬, ૯૯૧૩૮૨૨૨૦ | કેઈન |
| ૪૪ | કિશોર મો.૯૮૨૫૧૪૨૮૮૦ | કેઈન |
| ૪૫ | ગુજરાત મો.૯૯૧૩૫૯૮૯૮૧ | કેઈન |
| ૪૬ | સહકાર બ્રેક ડાઉન એન્ડ કેઈન સર્વિસ ચિંકા ઈન્ટરસીટી, ભક્તિધામ મંદિર સામે, પુણા કુંભારીયા રોડ, સુરત. મો.૯૮૭૯૭૪૫૬૧૭ | કેઈન |
| ૪૭ | પ્રવિણ કેઈન હાયરીંગ કાં. ૭, કુસુમચંદ્ર પાર્ક ઓ.એન.જી. ચાર રસ્તા ઈચ્છાપોર, સુરત. ફોન નં.૦૨૬૧ ૨૮૪૧૫૨૧ મો.૯૮૨૫૧૯૯૪૮૯, ૯૭૧૨૯૯૯૮૯૯ | કેઈન |
| ૪૮ | ઝા કેઈન હાયરીંગ કાં, ૭, કુસુમચંદ્ર પાર્ક ઓ.એન.જી. ચાર રસ્તા ઈચ્છાપોર, સુરત. ફોન નં.૯૮૨૫૫૫૦૩૮૩, ૯૭૨૭૭૮૪૯૯૪, ૯૭૨૪૯૮૧૩૮૩ | કેઈન |

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| ૪૯ | અમન લીફ્ટર(કરીમ કાસમ જરીયા) એલ.જી.૧૮, મેઘમપુર પ્લાઝા, જૈન ફરસાણની સામે, પાર્લે પોઈન્ટ, સુરત ફોન નં.૦૨૬૧-૨૨૫૮૫૧૯, મો.૯૮૨૫૩૧૭૮૬૨, ૯૪૪૦૦૪૧૩૮૯, | કેઈન |
| ૫૦ | અસિક ભાનવડીયા નં.૩૦૦૯, ચાંદણી ચોક કોમ્પ્લેક્સ, મોટી સિનેમા પાસે, બેગમપુરા સુરત ફોન નં.૦૨૬૧-૨૪૦૧૨૦૦, મો.૯૮૨૫૪૬૦૦૦૦ | કેઈન |
| ૫૧ | પાટીલ ટ્રાન્સપોર્ટ એન્ડ કેઈન સર્વિસ. શોપ નં.૦૧, અશોક કોમ્પ્લેક્સ, એકડમી સ્કુલ સામે, ઉધના સ્ટેશન, મેઈન રોડ, ઉધના, સુરત, મો.૯૬૬૨૦૨૮૩૪૮ | કેઈન |
| ૫૨ | પાટીલ કેઈન સર્વિસ શ્રીરામ કોમ્પ્લેક્સ શોપનં.૦૨, ખાડી ન્યુ બ્રીજ, બોમ્બે ડાઈંગ રોડ, જી.આઈ.ડી.સી પાંડેસરા, સુરત, મો. ૯૯૦૯૨૯૪૧૩૧ | કેઈન |
| ૫૩ | સાઈની ડીઝલ પાવર સર્વિસ પ્રા.લી. પ્લોટ નં.૯૯૨, રોડ નં.૮૭, જી.આઈ.ડી.સી, સચીન, સુરત. ફોન નં.૦૨૬૧-૨૩૯૮૪૭૫, મો.૯૮૨૪૦૫૫૫૯૧ | કેઈન |
| ૫૪ | દક્ષ ઈક્વીપમેન્ટ જી-૩૨, સીટી સેન્ટર, સોસીયો સર્કલ બમરોલી રોડ, સુરત. મો.૯૯૭૮૮૪૪૭૪૪ | કેઈન |
| ૫૫ | ભારત કેઈન સર્વિસ શ્રીજી કોમ્પ્લેક્સ ઊન પાટીયા, મેઈન રોડ, ઉધના સુરત, મો.૯૮૨૫૩૧૮૪૦૫ | કેઈન |
| ૫૬ | રાજ કેઈન સર્વિસ, ૨૭૫, સુર્ભી સરીતા સોસ. ટી.વી.એચ.સર્વિસ સેન્ટર, ઉધના, સુરત. મો.૯૮૨૫૩૩૬૦૩ | કેઈન |

Emergency Vehicles Facilities Held by MHA

| Sr. No. | Name of factories | Emergency Vehicles/Equipment | | | | | | Phone Nos. |
|--|---------------------------------|------------------------------|------|--------|-----|---------|-------|-------------------|
| | | Bus | Truk | Dumper | JCB | Tractor | Crane | |
| SURAT-1 : HAZIRA-OLPAD- MANGROL-MANDVI & UMARAPADA INDUSTRIAL POCKET | | | | | | | | |
| 1 | Essar Steel Ttd. (HBI Division) | 2 | - | 4 | 2 | 1 | 1 | (0261)6682400/277 |
| 2 | Essar Steel Ttd. (HRC Division) | 2 | - | 4 | 2 | 1 | 1 | (0261)6682400/277 |

| | | | | | | | | |
|----|--|-----|----|---|---|---|---|--|
| 3 | Gujarat Industrial Power Company Ltd. | 1 | - | - | - | - | - | (02629)261063 |
| 4 | Hazira ING Pvt. Ltd. | 1 | 2 | - | - | - | - | (0261) 3051009 |
| 5 | Hindustan Chemicals Company | 2 | - | - | - | - | - | (0261) 221681-81 |
| 6 | Krishak bharati Co- Operative Ltd | 2 | 5 | 1 | 1 | - | 2 | (0261)2802489 |
| 7 | National thermal power corporation | 3 | - | - | - | - | - | (0261)2860290,2860375,28604445-46 M,9426810249 |
| 8 | Natural Glass & Allied Industries. PVT. Ltd. | yes | - | - | - | - | - | (02629)231373 |
| 9 | Oil & Natural Gas Corporation Ltd. Hazira plant. | | | | | | | (0261) 2815500 |
| 10 | Reliance Industries Ltd. Village Mora | 2 | 5 | 5 | - | - | 4 | (0261) 04135999 |
| 11 | Sayan Vibhag khand Udhog sahakari Mandali Ltd. | - | 50 | - | - | 2 | - | (02361) 242149, 242278 |

Surat-2 CHORYASI TALUKA EXCEPT HAZIRA AREA, PALASANA-BARDOLI-MAHUVA-KAMREJ INDUSTRIAL POCKET

| | | | | | | | | |
|---|---|-----|---|---|---|---|-----|---------------------------------|
| 1 | Spectrum Dyes & Chemicles Pvt. Ltd. | 2 | - | - | - | 1 | - | (02622) 264259 |
| 2 | Colourtex Industries Pvt. Ltd. S. No. 80, (Bhestan) | 1 | - | - | - | 1 | 2 | (0261-02890122, 2890775 |
| 3 | Colourtex Industries Pvt. Ltd. (GIDC Sachin) | 1 | - | - | - | - | 1 | 91- 261- 2399666 |
| 4 | Navin Fluorine Industries Ltd. | - | - | - | - | - | 1 | 0261- 2890326-0329 |
| 5 | Chalthan Vibhag khand Udhog sahakari Mandali Ltd. | - | - | - | - | 1 | 2 | (02628) 281050, 281112 |
| 6 | Kamrej Vibhag khand Udhog sahakari Mandali Ltd. | 1 | - | - | - | - | 3 | 02621-234500, 234600 |
| 7 | Shree Madhi Vibhag khand Udhog | Yes | - | - | - | - | Yes | (02622) 241048, 242141, 241013. |

| | | | | | | | | |
|---|----------------------------|------------------------|---|---|---|---|---|---------------------------------|
| | sahakari Ltd. | Mandali | | | | | | |
| 8 | Mahuva khand sahakari Ltd. | Vibhag Utpadak Mandali | 1 | - | - | - | 1 | 2 |
| | | | | | | | | (02625) 256846, 256838, 256839. |

Taluka wise details of available rescue equipments:

| Sr. No. | Taluka Name | Life Jacket | Life Buoy | Palmist | Small Rope | Big Rope | Tent | Generator |
|---------|-------------|-------------|-----------|---------|------------|----------|------|-----------|
| 1 | Bardoli | 50 | 55 | 100 | 100 | 100 | 40 | 1 |
| 2 | Choryasi | 140 | 140 | 70 | 14 | 42 | 00 | |
| 3 | Kamrej | 100 | 69 | 15 | 60 | 50 | 00 | |
| 4 | Mahuva | 90 | 50 | 00 | 10 | 50 | 40 | 1 |
| 5 | Mandvi | 100 | 175 | 95 | 79 | 210 | 40 | |
| 6 | Mangrol | 230 | 80 | 00 | 00 | 03 | 00 | |
| 7 | Olpad | 150 | 75 | 00 | 49 | 60 | 40 | |
| 8 | Palsana | 76 | 00 | 45 | 00 | 08 | 50 | |
| 9 | Surat City | 220 | 300 | 00 | 50 | 100 | 00 | |
| 10 | Umarpada | 23 | 43 | - | 00 | 00 | 50 | |
| Total | | 1179 | 987 | 325 | 362 | 623 | 260 | 2 |

Annexure: 4
Infrastructure in the District (Public and Private)

| Name | Number |
|---------------------------------------|--------|
| Anganwadi | |
| Primary School | |
| Secondary and Higher Secondary School | |
| General Hospital | 1 |
| CHC | 14 |
| PHU | 1 |
| PHC | 56 |
| Sub Centre | 358 |
| grant in Aid Hospital | 6 |
| Medical College | 2 |
| Veterinary Hospital | |
| Theator | |
| | |

List of Boats that can be used for rescuing work

| ક્રમ | તાલુકો | બોટનું નામ | બોટ માલિકનું નામ | સરનામું | સંપર્ક નંબર | નોંધ |
|------|----------|------------|-------------------|-------------------------------|---------------|---|
| ૧ | ચોર્યાસી | કાવેરી | પરશોત્તમભાઈહરીભાઈ | ટીમલા સ્ટ્રીટ, રાંદેર, સુરત-૫ | ૦૨૬૧-૨૭૭૩ ૬૩૦ | તમામ બોટ ધારકોશ્રી ખલાસી ટીમલા પંચ,રાંદેર ના સભ્યો હોય તથા તમામ બોટ ધારકો પંચના આદેશ થી કામગીરી કરતા હોય,બોટ માલિકનું સરનામું તથા સંપર્ક નંબર |
| ૨ | ચોર્યાસી | સરીતા | નારણભાઈ ડાયાભાઈ | | | |
| ૩ | ચોર્યાસી | નર્મદા | રમેશભાઈ ભાણાભાઈ | | | |
| ૪ | ચોર્યાસી | લક્ષ્મી | નારણભાઈ ગણેશભાઈ | | | |
| ૫ | ચોર્યાસી | મહાલક્ષ્મી | ફકીરભાઈ હરીભાઈ | | | |

| | | | | | | |
|---|----------|---------|-------------------|--|--|--------------|
| ૬ | ચોર્યાસી | અલકનંદા | હરીલાલભાઈ લાલાભાઈ | | | એકજ આવેલ છે. |
| ૭ | | | | | | |
| ૮ | | | | | | |

| | | | | | |
|----|----------|-------------------|----------------------------|---------------------------|-------------|
| ૧૦ | ઓલપાડ | જય સિગોતેરમા | કેતન રામજીભાઈ પટેલ | મોટુ ફળિયું, મોર | ૯૮૨૫૩-૭૨૦૩૪ |
| ૧૧ | ઓલપાડ | જય સિગોતેરમા-૧ | હિરેન જીતેન્દ્રભાઈ પટેલ | મોટુ ફળિયું, મોર, | ૯૯૧૩૯-૫૦૯૨૫ |
| ૧૨ | ચોર્યાસી | જલારામ કૃપા | બીપીન સી ખલાસી | ડુમસ, નવસાથ, | ૭૩૮૩૬-૧૦૨૪૮ |
| ૧૩ | ચોર્યાસી | સાંઈ કૃપા | રમણ સુખાભાઈ ખલાસી | ડુમસ, વડવા સ્ટ્રીટ | ૯૯૯૮૨-૨૩૮૪૩ |
| ૧૪ | ઓલપાડ | હરીઓમ પ્રસાદ | સોમજી બુધાભાઈ ખલાસી | પીપરીયું ફળિયું, દાંડી | ૯૯૧૩૭-૧૭૬૧૩ |

Boats can be useful for flood rescue

| ક્રમ | તાલુકાનું નામ | બોટનો પ્રકાર | બોટ કોના હસ્તક છે? ગામનું નામ | બોટની સંખ્યા | સંપર્ક નંબર |
|------|------------------|----------------------------------|--|-----------------|-------------|
| ૧ | માંડવી | ટીનબોટ બિન યાંત્રિક OBM Fiber | બુણધા વિભાગ મત્સ્યોદ્યોગ સહકારી મંડળી લિ. બુણધા | ૩૫ | ૯૮૭૯૭૭૩૫૪૭ |
| ૨ | માંડવી | ટીનબોટ બિન યાંત્રિક | વીસડાલિયા વિભાગ મત્સ્યોદ્યોગ સહકારી મંડળી ઈસર-જસુભાઈ | | ૯૭૨૬૧૬૬૬૭૯ |
| ૩ | માંડવી | ટીનબોટ બિન યાંત્રિક OBM Fiber | કેવડી મત્સ્યોદ્યોગ સહકારી મંડળી કેવડી | ૧૦ | ૯૬૮૭૨૭૬૦૫૦ |
| ૪ | ચોર્યાસી | IBM યાંત્રિક | ડુમ્મસ-અભિષેકભાઈ | ૩૦ | ૯૮૨૫૬૩૭૫૨૮ |

| | | | | | |
|---|----------|--------------|-----------------|----|---------------|
| ૫ | ચોર્યાસી | IBMયાંત્રિક | ભીમપોર પ્રભુભાઈ | ૨૧ | ૯૮૨૪૯૭૬૮૩૪ |
| ૬ | ચોર્યાસી | બિન યાંત્રિક | રાંદેર | ૬૦ | ૦૨૬૧-૨૭૭૩ ૬૩૦ |

Annexure: 5
Medical Facilities at Major Industries

MEDICAL FACILITIES AT MAJOR INDUSTRIES

| Sr. No. | Name of Factories | Name of Medical Officer | Medical & Paramedical Staff | No. Of Ambulance | No. Of Beds in OHC | No. Of Oxygen Cylinders | Telephone Nos. | |
|---------|---------------------------------|-------------------------------------|-----------------------------|------------------|--------------------|-------------------------|----------------|---|
| | | | | | | | Office | Resident |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Essar Steel Ltd. (HBI Division) | Dr. bhaumik Acharya | 3+4 | 1 | 3 | 15 | 6685105 | M. 98791100761 |
| 2 | Essar Steel Ltd. (HRC Division) | Dr. bhaumik Acharya. | 3+4 | 1 | 3 | 15 | 6685105 | 98791100761 |
| 3 | KRIBHCO | Dr. paundrick Dr. Payoj Tivari / | 5+15 | 2 | 6 | 15 | - | 9825147602 9825147683 2802588/ 2803651 |
| 4 | Reliance Industries Ltd. Hazira | DrAditya Palival | 7+25 | 4 | 4 | 35 | (0261) 3035070 | 998215116 |
| 5 | Larson & Turbo Ltd. Bhatha | DrJayant Patel | 1+3 | 1 | 2 | 3 | 2862160 | M. 9879200601 |

| | | | | | | | | |
|----|--|--------------------------------|-----|---|---|---|----------------------------|---------------|
| 6 | ONGC-Hazira | Dr. (Mr.)Sudipta Saha | 2+4 | 1 | 2 | 4 | 2875826 | M. 9427504543 |
| 7 | Navin Fluorine Industries Ltd. Bhestan | Dr. Kirti Chappia | 1+4 | 1 | 2 | 9 | 2890250, 2890325, 38690327 | - |
| 8 | NTPC-Kawas | Dr. Ranjna Karketa/Dr.A.K .Dey | 3+8 | 1 | 2 | 2 | 2860373, 2860862 | M. 9427107438 |
| 9 | Spectrum Dyes-Palasana | Dr. Vimesh jani | - | 1 | - | 1 | 0261 3225954 | M. 9825500438 |
| 10 | Essar Power Ltd. Hazira | Dr. Deepak Mehta | - | - | - | - | 6685101 | M. 9879100110 |
| 11 | Gujarat Industries Power Company Limited | Dr. C.R. Joshi | - | - | - | - | 02629-261095 | M. 9909925321 |
| 12 | Hindustan Chemicals Company | Dr.Jagiwala | - | - | - | - | - | 9427884157 |
| 13 | Hindustan Petroleum Corporation Ltd. | Dr. B. G. Dodia | - | - | - | - | 0261-2782707 | 9825141857 |

MEDICAL FACILITIES AT MAJOR INDUSTRIES

| Sr. No . | Name of Factories | Name of Medical Officer | Medical & Paramedical Staff | No. Of Ambulance | No. Of Beds in OH C | No. Of Oxygen Cylinders | Telephone Nos. | |
|----------|--|-------------------------|-----------------------------|------------------|---------------------|-------------------------|----------------|--------------|
| | | | | | | | Office | Resident |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 14 | Indian Oil Corporation Ltd. (LPG Bottling Plant) | Dr. B. G. Dodia | - | - | - | - | 0261-2782707 | M. 982514185 |
| 15 | Natural Glass & Allied Industries. PVT. Ltd. | Dr. Vijay V Panchal | - | - | - | - | - | 9825116005 |

| | | | | | | | | |
|----|---|--|---|---|---|---|-------------------------------|----------------------------|
| 16 | Sayan Vibhag khand Udhog sahakari Mandali Ltd. | Dr. Dhirajbhai Rupapara | - | - | - | - | - | |
| 17 | Colourtex Industries Pvt. Ltd. S. No. 80, (Bhestan) | Dr. Dawra | - | - | - | - | - | 9879344354 |
| 18 | Colourtex Industries Pvt. Ltd. (GIDC Sachin) | Dr. Dawra | - | - | - | - | - | 9879344354 |
| 19 | Nova Dyestuff Industries Pvt. Ltd | Dr. B.G. Dodia | - | - | - | - | 0261 2782707 | |
| 20 | Kamrej Vibhag khand Udhog sahakari Mandali Ltd. | Dr. Manojbhai Patel | - | - | - | - | - | |
| 21 | Shree Madhi Vibhag khand Udhog sahakari Mandali Ltd. | Dr. Devendrku mar S. Harssola | - | - | - | - | Ext- 212 | 02622 241013/ 242883 |
| 22 | Mahuva Vibhag khand Utpadak sahakari Mandali Ltd. | Dr. Sunilbhai Dahyabhai Patel | - | - | - | - | 02625- 256846, Ext. 291 | |

MEDICAL FACILITIES AT MAJOR INDUSTRIES

| Sr. No. | Name of Factories | Name of Factories Medical Officer | Medic al & Parme dical Staff | No. Of Amb ulanc e | No. Of Beds in OH C | No. Of Oxyge n Cylin ders | Telepho ne Nos. | |
|------------|------------------------------------|---|--|--------------------------------|------------------------------------|---------------------------------------|--------------------|-------------------|
| | | | | | | | Office | Resident |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Essar Steel Ttd. (HBI Division) | Dr. bhaumik Acharya | 3+4 | 1 | 3 | 15 | 6685105 | M. 98791100761 |
| 2 | Essar Steel Ttd. (HRC Division) | Dr. bhaumik Acharya. | 3+4 | 1 | 3 | 15 | 6685105 | 98791100761 |

| | | | | | | | | |
|----|--|--|------|---|---|----|--------------------------------------|---|
| 3 | KROBHCO | Dr. paundrick Dr. Payoj Tivari / | 5+15 | 2 | 6 | 15 | - | 9825147602 9825147683 2802588/ 2803651 |
| 4 | Reliance Industries Ltd. Hazira | DrAditya Palival | 7+25 | 4 | 4 | 35 | (0261) 3035070 | 998215116 |
| 5 | Larson & Turbo Ltd. Bhatha | DrJayant Patel | 1+3 | 1 | 2 | 3 | 2862160 | M. 9879200601 |
| 6 | ONGC- Hazira | Dr. (Mr.)Sudipta Saha | 2+4 | 1 | 2 | 4 | 2875826 | M. 9427504543 |
| 7 | Navin Fluorine Industries Ltd. Bhestan | Dr. Kirti Chappia | 1+4 | 1 | 2 | 9 | 2890250, 2890325, 3869032 7 | - |
| 8 | NTPC- Kawas | Dr. Ranjna Karketa/Dr.A.K .Dey | 3+8 | 1 | 2 | 2 | 2860373, 2860862 | M. 9427107438 |
| 9 | Spectrum Dyes- Palasana | Dr. Vimesh jani | - | 1 | - | 1 | 0261 3225954 | M. 98255 00438 |
| 10 | Essar Power Ltd. Hazira | Dr. Deepak Mehta | - | - | - | - | 6685101 | M. 98791 00110 |
| 11 | Gujarat Industries Power Company Limited | Dr. C.R. Joshi | - | - | - | - | 02629- 261095 | M. 99099 25321 |
| 12 | Hindustan Chemicals Company | Dr.Jagiwala | - | - | - | - | - | 9427884157 |
| 13 | Hindustan Petroleum Corporation Ltd. | Dr. B. G. Dodia | - | - | - | - | 0261- 2782707 | 9825141857 |

MEDICAL FACILITIES AT MAJOR INDUSTRIES

| Sr. No. | Name of Factories | Name of Medical Officer | Medical & Parmedical Staff | No. Of Ambulance | No. Of Beds in OHC | No. Of Oxygen Cylinders | Teleph hone Nos. | |
|---------|-------------------|-------------------------|----------------------------|------------------|--------------------|-------------------------|------------------------|----------|
| | | | | | | | Office | Resident |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

| | | | | | | | | |
|----|--|-------------------------------|---|---|---|---|-------------------------|----------------------|
| 14 | Indian Oil Corporation Ltd. (LPG Bottling Plant) | Dr. B. G. Dodia | - | - | - | - | 0261-27827 07 | M. 982514185 |
| 15 | Natural Glass & Aliied Industries. PVT. Ltd. | Dr. Vijay V Panchal | - | - | - | - | - | 9825116005 |
| 16 | Sayan Vibhag khand Udhog sahakari Mandali Ltd. | Dr. Dhirajbhai Rupapara | - | - | - | - | - | |
| 17 | Colourtex Industries Pvt. Ltd. S. No. 80, (Bhestan) | Dr. Dawra | - | - | - | - | - | 9879344354 |
| 18 | Colourtex Industries Pvt. Ltd. (GIDC Sachin) | Dr. Dawra | - | - | - | - | - | 9879344354 |
| 19 | Nova Dyestuff Industries Pvt. Ltd | Dr. B.G. Dodia | - | - | - | - | 0261 27827 07 | |
| 20 | Kamrej Vibhag khand Udhog sahakari Mandali Ltd. | Dr. Manojbhai Patel | - | - | - | - | - | |
| 21 | Shree Madhi Vibhag khand Udhog sahakari Mandali Ltd. | Dr. Devendrku mar S. Harssola | - | - | - | - | Ext-212 | 02622 241013/ 242883 |
| 22 | Mahuva Vibhag khand Utpadak sahakari Mandali Ltd. | Dr. Sunilbhai Dahyabhai Patel | - | - | - | - | 02625-25684 6, Ext. 291 | |

MEDICAL FACILITIES AT MAJOR INDUSTRIES

| Sr . No . | Name of Factories | Name of Factories Medical Officer | Medical & Parmedical Staff | No. Of Ambulance | No. Of Beds in OH | No. Of Oxygen Cylinders | Telepho ne Nos. | |
|-----------|-------------------|-----------------------------------|----------------------------|------------------|-------------------|-------------------------|-----------------|----------|
| | | | | | | | Office | Resident |

| | | | | | C | | | |
|----|--|----------------------------------|------|---|---|----|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Essar Steel Ttd. (HBI Division) | Dr. bhaumik Acharya | 3+4 | 1 | 3 | 15 | 6685105 | M. 98791100761 |
| 2 | Essar Steel Ttd. (HRC Division) | Dr. bhaumik Acharya. | 3+4 | 1 | 3 | 15 | 6685105 | 98791100761 |
| 3 | KROBHC O | Dr. paundrick Dr. Payoj Tivari / | 5+15 | 2 | 6 | 15 | - | 9825147602 9825147683 2802588/ 2803651 |
| 4 | Reliance Industries Ltd. Hazira | DrAditya Palival | 7+25 | 4 | 4 | 35 | (0261) 3035070 | 998215116 |
| 5 | Larson & Turbo Ltd. Bhatha | DrJayant Patel | 1+3 | 1 | 2 | 3 | 2862160 | M. 9879200601 |
| 6 | ONGC-Hazira | Dr. (Mr.)Sudipta Saha | 2+4 | 1 | 2 | 4 | 2875826 | M. 9427504543 |
| 7 | Navin Fluorine Industries Ltd. Bhestan | Dr. Kirti Chappia | 1+4 | 1 | 2 | 9 | 2890250 , 2890325 , 38690327 | - |
| 8 | NTPC-Kawas | Dr. Ranjna Karketa/Dr.A. K.Dey | 3+8 | 1 | 2 | 2 | 2860373 , 2860862 | M. 9427107438 |
| 9 | Spectrum Dyes-Palasana | Dr. Vimesh jani | - | 1 | - | 1 | 0261 3225954 | M. 9825500438 |
| 10 | Essar Power Ltd. Hazira | Dr. Deepak Mehta | - | - | - | - | 6685101 | M. 9879100110 |
| 11 | Gujarat Industries Power Company | Dr. C.R. Joshi | - | - | - | - | 02629-261095 | M. 9909925321 |

| | | | | | | | | |
|----|--------------------------------------|-----------------|---|---|---|---|--------------|------------|
| | Limited | | | | | | | |
| 12 | Hindustan Chemicals Company | Dr.Jagiwala | - | - | - | - | - | 9427884157 |
| 13 | Hindustan Petroleum Corporation Ltd. | Dr. B. G. Dodia | - | - | - | - | 0261-2782707 | 9825141857 |

| Sr . No. | Name of Factories | Name of Factories Medical Officer | Medical & Parmedic al Staff | No. Of Ambulan ce | No. Of Bed s in OH C | No. Of Oxygen Cylinde rs | Telepho ne Nos. | |
|-------------|---|--|--------------------------------------|-------------------------|----------------------------------|-----------------------------------|--------------------|--------------|
| | | | | | | | Office | Resident |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 14 | Indian Oil Corporation Ltd. (LPG Bottling Plant) | Dr. B. G. Dodia | - | - | - | - | 0261-2782707 | M. 982514185 |
| 15 | Natural Glass & Aliied Industries. PVT. Ltd. | Dr. Vijay V Panchal | - | - | - | - | - | 9825116005 |
| 16 | Sayan Vibhag khand Udhog sahakari Mandali Ltd. | Dr. Dhirajbhai Rupapara | - | - | - | - | - | |
| 17 | Colourtex Industries Pvt. Ltd. S. No. 80, (Bhestan) | Dr. Dawra | - | - | - | - | - | 9879344354 |

| | | | | | | | | |
|----|--|-------------------------------|---|---|---|---|------------------------|----------------------|
| 18 | Colourtex Industries Pvt. Ltd. (GIDC Sachin) | Dr. Dawra | - | - | - | - | - | 9879344354 |
| 19 | Nova Dyestuff Industries Pvt. Ltd | Dr. B.G. Dodia | - | - | - | - | 0261 2782707 | |
| 20 | Kamrej Vibhag khand Udhog sahakari Mandali Ltd. | Dr. Manojbhai Patel | - | - | - | - | - | |
| 21 | Shree Madhi Vibhag khand Udhog sahakari Mandali Ltd. | Dr. Devendrkumar S. Harssola | - | - | - | - | Ext- 212 | 02622 241013/ 242883 |
| 22 | Mahuva Vibhag khand Utpadak sahakari Mandali Ltd | Dr. Sunilbhai Dahyabhai Patel | - | - | - | - | 02625-256846, Ext. 291 | |

MEDICAL FACILITIES AT MAJOR INDUSTRIES

| Sr. No. | Name of Factories | Name of Factories Medical Officer | Medical & Parmedical Staff | No. Of Ambulance | No. Of Beds in OHC | No. Of Oxygen Cylinders | Telephone Nos. | |
|---------|---------------------------------|-----------------------------------|----------------------------|------------------|--------------------|-------------------------|----------------|-------------|
| | | | | | | | Office | Resident |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Essar Steel Ttd. (HBI Division) | Dr. bhaumik Acharya | 3+4 | 1 | 3 | 15 | 6685105 | 98791100761 |

| | | | | | | | | |
|----|---|-----------------------------------|------|---|---|----|----------------------------------|--------------------------|
| 2 | Essar Steel Ttd. (HRC Division) | Dr. bhaumik Acharya. | 3+4 | 1 | 3 | 15 | 6685105 | 98791100761 |
| 3 | KROBHCO | Dr.undrick Dr. Payoj T | 5+15 | 2 | 6 | 15 | -2802588/ 2803651 | 9825147602 9825147683 |
| 4 | Reliance Industries Ltd. Hazira | DrAditya Palival | 7+25 | 4 | 4 | 35 | (0261) 3035070 | 998215116 |
| 5 | Larson & Turbo Ltd. Bhatha | DrJayant Patel | 1+3 | 1 | 2 | 3 | 2862160 | M. 9879200601 |
| 6 | ONGC- Hazira | Dr.Sudipta Saha | 2+4 | 1 | 2 | 4 | 2875826 | 9427504543 |
| 7 | Navin Fluorine Industries Ltd. Bhestan | Dr. Kirti Chappia | 1+4 | 1 | 2 | 9 | 2890250, 2890325, 38690327 | - |
| 8 | NTPC- Kawas | Dr. Ranjna Karketa/D r.A.K.Dey | 3+8 | 1 | 2 | 2 | 2860373, 2860862 | 9427107438 |
| 9 | Spectrum Dyes- Palasana | Dr.Vimesh jani | - | 1 | - | 1 | 0261 3225954 | 98255 00438 |
| 10 | Essar Power Ltd. Hazira | Dr.Deepak Mehta | - | - | - | - | 6685101 | 98791 00110 |
| 11 | Gujarat Industries Power Company Limited | Dr. C.R. Joshi | - | - | - | - | 02629- 261095 | 99099 25321 |
| 12 | Hindustan Chemicals Company | Dr.Jagiwal a | - | - | - | - | - | 9427884157 |
| 13 | Hindustan Petroleum Corporation Ltd. | Dr. B. G. Dodia | - | - | - | - | 0261- 2782707 | 9825141857 |

MEDICAL FACILITIES AT MAJOR INDUSTRIES

ONGC INFORMATIONS IN HAZIRA REGION

(1) ONGC, HAZIRA

| SR.N O. | INFORMATI ON TYPE | INFORMATIONS |
|------------|----------------------|--|
| 1. | Factory's Name | Oil and Natural Gas Corporation Ltd |
| 2. | Address | Hazira Gas Processing Complex, Surat |
| 3. | OHC Information | Location : Inside ONGC Hazira Plant, we have Plant Dispensary and Occupational Health Centre |

| | | | | | | | |
|-----|-----------------------------------|--|----------------------|----------------------|-------------------------|-----------------|-----|
| 4. | FMO IN OHC-(03) | <i>SN</i> | <i>Name</i> | <i>Qualification</i> | <i>Post Held</i> | <i>Duties</i> | |
| | | 1 | Dr Bharti Pandey | MBBS, DGM(MS), | I/C- M.O. | FMO | |
| | | 2 | Dr Sudipta Saha | MBBS, DIH, AFIH | Sr- M.O. | FMO | |
| | | 3 | Dr Siddhart Mitra | MBBS | M.O. | FMO | |
| | | 4 | Dr Azad Kumar | MBBS, CIH | Contract M.O. | 14 Days Off | On- |
| | | 5 | Dr Prakash Javi | MBBS, CIH | Contract M.O. | 14 Days Off | On- |
| | | 6 | Dr Mukesh Jain | MBBS | Contract | General | |
| 5. | Other Staff in OHC | <i>S.N.</i> | <i>Names</i> | <i>Post Held</i> | <i>Duties</i> | | |
| | | 1 | Ashish Pacchhigar | Pharmacist | Fulltime | | |
| | | 2 | Minesh Patel | Dresser | Contract | | |
| | | 3 | Dharmesh Patel | Dresser | Contract | | |
| | | 4 | Chetan Patel | Dresser | General | | |
| | | 5 | Smitha Patel | Nurse | Contract | | |
| | | 6 | Vipul Patel | Pharmacist | Contract | | |
| 6. | E'gency Drugs & Equipments in OHC | <i>SN</i> | <i>E'gency Drugs</i> | <i>Quantity</i> | <i>Equipments</i> | <i>Quantity</i> | |
| | | 1 | Inj.T.T. | | O ₂ cylinder | | |
| | | 2 | Inj Hydrocortisone | | Bag /Mask for CPR | | |
| | | 3 | Inj Avil | | Suction Machine | | |
| | | 4 | Inj Diclofenac | | Glucometer | | |
| | | 5 | Inj Ranitidine | | ECG Machine | | |
| | | 6 | Inj Ondansetron | | Spirometer | | |
| | | 7 | Inj Diazepam | | Audiometer | | |
| | | 8 | I.V fluids | | Vision Tester | | |
| | | 9 | Oral Emergency-Drugs | | Suturing Materials | | |
| 7. | Ambulance No. | Already provided | | | | | |
| 8. | Antidotes Kept | <i>S.N.</i> | <i>Chemicals</i> | <i>Antidotes</i> | | | |
| | | 1 | Hydrogen Sulphide | Cyanide Antidote Kit | | | |
| 9. | E'gency Lab . Facility | Not available | | | | | |
| 10. | Bed Capacity of OHC | 04- <i>Patient Observation Beds</i> for <i>Primary Care</i> including first aid only | | | | | |
| 11. | Specialists in OHC | No specialists are there in OHC. | | | | | |

(1) RELIANCE INDUSTRIES ,HAZIRA

| SR.N O. | INFORMATIO N TYPE | INFORMATIONS | | | | | |
|--------------------|------------------------------|---|---------------------|----------------------|----------------------|---------------|--|
| 1. | Factory's Name | Reliance industries limited, Hazira | | | | | |
| 2. | Address | Bhatha, Mora, Hazira, Surat | | | | | |
| 3. | OHC Information | Location - Reliance industries limited, Hazira Implies to – which Factory –PETROCHEMICAL | | | | | |
| 4. | FMO IN OHC- (08) | SN | Name | Qualification | Post Held | Duties | |
| | | 1 | Dr Aditya Paliwal | MBBS,DGM(MS) | C.M.O. | FMO | |
| | | 2 | Dr. Rakesh S Bansal | MBBS, MD,CIH | M.O. | FMO | |
| | | 3 | Dr. Amar Kapadia | MBBS, CIH | M.O. | FMO | |
| | | 4 | Dr Umang Kothari | MBBS, CIH | M.O. | FMO | |
| | | 5 | Dr Praveen Vaghmar | MBBS, CIH | M.O. | FMO | |
| | | 6 | Dr Palak Patel | MBBS, CIH | M.O. | FMO | |
| | | 7 | Dr Jignesh Patel | MBBS | M.O. | FMO | |
| | | 8 | Dr Vimal J Patel | MBBS | M.O. | FMO | |
| 5. | Other Staff in OHC | S.N. | Names | Post Held | | | |
| | | 1 | Laxman Solanki | Nursing Coordinator | | | |
| | | 2 | Bimal Joshi | Male Nurse | | | |
| | | 3 | Emmanual | Male Nurse | | | |
| | | 4 | Bipin Jose | Male Nurse | | | |
| | | 5 | Pratik Patel | Male Nurse | | | |
| | | 6 | Ramesh I. Patel | Ambulance Driver | | | |
| | | 7 | Ramesh D Patel | Ambulance Driver | | | |
| | | 8 | Raman | Ambulance Driver | | | |
| | | 9 | Madhukar C | Ambulance Driver | | | |
| | | 10 | Harish | Ambulance Driver | | | |
| | | 11 | Jagdish | Ambulance Driver | | | |
| | | 12 | Ashish | Ambulance Driver | | | |
| | | 13 | 04 | Ward Boy | | | |

| | | | | | | |
|-----|-----------------------------------|--|----------------------|----------------------|---------------------------|------------------|
| 6 | E'gency Drugs & Equipments in OHC | <i>SN</i> | <i>E'gency Drugs</i> | <i>Quantit y</i> | <i>Equipments</i> | <i>Quanti ty</i> |
| | | 1 | Inj Lasix | | Ambu Bag | |
| | | 2 | Inj Dextrose 25% | | Defibrillator | |
| | | 3 | Inj Fabrinil | | Diaphotrine | |
| | | 4 | Inj N.S./DNS | | ECG Machine | |
| | | 5 | Inj Zobid | | Eye Wash Kit | |
| | | 6 | Inj Phenargan | | Intubation Kit | |
| | | 7 | Inj Dobutamine | | Multipara Cardiac Monitor | |
| | | 8 | Inj Fortwin | | Nebulizer | |
| | | 9 | Inj.Adrenaline | | O ₂ - Cylinder | |
| | | 10 | Inj.Epsoline | | Oxygen Concentrator | |
| | | 11 | Inj Isolyte M | | Spirometer | |
| | | 12 | Inj Atropine | | PO2 Analyser | |
| | | 13 | Inj Avil | | Suction Machine | |
| | | 14 | Oral Emergency-Drugs | | Suturing Materials | |
| | | 15 | Inj. Aminophylline | | Ventilator | |
| 16 | - | | Vision Tester | | | |
| 7. | Ambulance No. | 02-shown separately | | | | |
| 8. | Antidotes Kept | <i>S.N.</i> | <i>Chemicals</i> | <i>Antidotes</i> | | |
| | | 1 | Cyanide | Cyanide Antidote Kit | | |
| 9. | E'gency Lab . Facility | Biochemistry and Heamatology, Radiology Services | | | | |
| 10. | Bed Capacity of OHC | 4+1 (emergency room) | | | | |
| 11. | Specialists in OHC | Names Qualification | | | | |

(2) COLOURTEX –PANDESARA -OTHER INFORMATION

| Sr.No . | Information Type | Informations |
|----------------|-------------------------|---------------------|
| | | |

| | | | | | | | |
|-----|-----------------------------------|---|-------------------|-----------------------|-------------------|----------|--|
| 1. | Factory's Name | Colourtex Industries Ltd., (Unit-2) Pandesar | | | | | |
| 2. | Address | Survey No.: 80, Bhestan, TPS-21 FP-11, 12, 15, 16, 21, 23, 29 Plot No.: 158/1, 158/3 to 6, 158/14 to 23, 437, 438/1 to 4, 439/1, 564, 565, Survey No. 50-52/1 Paikee, Plot no. 17/1 to 17/16, G.I.D.C., Pandesara, Surat -394 221 | | | | | |
| 3. | OHC Information | Location : Inside premises Implies to – which Factory : Colourtex Industries LTD. (Unit-2) | | | | | |
| 4. | FMO IN OHC- | SN | Name | Qualification | Post Held | Duties | |
| | | 1 | Dr L.V. Davara | MBBS.AFIH | FMO | FMO | |
| 5. | Other Staff in OHC | S.N. | Names | Post Held | | | |
| | | 1 | Binayak Chhatai | Male Nurse | | | |
| 6. | E'gency Drugs & Equipments in OHC | SN | E'gency Drugs | Quantity | Equipments | Quantity | |
| | | 1 | Inj Vit C | | O2 Cylinder | | |
| | | 2 | Inj Dextrose 25% | | First Aid Kit | | |
| | | 3 | Inj Fabrinil | | Water Jel Blanket | | |
| 7. | Ambulance No. | GJ 5 AU 5732 | | | | | |
| 8. | Antidotes Kept | S.N. | Chemicals | Antidotes | | | |
| | | 1 | Cyanide | Cyanide -Antidote Kit | | | |
| | | 2 | Methamoglobinemia | Inj . Methylene Blue | | | |
| | | 3 | Acid Ingestion | Milk of Magnesia | | | |
| 9. | E'gency Lab . Facility | --- | | | | | |
| 10. | Bed Capacity of OHC | 7 Bed | | | | | |
| 11. | Specialists in OHC | Names ---Nil Qualification- | | | | | |

NTPC

| Sr.No. | Information Type | Informations | | | | |
|--------|-----------------------------------|------------------------------|----------------------|----------------------|-------------------|-----------------|
| 1. | Factory's Name | NTPC | | | | |
| 2. | Address | NTPC HOSPITAL KAWAS | | | | |
| 3. | OHC Information | Location NTPC KAWAS | | | | |
| 4. | FMO IN OHC- | <i>SN</i> | <i>Name</i> | <i>Qualification</i> | <i>Post Held</i> | <i>Duties</i> |
| | | 1 | D.Amit Kumar De | MBBS.AFIH | FMO | FMO |
| | | 2 | Dr.Anita Saha | MBBS | ACMO | FMO |
| 5. | Other Staff in OHC | Names- Post Held- | | | | |
| 6. | E'gency Drugs & Equipments in OHC | <i>SN</i> | <i>E'gency Drugs</i> | <i>Quantity</i> | <i>Equipments</i> | <i>Quantity</i> |
| | | 1 | Inj Effcorline | | Defibrillator | |
| | | 2 | Inj Atropine | | ECG | |
| | | 3 | Inj Sodabibarbonate | | Sanction Machine | |
| | | 4 | Inj.Adrenaline | | | |
| | | 5 | Inj.Avil | | | |
| 7. | Ambulance No. | 02 | | | | |
| 8. | Antidotes Kept | Chemicals -Antidotes OXYGEN, | | | | |
| 9. | E'gency Lab . Facility | YES | | | | |
| 10. | Bed Capacity of OHC | 13 | | | | |
| 11. | Specialists in OHC | <i>SN</i> | <i>Name</i> | <i>Qualification</i> | <i>Post Held</i> | <i>Duties</i> |
| | | 1 | Dr Rekha Thoma | MD (Pediatrics) | Paediatrician | |
| | | 2 | Dr Ranjana Kerketta | MD (Medicine) | Physician | |

NAVIN FLUORINE INTERNATIONAL LTD.

| Sr.No . | Information Type | Informations |
|---------|------------------|-----------------------------------|
| 1. | Factory's Name | Navin Fluorine International Ltd. |

| | | | | | | | |
|-----|-----------------------------------|---|-----------------------|---------------------------|----------------------------|----------------------|--|
| 2. | Address | Bhestan, Surat | | | | | |
| 3. | OHC Information | Location –Within company premises.Working 24x7. | | | | | |
| 4. | FMO IN OHC- | <i>S N</i> | <i>Name</i> | <i>Qualificat ion</i> | <i>Post Held</i> | <i>Duti es</i> | |
| | | 1 | Dr. Kirti H. Chhapiya | MBBS.CI H | FMO | FM O | |
| 5. | Other Staff in OHC | <i>SN</i> | <i>Names</i> | <i>Post Held</i> | | | |
| | | 1 | Ajit G Patel | Officer- OHC | | | |
| | | 2 | Prem Prakesh M Gupta | Officer- OHC | | | |
| | | 3 | Suresh Indoria | Officer- OHC | | | |
| | | 4 | Vinod Kumar Gupta | Officer- OHC | | | |
| | | 5 | Ritesh P Kosambia | Lab Technician | | | |
| | | 6 | Dahya C Solanki | Helper | | | |
| 6. | E'gency Drugs & Equipments in OHC | <i>SN</i> | <i>E'gency Drugs</i> | <i>Quanti ty</i> | <i>Equipments</i> | <i>Quant ity</i> | |
| | | 1 | Inj Primacort | | O ₂ Regenerator | | |
| | | 2 | Inj Atropine | | Ambo Bag | | |
| | | 3 | Inj Deriphylline | | Sanction Machine | | |
| | | 4 | Inj.Adrenaline | | Pulse Oxymeter | | |
| | | 5 | Inj. Dexona | | Suction Machine | | |
| | | 6 | Inj.Fortwin | | Dressing- Equipements | | |
| 7. | Ambulance No. | GJ 5- YY- 2959 | | | | | |
| 8. | Antidotes Kept | <i>SN</i> | <i>Chemical</i> | <i>Antidote</i> | | | |
| | | 1 | HF | Cal. Gluconate | | | |
| | | 2 | Cyanides | Methyline Blue | | | |
| 9. | E'gency Lab . Facility | Laboratory,24 Hrs. | | | | | |
| 10. | Bed Capacity of OHC | 6 for observation Casualty,No indoor Facility. | | | | | |
| 11. | Specialists in | None | | | | | |

NCH-BASE HOSPITAL

Names of Doctors with Qualifications and Posts held - who will serve either as a Member of Management Team or as an Observer.

| Sr. No. | Name of the Doctor | Post Held | Qualification |
|---------|--------------------|----------------|-------------------|
| 1 | Dr. P. B. Gupta | Professor | M.D. |
| 2 | Dr. Pravin Sharma | Ass. Professor | M.S. |
| 3 | Dr. Roshan Bafna | M.O. | D.G.O. , M.B.B.S. |
| 4 | Dr. Mitali Mahadik | M.O. | M.B.B.S. |

KRIBHCO, Hazira

| SR. NO | INFORMATION TYPE | INFORMATIONS | | | | | | |
|--------|------------------|---|--------------------|----------------------------|------------------|---------------|--|--|
| 1. | Factory's Name | Krishak Bhararti Cooperative Limited | | | | | | |
| 2. | Address | P.O, Kribhconagar, Surat, PIN 394515 | | | | | | |
| 3. | OHC Information | Location –Within the plant premises and KRIBHCO hospital in the vicinity of 2.5 km in the township. | | | | | | |
| 4. | FMO IN OHC- | <i>SN</i> | <i>Name</i> | <i>Qualification</i> | <i>Post Held</i> | <i>Duties</i> | | |
| | | 1 | DR. S.R. Poundarik | MBBS, DA, PGCIH | AGM-Medical | FMO | | |
| | | 2 | DR. Payoj Tewari | MBBS, PGDMCH, AFIH, PGCCHM | DY.CMO | FMO | | |
| | | 3 | DR. Jyoti Ralhan | MBBS, PGCIH | DY. CMO | FMO | | |
| | | 4 | DR. Varsha Maradia | MBBS, DGO | M.O. | FMO | | |
| | | All doctors look the plant fac and kribhco hospital on | | | | | | |

| | | | | | |
|----|-----------------------------------|---|-----------------|-----------|--|
| | | rotation basis and provide round the clock emergency services to patients | | | |
| 5. | Other Staff in OHC | <i>S.N</i> | <i>Post</i> | <i>No</i> | |
| | | 1 | Nurses | 9 | |
| | | 2 | Pharmaist | 05 | |
| | | 3 | Lab. Technician | 03 | |
| | | 4 | Radiographer | 01 | |
| | | 5 | Ward Attendant | 05 | |
| 6. | E'gency Drugs & Equipments in OHC | <p>LIST OF E'GENCY MEDICINES & INJECTIONS</p> <ol style="list-style-type: none"> 1. Inj. Adrenalin 2. Inj. Aminophyllin 3. Inj. Antisnake venom 4. Inj. Tetglob 500 mg 5. Inj. Artesunate 6. Tab. Aspirin 7. Inj. Atropine 8. Inj. Calcium Gluconate 9. Inj. Chloroquine 10. Inj. Chlorpheniramine 11. Tab. Clopigrel 12. Inj. Dexamethasone 13. Inj. / Suppositories Diazepam 14. Inj. / Suppositories Diclofenac Sodium 15. Inj. Dopamine 16. Inj. Enoxaparin 17. Inj. Ethamsylate 18. Inj. Frusemide 19. Inj. Haloperidol 20. Inj. Heparin 21. Inj. Hydrocortisone 22. Inj. / Tab/ suppositories Hyoscine 23. Inj. Human Insulin 24. Inj. Ketamine 25. Inj. Lorazepam 26. Inj. Magnesium Sulphate 27. Inj. Mannitol 28. Inj. Methergin 29. Inj. Methyprednisolone 30. Inj. Metoclopramide 31. Spray Nitroglycerin 32. Cap. Nifedipine 33. Oxygen 34. Oral Rehydration Solution | | | |

| | | |
|----|------------------|--|
| | | 35. Inj. Oxytocin 36. Inj. Pantoprazole 37. Inj. Phenytoin 38. Oral Potassium Gluconate 39. Inj. Pralidoxime 40. Inj. Quinine Sulphate 41. Inj. Rabipur 42. Inhaler/ respiratory soln./ tab. Salbutamol 43. Inj. Sodium Bicarbonate <p style="text-align: center;">LIST OF IMPORTANT ITEMS AND INSTRUMENTS:</p> 1. Ambu bag 2. Airways 3. Artery forceps 4. BP apparatus 5. Bandages 6. Central suction – functioning 7. Central oxygen – functioning 8. Cotton 9. Condom catheter 10. Catheters 11. Defibrillators 12. Endotracheal tubes 13. ECG machine 14. Foley’s catheter 15. Foot operated suction machine 16. Glucometer 17. Gloves 18. IV sets 19. Kidney trays 20. Laryngoscope 21. Needles 22. Nebulizer machine 23. Oxygen cylinders with face mask, Pr. Guage and mask 24. Stethoscope 25. Sutures 26. Splints 27. Torch 28. UPS for ventilator 29. Urine bottle 30. Ventilators 31. Vital sign monitor 32. Ventilator – non invasive |
| 7. | Ambulance No. | 04 Total Capacity – 07 |

| | | | | | |
|-----|---------------------------|--------------------|---------------|-------------------------|--|
| 8. | Antidotes Kept | S N | Chemical | Antidote | |
| | | 1 | Snake Bite | Anti Snake Venom | |
| | | 2 | O.P.Poisoning | Inj Atropine Inj.PAM | |
| 9. | E'gency Lab . Facility | Laboratory,24 Hrs. | | | |
| 10. | Bed Capacity of OHC | 30 | | | |
| 11. | Specialists in OHC | | | | |

ESSAR STEEL, HAZIRA

| SR.NO. | INFORMATION TYPE | INFORMATION | | | | |
|--------|--------------------|--|------------------------|----------------------|------------------|---------------|
| 1. | Factory's Name | Essar Steel India Ltd | | | | |
| 2. | Address | 27 th KM, Surat-Hazira Road, 394270 | | | | |
| 3. | OHC Information | Care Nursing Home, Nand Niketan - Essar Town Ship, Hazira For Essar Steel India Ltd. | | | | |
| 4. | FMO IN OHC- | <i>SN</i> | <i>Name</i> | <i>Qualification</i> | <i>Post Held</i> | <i>Duties</i> |
| | | 1 | Dr Girish Gangwal | MBBS, MD | C.M.O. | FMO |
| | | 2 | Dr. Bhamini Gangwal | MBBS, MD | Anaesthetist | Consultant |
| | | 3 | Dr. Anilkumar Tripathi | MBBS | Sn.M.O. | FMO |
| | | 4 | Dr. Meeta Mishra | MBBS | Sn.M.O. | FMO |
| | | 5 | Dr Bhaumik Acharya | MBBS.AFIH | M.O. | FMO |
| 5. | Other Staff in OHC | <i>S.N.</i> | <i>Names</i> | <i>Post Held</i> | | |
| | | 1 | Nikita Gamit | Staff Nurse -Female | | |
| | | 2 | Sonal Patel | Staff Nurse -Female | | |
| | | 3 | Isha Goswami | Staff Nurse -Female | | |
| | | 4 | Jigna Acharya | Staff Nurse -Female | | |
| | | 5 | Vineedha Manu | Staff Nurse -Female | | |
| | | 6 | Ansu Soman | Staff Nurse -Female | | |
| | | 7 | Sheeja Suneesh | Staff Nurse -Female | | |
| | | 8 | Dhara Patel | Staff Nurse -Female | | |
| | | 9 | Bhavika Patel | Staff Nurse -Female | | |
| | | 10 | Geeta Gavit | Staff Nurse -Female | | |
| | | 11 | Stefee | Staff Nurse -Female | | |

| | | | | | | |
|-----|-----------------------------------|---|--------------------|-------------------|---------------------------|-----|
| | | 12 | Ashish | Ambulance Driver | | |
| | | 13 | Sanjaya Modiapara | Staff Nurse -Male | | |
| | | 14 | Vasim Patel | Staff Nurse -Male | | |
| | | 15 | Devisingh | Staff Nurse -Male | | |
| | | 16 | Jitendra Solanki | Staff Nurse -Male | | |
| | | 17 | Hemsing | Staff Nurse -Male | | |
| | | 18 | Bharat | Staff Nurse -Male | | |
| 6. | E'gency Drugs & Equipments in OHC | SN | INJ | QUA | EQUIPMENTS | QUA |
| | | 1. | Inj Fabrinil | | Defibrillator | |
| | | 2. | Inj N.S./DNS | | Nebulizer | |
| | | 3. | Inj NTG | | Monitor (Cardiac) | |
| | | 4. | Inj Sodabocard | | Pulse Oxymeter | |
| | | 5. | Inj Dobutamine | | Ventilator | |
| | | 6. | Inj KCL | | ECG | |
| | | 7. | Inj.Adrenaline | | O ₂ - Cylinder | |
| | | 8. | Inj.Deriphylline | | | |
| | | 9. | Inj Dopamine | | | |
| | | 10. | Inj Atropine | | | |
| | | 11. | Inj. Aminophylline | | | |
| | | 12. | Inj Effcorlin | | | |
| 13. | Ambulance Capacity | 02 | | | | |
| 14. | Antidotes Kept | Chemicals -Antidotes | | | | |
| 15. | E'gency Lab Facility | All Lab Facilities for All Emergency Investigations | | | | |
| 16. | Bed Capacity of OHC | 40 Bed | | | | |
| 17. | Specialists in OHC | Same as shown above | | | | |

HINDUSTAN CHEMICAL CO., OLPAD

| Sr. No. | Information Type | Informations |
|---------|------------------|--|
| 1. | Factory's Name | Hindusthan Chemicals Company |
| 2. | Address | GIDC Industrial Estate, P.O. Olpad – 394 540, Dist. Surat. |
| 3. | OHC Information | Location : Opp. HCN Plant (HCC, Olpad) Implies to – which Factory |
| 4. | FMO IN OHC- | Names- Post Held 1 Dr Kirankumar S. Jagiwala F.M.O. A.F.I.H. Qualification – M.D., D.G.O |

| | | | |
|-----|-----------------------------------|--|---|
| 5. | Other Staff in OHC | Names- 1.R.J.Soni 2.A.G. Solanki 3.B.R. Patanwadia 4.B.H. Patel | Post Held Compounder Compounder Compounder Compounder |
| 6. | E'gency Drugs & Equipments in OHC | Drugs 1 Inj. Hydrocortisone 2 Inj. Adrenaline 3Inj. Dopamine 4.Inj. Doriphyline | Equipments Pulmotor – 2 nos Pneupack – 1 no |
| 7. | Ambulance No. | GJ-5-YY-2783 | |
| 8. | Antidotes Kept | Chemicals | Antidotes |
| 9. | E'gency Lab Facility | Cyanide & its derivatives Antidote kit – 15 nos Inj. Kelocyanor - 60 amps. Aniline Blue - 30 amps Chlorine Doriphyline - 10 amps. Inj. Cefatoxim - 4 amps | Cyanide Inj. Methylene Inj. |
| 10. | Bed Capacity of OHC | 3 | |
| 11. | Specialists in OHC | Names : Dr Kirankumar S. Jagiwala Qualification : M.D., D.G.O., A.F.I.H | |

LARSEN & TOUBRO, Hazira

| S R . | HOSPITAL NAME WITH ADDRESS AND PHONE NUMBER | DESIGNATED CONTACT PERSONS WITH ADDRESS (O, R) AND PHONE:- NUMBERS (O, R, M) | NUMBE R OF BEDS | NUMBER OF DOCTORS, NUMBER, STAFF TOTAL | NO. OF BUR N WAR D | NO OF AMBUL ANCE |
|-------------|--|---|-----------------------|---|-----------------------------------|------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | Ocupational Health Centre Navin Fluorine International Ltd. Bhaestan Surat Phone No. 0261- 2890326-329 | DR. KIRTI CHHAPIYA NAVIN FLUORINE INTERNATIONA L LTD. BHAESTAN SURAT PHONE NO. 0261- 2890326-329 | 6 | DOCTOR – 1 NURSES - 4 TOTAL STAFF - 7 | NO | 1 |
| 2. | Dinbandhu Hospital | DR. RAJNIBHAI | 200 | ADEQUAT | 2 | 2 |

| | | | | | | |
|-----|---|--|------------|--|-----------|---|
| | Kholwad Ta Kamrej Di: Surat | DR. SHANTUBHAI | | E | | |
| 3. | Mody General Hospital Kadodara Char Rasta Kadodara, Palsana | DR.HEMANT A.MODY DR.BHAVNA H.MODY 02622 271621 02622 272345 02622 273333 | 15 NOS | DO | 10 NOS | |
| 4. | Khusi Hospital 1st Floor, Shri Sai Complex, Nr. New Neelam Hotel, Kadodara, Palsana | DR. RAJENDRA KOCHER DR.NITA COCHER 02622 272023 | 15 NOS | DO | | |
| 5. | Sanjivani Hospital Chalthan- 394305 Tal – Palsana | DR. MEGHAJI VOGARI 02622 281184 02622 281253 | 170 NOS | DO | | |
| 6. | Central Health Center Palsana | DR. MUKUNKUMAR SINGH 02622 264232 | 30 NOS | DO | | |
| 7. | Punit Hospital Kadodara, Palsana | DR. PUNIT MENDIRATTA 02622 271454 9825167137 | 25 NOS | DO | | |
| 8. | Pooja Hospital 1st Floor, Yashkamal Apartment, Near Jivanjyot Cinema, Udhna Surat 394210 | DR. DHIREN MAHIDA, O: 2278777 R: 2650458 M: 9898130170 | 20 | DOCTOR : 01 NURSES : 16 STAFF : 19 | 2 | |
| 9. | Udhna Hospital Pvt Ltd. 18, Patel Colony,, Behind Dena Bank, Main Road Udhana Surat 394210 | DR. YOGESH DESAI O: 2277991/2/3 R: 2244661 M: 9374720328 | 40 | DOCTOR : 03 NURSES : 65 STAFF : 15 | 2 | 1 |
| 10. | Care Hospital, Nand Ni Ketan Township, Hazira | MR. GIRISH GANGWAL (O) 6685100 (M) 98791 00508 | 40 | DOCTOR : 02 NURSES : 11 STAFF : 15 | 2 | 2 |
| 11. | Chc, Karasanpara Olpad | (O) 02621-222048 | 30 | DOCTOR : 01 | NIL | 1 |

| | | | | | | |
|-----|---|---|----------|---|------|------|
| | | | | NURSES : 07 STAFF : 08 | | |
| 12. | Kribhco Hospital, P.O. Kribhco Nagar, Hazira Road, Surat. 394515. Ph. 2606 | DR.PAYOJ TIWARI DR.JYOTI RALHAN (O) 280 2588 (R) 280 3651 | 6 | DOCTOR : 05 NURSES : 15 STAFF : 20 | NIL | 2 |
| 13. | Muskati Dharmad Hospital,Rajmarg Road Opp.Tower,Surat Ph. 0261 2420412,9724346065 To 67 | DR.HOMI D DUDHWALA (MEDICAL SUPRENTENDENT & DIRECTOR) (O) 0261 2420412 (M) 97243 45004 | 120 BEDS | REGULAR DOCT.- 06 & HOUNERABLE SER.DOCT. - 28,NURSE-100 | 2 | 3 |
| 14. | Smimmer Hospital & Medical Collage,Sahra Darvaja,Near Railway Staion,Surat,Ph.-0261 2368040 To 44,9 724346039 To 48 | DR.HOMI D DUDHWALA (MEDICAL SUPRENTENDENT & DIRECTOR) (O) 0261 2420412 (M) 97243 45004 | 750 BEDS | REGULAR DOCT.- 17 & HOUNERABLE SER.DOCT. - 50,NURSE-200 | 16 | 20 |
| 15. | Sheth P T Surat General Hospital | (0)(0261)2427270 | ----- | ADEQUATE | ---- | ---- |
| 16. | Parth Hospital Anand Mahal Road Samay Complex, Anand Mahal Road, Adajan | 0261 2745106 | ----- | DO | ---- | ---- |
| 17. | Mamta Children Hospital Varachha Road 2nd Floor, Doctor House, Sargam Complex, Varchha | 0261 28567825 | ----- | DO | ---- | ---- |
| 18. | Malavia Medical Hospital Bhulka Bhavan School Sandhya Darshan Apt, Opp. Bhulka Bhavan School, Ad | 0261 2682492 | ----- | DO | ---- | ---- |
| 19. | Amardeep Hospital Pumping Station 101, Navchetan Complex, | 0261 2420284 | ----- | DO | ---- | ---- |

| | | | | | | |
|-----|---|---------------|------|----|------|------|
| | Opp. Saiyadpura Pumping St | | | | | |
| 20. | Sita Superspeciality Hospital Ring Road Behind J K Tower, Next To Tata Tele, Beside Sub-Ja 0261 2632100 | NOT AVAILABLE | ---- | DO | ---- | ---- |
| 21. | Malavia Medical & Children Hospital Anand Mahal Road Aditya Complex, Opp. Prime Arcade, Anand Mahal Roa | 0261 3097014 | ---- | DO | ---- | ---- |
| 22. | Pooja Hospital Katargam Main Road Kunj Gali, Opp. Paras Police Chowki, Katargam Main | 0261 2536826 | ---- | DO | ---- | ---- |
| 23. | Kiran Surgical Hospital Katargam Main Road Bhavani Chember, Opp. Peoples Bank, Katargam Main | 0261 2532842 | ---- | DO | ---- | ---- |
| 24. | Akshar Children Hospital Katargam Main Road 3rd Floor, Doctor House, Katargam Main Road | 0261 2532884 | ---- | DO | ---- | ---- |
| 25. | Healing Hands Hospital City Light Road Prasham Building, City Light Road | 0261 2223227 | ---- | DO | ---- | ---- |
| 26. | Sudeep Hospital Varachha Road Near Sadhna School, Varachha Road | 0261 2545973 | ---- | DO | ---- | ---- |
| 27. | Metas Adventist Hospital Athwa Lines P O Box 24, | 0261 2667591 | ---- | DO | ---- | ---- |
| 28. | Navsarjan Hospital & Maternity Home Sagrampura Hiramodi's Street, Opp | 0261 2330305 | ---- | DO | ---- | ---- |

| | | | | | | |
|-----|--|--------------|-------|----|------|------|
| | Subjail, Sagrampura | | | | | |
| 29. | Navsarjan Hospital Anand Mahal Road Opp. Shree Ram Petrol Pump, Anand Mahal Road, Adaj | 0261 2680301 | ----- | DO | ---- | ---- |
| 30. | Mangukiya Surgical Hospital Unapani Road 4th Floor, Doctor House, Unapani Road | 0261 2443367 | ----- | DO | ---- | ---- |
| 31. | Krishna Hospital Katargam Road Ruchita, 1st Floor, Opp. Hari Om Bunglow, Near Doc | 0261 2530962 | ----- | DO | ---- | ---- |
| 32. | Radhika Hospital & Polyclinic Ichchhanath Road 41, Ganesh Krupa Society, Opp. Sargam Shopping Cen | 0261 3298064 | ----- | DO | ---- | ---- |
| 33. | Shreeji Prasutigrh & Surgical Hospital Puna Kumbharia Road 2nd Floor, Pramukh Doctor House, Near Tvs Auto Poi | 0261 2857555 | ----- | DO | ---- | ---- |
| 34. | Wadekar Hosptial Ring Road Opp. Sub Jail, Ring Road | 0261 2330640 | ----- | DO | ---- | ---- |
| 35. | Jyoti Surgical Nursing Home Ambika Nagar 260, Ambika Nagar, Katargam Road, Surat | 0261 2535945 | ----- | DO | ---- | ---- |
| 36. | Baps Pramukhswami Hospital Adajan Cross Road Shree Pramukhswami Maharaj Marg Adajan Cross Road | 0261 2781000 | ----- | DO | ---- | ---- |
| 37. | Adventist Wockardt Heart Hospital Athwagate | 0261 6694444 | ----- | DO | ---- | ---- |

| | | | | | | |
|-----|---|--------------|------|----|------|------|
| | 24 Athwalines Surat | | | | | |
| 38. | Noble Hospital & Diabetes Care Centre Nanpura 109, Jalnidhi Complex, Opp.Bahumali Building | 0261 2465762 | ---- | DO | ---- | ---- |
| 39. | Nadkarni 21st Century Hospital Pvt Ltd Station Road 51/B, Dawer Plaza, Subi Baug,Near Savera Hotel, Unaparni | 0261 2490190 | ---- | DO | ---- | ---- |
| 40. | Shri Bachubhai Dahyabhai Mehta Mahavir Heart Institute Near Rto Office Opposite Vanita Vishram Ground,Athwa Gate, Ring Road | 0261 2462116 | ---- | DO | ---- | ---- |
| 41. | SHREE PRANANATH HOSPITAL OPPOSITE SANGHVI DIAMOND VED ROAD | 0261 2510050 | ---- | DO | ---- | ---- |
| 42. | APPLE HOSPITAL UDHANA GATE UDHANA GATE RING RD | 0261 2310703 | ---- | DO | ---- | ---- |
| 43. | CARE HOSPITAL ATHWA GATE CARE | 0261 3927777 | ---- | DO | ---- | ---- |
| 44. | OM SHIVAM MATERNITY & GENERAL HOSPITAL SACHIN GAJANAN COMPLEX, STATION ROAD, NEAR SACHIN POST OFFICE | 0261 2390095 | ---- | DO | ---- | ---- |
| 45. | NIRMAL HOSPITAL PRIVATE LIMITED RING ROAD | 0261 2333999 | ---- | DO | ---- | ---- |
| 46. | SMT R B SHAH MAHAVIR SUPER SPECIALITY HOSPITAL NANPURA AT SHREE MAHAVIR | 0261 6595555 | ---- | DO | ---- | ---- |

HEALTH CAMPUS, OPP
JEEVAN BHARATI
SCHOOL,
TIMLIYAWAD

Annexure:6

Facilities available in the District

(1) Volunteers who are trained by First Aid trainer through GSDMA

| No. | Name | Training | Mob. |
|------------|------------------------|-----------------|-------------|
| 1. | Dev Kamlesh | First Aid | 9099445432 |
| 2. | Gothana Kirti .P | First Aid | 9879569080 |
| 3. | Prajapati Arun.N | First Aid | 7367952751 |
| 4. | Jitubhai N. Chudhari | First Aid | 9925367021 |
| 5. | Kulkarni Radhika .R | First Aid | 9429268809 |
| 6. | Amitbhai K.Chudhari | First Aid | 8980938095 |
| 7. | Mayurkumar L. Sarateja | First Aid | 9624054261 |
| 8. | Vijaybhai F.Gamit | First Aid | 9879922428 |
| 9. | Shweta S. Patel | First Aid | 9726733306 |
| 10. | Girish V Chudhari | First Aid | 9925862216 |
| 11. | Vipulbhai K. Katariya | First Aid | 9427305810 |
| 12. | Niravkumar H.Tndel | First Aid | 8511335655 |
| 13. | Shashikant D.Chudhari | First Aid | 9979448673 |
| 14. | Sarasvati R. Chudhari | First Aid | 9979353614 |
| 15. | Desai Bhavin.G | First Aid | 9327506099 |
| 16. | Dimpal M.Rana | First Aid | 8238220669 |
| 17. | Dipaliben P.Patel | First Aid | 9427490422 |
| 18. | Patel Shveta D | First Aid | 8140537699 |
| 19. | Patel Shveta V | First Aid | 9879317324 |
| 20. | Patel Mauri S | First Aid | 9825518674 |
| 21. | Bhagat Grishma B | First Aid | 9510055240 |
| 22. | Mehul P. Maheta | First Aid | 9727834933 |
| 23. | Digesh J Aivala | First Aid | 9825848098 |
| 24. | Aahir Pareshbhai B | First Aid | 9925630130 |

| | | | |
|----|-----------------------------------|-----------|------------|
| 25 | Subhash G. Ghodadara | First Aid | 9510422910 |
| 26 | Sunil N Chudhari | First Aid | 9879206055 |
| 27 | Avniben B Soni | First Aid | 9904635296 |
| 28 | Vilasini M Patel | First Aid | 9913762528 |
| 29 | Harshbhai Bharavad | First Aid | 9925137702 |
| 30 | Manishaben Pnchal | First Aid | |
| 31 | Vimalbhai Prabhudas Vinchhi | First Aid | 9825475850 |
| 32 | Patel Nikunjibhai Chndrkantbhai | First Aid | 9687959093 |
| 33 | Dharmendrbhai Dalaptbhai Patel | First Aid | 9099056449 |
| 34 | Patel Ashvinbhai Pratapbhai | First Aid | 9909681924 |
| 35 | Ratnakarbhai Rameshbhi Mahale | First Aid | 9898402278 |
| 36 | Kishorbhai Natavarbhai Telar | First Aid | 9737234764 |
| 37 | Parekh Sanjaykumar Kirtibhai | First Aid | 9913007736 |
| 38 | Manishbhai Prhaladbhai Patel | First Aid | 9275128210 |
| 39 | Vinaykant Babubhai Dhuliya | First Aid | |
| 40 | Manojkumar Shantilal Lad | First Aid | 9904040022 |
| 41 | Nikunj Labhshnkar Raval | First Aid | 9510177375 |
| 42 | Pankajbhai Parabhubhai Patel | First Aid | 9726020955 |
| 43 | Jayeshbhai M Naiya | First Aid | 9427547684 |
| 44 | Jigarkumar Somabhai Patel | First Aid | 9714571505 |
| 45 | Ankurkumar Dilipbhai Patel | First Aid | 8735036844 |
| 46 | Rajeshkumar Farasubhai Patel | First Aid | |
| 47 | Kishorbhai Bhanabhai Patel | First Aid | 9904231974 |
| 48 | Pareshbhai Govindbhai Tendal | First Aid | 9924398652 |
| 49 | Hiteshkumar Bhikubhai Patel | First Aid | 8866444651 |
| 50 | Jinaybhai Ishvarbhai Patel | First Aid | |
| 51 | Shaileshbhai Medhajibhai Navadiya | First Aid | |
| 52 | Patel Pramodbhai Ramajibhai | First Aid | 9979472780 |
| 53 | Kalpeshbhai Devidas Jagtap | First Aid | |
| 54 | Arvindbhai Vasnjibhai Patel | First Aid | |
| 55 | Divyeshbhai Lalubhai Patel | First Aid | 9724793579 |
| 56 | Ramanbhai Babarbhai Patel | First Aid | |
| 57 | Rakeshbhai Shantilal Joshi | First Aid | 9687540181 |
| 58 | Narendrsinh Ramikabal Yadav | First Aid | |
| 59 | Variya Jivarajbhai Ramajibhai | First Aid | 9723744723 |
| 60 | Priteshkumar Premdas Patel | First Aid | 9712360677 |

(2) Swimmers list (fishery swimmers)

| ક્રમ | તાલુકાનું નામ | તરવૈયાનું નામ | તરવૈયાનું સરનામું | સંપર્ક |
|------|---------------|---------------------------|-------------------|--------------|
| ૧ | માંડવી | કરસનભાઈ બાપુડાભાઈ ચૌધરી | તરસાડા | ૦૨૬૨૩-૨૨૧૧૨૮ |
| ૨ | માંડવી | અનિલભાઈ લક્ષ્મણભાઈ ચૌધરી | તરસાડા | ૦૨૬૨૩-૨૨૧૧૨૮ |
| ૩ | માંડવી | ઉમકાભાઈ ધનજીભાઈ ચૌધરી | તરસાડા | ૦૨૬૨૩-૨૨૧૧૨૮ |
| ૪ | માંડવી | કરસનભાઈ કીકાભાઈ ચૌધરી | તરસાડા | ૦૨૬૨૩-૨૨૧૧૨૮ |
| ૫ | માંડવી | રેલીયાભાઈ ધનજીભાઈ ચૌધરી | તરસાડા | ૦૨૬૨૩-૨૨૧૧૨૮ |
| ૬ | માંડવી | ચરજીતભાઈ પ્રેમાભાઈ ચૌધરી | નાનીચેર | ૦૨૬૨૩-૨૨૧૧૨૮ |
| ૭ | માંડવી | ગુમાનભાઈ ઢેડાભાઈ ચૌધરી | નાનીચેર | ૦૨૬૨૩-૨૨૧૧૨૮ |
| ૮ | માંડવી | નવીનભાઈ રેશ્માભાઈ ચૌધરી | નાનીચેર | ૦૨૬૨૩-૨૨૧૧૨૮ |
| ૯ | માંડવી | બાબુભાઈ દેવજીભાઈ ચૌધરી | નાનીચેર | ૦૨૬૨૩-૨૨૧૧૨૮ |
| ૧૦ | માંડવી | ફતેસીંગભાઈ રામજીભાઈ ચૌધરી | નાનીચેર | ૦૨૬૨૩-૨૨૧૧૨૮ |
| ૧૧ | ચોર્યાસી | પ્રભુભાઈ બાલુભાઈ ખલાસી | ભીમપોર | ૯૮૨૪૯૭૬૮૩૪ |
| ૧૨ | ચોર્યાસી | અરવિંદભાઈ હાંસજીભાઈ ખલાસી | ભીમપોર | ૮૨૩૮૩૧૯૧૨૧ |
| ૧૩ | ચોર્યાસી | રોહીતભાઈ જયમતભાઈ ખલાસી | ડુમસ | ૯૮૨૫૦૧૪૩૯૫ |
| ૧૪ | ચોર્યાસી | અરવિંદભાઈ જયમતભાઈ ખલાસી | ડુમસ | ૯૯૨૫૯૦૪૯૫૦ |
| ૧૫ | ચોર્યાસી | બીપીનભાઈ છીપકાભાઈ ખલાસી | ડુમસ | ૭૩૮૩૬૧૦૨૪૮ |
| ૧૬ | ચોર્યાસી | વિજયભાઈ ચિમનભાઈ પટેલ | હજીરા | ૯૮૭૯૫૪૨૦૭૦ |
| ૧૭ | ઓલપાડ | કેતનભાઈ રામજીભાઈ પટેલ | મોર | ૯૮૨૫૩૭૨૦૩૪ |
| ૧૮ | ચોર્યાસી | ચંદ્રવદન સુભાષભાઈ ખલાસી | ભીમપોર | ૭૦૯૬૧૨૭૪૭૯ |
| ૧૯ | ચોર્યાસી | દિવ્યન ફકીરભાઈ ખલાસી | ભીમપોર | ૮૫૩૦૪૭૩૩૪૦ |
| ૨૦ | ચોર્યાસી | પરેશભાઈ ગાંડાભાઈ ખલાસી | ભીમપોર | ૯૯૦૪૯૪૩૬૩૯ |

| | | | | |
|----|----------|-------------------------|--------|------------|
| ૨૧ | ચોર્યાસી | વિમલકુમાર બાબુભાઈ ખલાસી | ભીમપોર | ૯૭૧૨૬૩૪૧૮૯ |
| ૨૨ | ચોર્યાસી | રિતેશભાઈ રામાભાઈ ખલાસી | ડુમસ | ૮૨૩૮૯૫૯૭૯૯ |
| ૨૩ | ચોર્યાસી | ફકીરભાઈ છીમકાભાઈ ખલાસી | ડુમસ | ૯૮૨૫૭૮૩૭૧૯ |
| ૨૪ | ચોર્યાસી | વિવેકભાઈ સિકેશભાઈ ખલાસી | ડુમસ | ૯૪૨૮૧૪૦૧૨૮ |
| ૨૫ | ચોર્યાસી | જયેશભાઈ નવીનભાઈ પટેલ | હજીરા | ૯૯૭૪૭૩૧૭૨૭ |
| ૨૬ | ચોર્યાસી | ભીખુભાઈ ચિમનભાઈ પટેલ | હજીરા | ૯૮૨૫૪૮૭૦૦૫ |
| ૨૭ | ચોર્યાસી | રિતેશભાઈ રસિકભાઈ પટેલ | હજીરા | ૯૯૦૪૨૫૨૩૨૨ |
| ૨૮ | ચોર્યાસી | વિજયભાઈ ચિમનભાઈ પટેલ | હજીરા | ૯૮૭૯૫૪૨૦૭૦ |
| ૨૯ | ચોર્યાસી | કેતનભાઈ રામજીભાઈ પટેલ | હજીરા | ૯૮૨૫૩૭૨૦૩૪ |

Annexure: 7

List of NGOs

| sr. no | NGO NAME, | NGO NAME, ADDRESS | phone /fax |
|-----------------|--|--|------------------------------|
| Olpad | | | |
| 1 | RAMA NEWSPRINT AND PAPERS LTD. | RAMA NEWSPRINT AND PAPERS LTD. BARBODHAN OLPAD | 02621-224203, 224205, 224207 |
| 2 | THE JAHANGIR PURA GROUP CO. OP. COTTON SALE SOCIETY LTD. | THE JAHANGIR PURA GROUP CO. OP. COTTON SALE SOCIETY LTD. OLPAD JIN, PO. OLPAD | 2762062 |
| Bardoli | | | |
| 3 | MANAV KALYAN RACHNATMAK TRUST | MANAV KALYANRACHNATMAK TRUST BARDOLI | |
| 4 | RURAL LABOUR ASSOCIATION | RURAL LABOUR ASSOCIATION HALPATI SEVA SANGH, KAMDAR HOUSE, SARDAR BAUG BARDOLI | 02622-20134, 02622-220478 |
| 5 | SARVAJANIK MAHILA MANDAL, BARDOLI | SARVAJANIK MAHILA MANDAL, BARDOLI OPPOSITE PRAKASH CINEMA BARDOLI | (02622)227201, 222522 |
| 6 | SWARAJ ASHRAM | SWARAJ ASHRAM SARDARBAUG BARDOLI | 02622 220034 |
| Choryasi | | | |
| 7 | HAZIRA AREA EDUCATIONAL AND MEDICAL CHARITABLE TRUST | HAZIRA AREA EDUCATIONAL AND MEDICAL CHARITABLE TRUST INDUSTRIAL TRAINING CENTER 1/160, GIDC ESTATE, BHATPOR CHORYASI | |
| 8 | SHREE AMBICA | SHREE AMBICA NIKETAN TRUST | 2226600, |

| | | | |
|----|---|---|--|
| | NIKETAN TRUST | VESU ROAD, VESU CHORYASI | 2252971 |
| | Kamrej | | |
| 9 | KATHOR VIBHAG NAGARIK SAHKARI DHIRAN MANDAL LTD | KATHOR VIBHAG NAGARIK SAHKARI DHIRAN MANDAL LTD KATHOR KAMREJ | 256516 257131, 256351 |
| | Mahuva | | |
| 10 | JANTA KALYAN RACHANATMAK TRUST | JANTA KALYAN ACHANATMAK TRUST VADIYA KARACHELIYA MAHUVA | 02625- 256101, 256516 257131, 256351 |
| | Mandvi | | |
| 11 | ADARSH MAHILA MANDAL | ADARSH MAHILA MANDAL PUNA MANDVI | |
| 12 | NAVRANG MAHILA MANDAL | NAVRANG MAHILA MANDAL FALI MANDVI | |
| | Mangrol | | |
| 13 | CATHOLIC CHURCH | JHANKHVAV MANGAROL | |
| 14 | SAMAJ SEVA SANGH ZANKHVAV | SAMAJ SEVA SANGH ZANKHVAV MANGAROL | 02629-256028 2629-256339 |
| 15 | M.L.P CHARITABLE TRUST. | M.L.P CHARITABLE TRUST. OFFICE, 9, PATEL SHOPPING CENTRE OPP GODREJ ADHARKIM CROSS ROAD, MANGROL | 0261-324927 |
| 16 | THE KOSAMBA KHEDUT SEVA SAHAKARI MANDL LTD | THE KOSAMBA KHEDUT SEVA SAHAKARI MANDL LTD JUNAGAM, KOSAMBA MANGROL | 02629- 235279 |
| | Palsana | | |
| 17 | SANJIVNI HOSPITAL | SANJIVNI HOSPITAL N.H.NO 8, NR, KADODARA CHARRASTA PALSANA | 02622-281184, 281253, 281083 |
| 18 | SHREE SWAMINARAYAN GAUSEVA TRUST | SHREE SWAMINARAYAN GAUSEVA TRUST SHREE SWAMINARAYAN VISHVA VIDHYAPITH (GURUKUL) NATIONAL HIGHWAY NO 8, KADADARA CHARRASTA PALSANA | 02622-- 72322 |
| | Surat city | | |
| 19 | Federation Of Surat Textile Traders Association | 5046 JJ A/C Textile Market, RingRoad , Surat -395002 | 0261 300 6709 |
| 20 | Navsarjan | NAVSARJAN NR. RTO., RING ROAD, | 0261-2475683 |
| 21 | Nature club | sarjan society parle point | 098250 57678 |

Ta: Bardoli

| ક્રમ | સંસ્થાનું નામ | સંપર્ક વ્યક્તિ | ટેલીફોન નંબર |
|------|-------------------------------------|-----------------------|----------------------------------|
| ૧ | જલારામ મંદિર ટ્રસ્ટ | શ્રી મહેન્દ્રભાઈ | 02622 - 220582 |
| ૨ | બારડોલી ચેમ્બર્સ ઓફ કોમર્સ | શ્રી હેમંતભાઈ જોષી | 02622 - 220188 98241 94901 |
| ૩ | ગણેશ મંડળ | શ્રી વિજયભાઈ ગૌસ્વામી | 94284 50400 |
| ૪ | રોટરી ક્લબ | શ્રી બિરેન શાહ | 99782 62799 |
| ૫ | મહિલા મંડળ | | |
| ૬ | બાબેન જીન સુગર ફેક્ટરી પાસે | શ્રી ભાવેશભાઈ પટેલ | 02622 - 220082 02622 - 220923 |
| ૭ | ગુજરાત સ્ટેટ ફેડરેશન | શ્રી હમ્મરભાઈ પટેલ | 02622 - 220188 |
| ૮ | ખરીદ વેચાણ સંઘ | શ્રી ભીખાભાઈ ઝ.પટેલ | 02622 - 220020 |
| ૯ | સરદાર બાગાયત સ.મંડળી | શ્રી સંજયભાઈ પટેલ | 02622 - 220032 |
| ૧૦ | સેવા સહકારી મંડળી | શ્રી નગીનભાઈ ચૌહાણ | 02622 - 220087 |
| ૧૧ | સ્વ.માતુશ્રી રૂપાબેન સિતારામ ટ્રસ્ટ | શ્રી સોમાભાઈ પટેલ | 99254 45250 |
| ૧૨ | બારડોલી સુગર ફેક્ટરી | શ્રી રમણભાઈ પટેલ | 02622 - 220172 |
| ૧૩ | જે.સી.આઇ. | શ્રી કિરણભાઈ પંડ્યા | 02622 - 220642 |

Annexure: 8

Medical and Hospital Management Plan

MANAGEMENT OF MASS CASUALTIES

TRIAGE AND COLOR TAGGING

- Airway
- Breathing
- Circulation

THE FOLLOWING INFORMATION SHOULD BE CONTAINED IN THE PATIENT'S COLOR TAG:

1. Patient's sequence number
2. Name of patient
3. Latest diagnosis and suspected injury
4. Previous treatment as stated on the tag which was placed on the patient at the scene of the disaster
5. Blood type (cross matching/signature)
6. X-ray number

PRIORITY FOR IN-HOSPITAL CARE

RED TAG (1ST PRIORITY): LIFE THREATENING

- A. obstruction/damage to airway
- B. breathing disturbance (RR >30/min)
- C. circulation disturbance (no radial pulse, weak, irregular or absent carotid pulse)
- D. altered level of consciousness
- E. need for life-saving measures
- F. victims whose injuries demand definite treatment in the hospital but which treatment may be delayed without prejudice to ultimate recovery?

YELLOW TAG (2ND PRIORITY): URGENT

- A. needs to be treated within 4-6 hours otherwise they will become Unstable
- B. severe burns; burns involving hands, feet or face (excluding Respiratory tract); burns complicated by major soft tissue trauma
- C. hospital admission is required moderate blood loss; back injuries; heat injuries with a normal level of consciousness.

GREEN TAG (3RD PRIORITY): DELAYED

- A. minor injuries not threatened by ABC instability

- B. minor fractures, minor soft tissue injuries, minor burns
- C. victims whose injuries are so severe that survival cannot be expected even under the most ideal conditions; obviously mortal wounds where death is certain (such as head injuries or massive burns)

BLACK TAG (LAST PRIORITY):

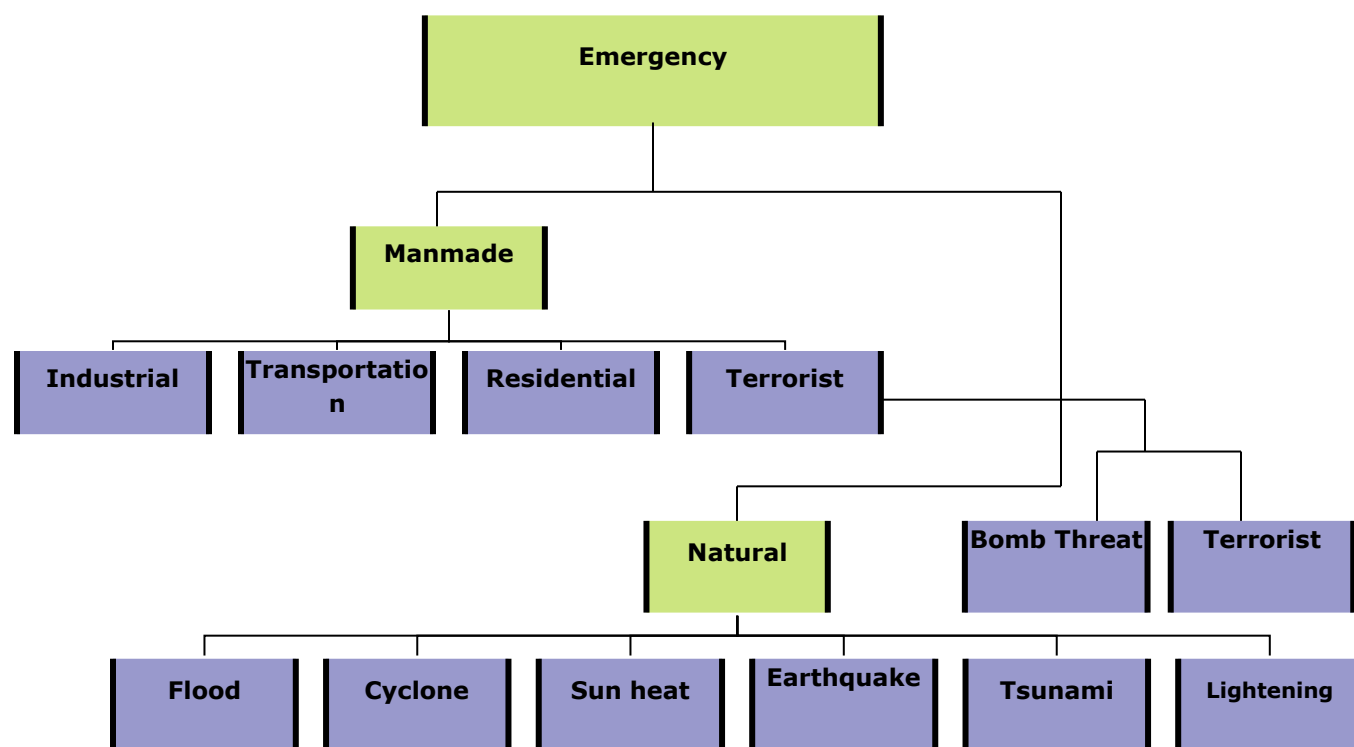
- A. patient is dead
- B. victim is also clinically dead
- C. those who die while awaiting treatment and those in cardiac arrest following trauma.

TYPE OF EMERGENCY

The off-site emergency, as identified by the management in their onsite emergency plans, may affect the surrounding people and the environment outside their premises. The emergency can be classified broadly in the following manner;

- (1) Natural Calamity.
- (2) Man made Emergency

Further, Emergency can be divided in the following way, please see next page



HEALTH INFRASTRUCTURE IN THE VICINTY

| No. | PARTICULARS | NO. | CENTRE |
|-----|-------------------------|-----|---|
| 1 | District Hospital | 1 | Surat Civil Hospital, majura gate |
| 2 | COMMUNITY HEALTH CENTRE | 14 | Olpad, Sayan, Palsana, Kamrej, Bardoli, Mandvi, Areth, Mahuva, Anaval, Mangrol, Zankhavav, Kharwasa, Umarpada, Kathor |
| 3 | PRIMARY HEALTH CENTRE | 54 | Olpad-7, Palsana-4 Kamrej-5 Bardoli-7 Mandvi-8 Mahuva-6 Mangrol-8 Umarpada-4 Choraysi-5 |
| 4 | MOBILE COMPREHENSIVE | 9 | all talukas |

MEDICAL & HEALTH DEPARTMENT

The health and medical services have to play vital role following the emergency. One fold is proper & timely treatments to the victims injured or affected. Persons other fold is to safe guard the public health.

The following actions are suggested for health & medical services.

- A). To ensure the arrangement & preparedness for special medical treatment antidotes and trained doctor Para-medical staff as specified in toxicology at the time of industrial emergency in local pocket area.
- B). On declaration of emergency or on receiving the message or information, prompt medical facilities should be set up e.g. first aid post, casualty. Receiving center/ camp, as per gravity of situation at site. Similarly, arrangement for emergency
- B). operation or special treatment on chemical burn, injury, gas dispersion etc with adequate arrangement, which will can serve the purpose of Base Hospital.
- C). Identification of dead bodies and post mortem arrangement.
- D). To maintain up to-date list with telephone nos. of services of doctors, hospitals, ambulance, primary health center, Para- medical staff, vehicle to meet the emergency situation.
- E). Arrangement to inform the up to-date status time to time to Central Control Room,. Chair Person, Relatives of injured or admitted patients, emergency services etc.

- F). Arrangement to safe guard the public health in case of development of epidemic situation & announcement on safety measure to be taken by public at the time of industrial emergency situation.
- G). To advice & guide the District Crisis Group in respect of medical & health part time to time.
- H). Provision for proper and adequate medicines, life saving drugs, equipments, antidotes etc. related to industrial emergency.
- I). To participate meetings, mock drills / examine and training.
- J). To prepare own detailed action plan to ensure the effective handling of industrial emergency.
- K). Liaison with Central Control Room, Chair Person, Emergency Services organization, agency and other related person.
- L). other duties as required during actual emergency

Brief Health Details

Name of District: Surat

Surat rural population: 16,13,525 (As per Census 2011)

Population density of district: 1337/Sq.Km

No. of District Hospitals: 1 (New Civil Hospital-Surat)

No. of Sub District Hospital: 1 (Mandvi)

No. of CHC: 14

No. of PHC: 56

No. of PHU: 1

No. of Sub Centre: 358

No. of Medical College: 2 (Govt. Medical College-Surat & “SMIMER” Surat Municipal Medical College)

Surat decadal growth rate: 42.2 (2011 Census)

Sex ratio, Surat rural-925, Urban-756 (2011 Census)

Bed occupancy in Surat rural

At CHC level – 516

At PHC level – 330

List of PHC, PHU & Sub Centre (Taluka wise)

| Sr. No. | Taluka | No. of PHC | No. of PHU | No. of Sub Centre |
|---------|----------|------------|------------|-------------------|
| 1. | Choryasi | 5 | 1 (Bhatha) | 19 |
| 2. | Olpad | 7 | 0 | 37 |
| 3. | Palsana | 4 | 0 | 25 |
| 4. | Kamrej | 5 | 0 | 32 |
| 5. | Bardoli | 7 | 0 | 54 |
| 6. | Mandvi | 9 | 0 | 60 |
| 7. | Mangrol | 8 | 0 | 55 |
| 8. | Umarpada | 4 | 0 | 28 |
| 9. | Mahuva | 7 | 0 | 48 |
| Total | 9 | 56 | 1 | 358 |

| PHC wise primary information - 2018 | | | | | | | | |
|-------------------------------------|----------|---------|-------------|---------|----------|-----------|------|-------|
| Sr. No. | Taluka | Sr. No. | Designation | Vehicle | Inverter | Generator | MBBS | AYUSH |
| 1 | Choryasi | 1 | Suvali | 1 | 1 | 1 | 1 | 2 |
| | | 2 | Mohini | 1 | 1 | 1 | 1 | 2 |
| | | 3 | Sachin | 1 | 1 | 1 | 2 | 2 |
| | | 4 | Ichchhapor | 1 | 1 | 1 | 1 | 2 |
| | | 5 | Lajpor | 1 | 0 | 0 | 1 | 2 |
| 2 | Olpad | 6 | Erthan | 1 | 0 | 1 | 1 | 1 |
| | | 7 | Karanj | 1 | 0 | 1 | 1 | 1 |
| | | 8 | Dihen | 1 | 0 | 1 | 1 | 1 |
| | | 9 | Kim | 1 | 0 | 1 | 1 | 0 |
| | | 10 | Mor | 1 | 0 | 1 | 1 | 1 |
| | | 11 | Sandhiyer | 1 | 1 | 1 | 1 | 1 |
| | | 12 | Kudiyana | 1 | 0 | 0 | 1 | 1 |
| 3 | Palsana | 13 | Kanav | 1 | 0 | 1 | 1 | 2 |
| | | 14 | Kadodara | 1 | 0 | 1 | 1 | 2 |
| | | 15 | Vanesa | 1 | 0 | 1 | 2 | 1 |
| | | 16 | Gangadhara | 1 | 0 | 1 | 1 | 2 |
| 4 | Kamrej | 17 | Sevani | 1 | 0 | 1 | 2 | 1 |
| | | 18 | Orana | 1 | 1 | 1 | 2 | 1 |
| | | 19 | Navi Pardi | 1 | 0 | 1 | 1 | 1 |
| | | 20 | Valan | 1 | 0 | 1 | 1 | 1 |
| | | 21 | Vav | 1 | 0 | 1 | 1 | 1 |
| 5 | Bardoli | 22 | Sarbhon | 1 | 1 | 1 | 1 | 1 |
| | | 23 | Umarakh | 1 | 1 | 1 | 1 | 1 |
| | | 24 | Varad | 1 | 0 | 0 | 1 | 1 |

| | | | | | | | | |
|---|----------|----|-------------|---|---|---|---|---|
| | | 25 | Kadod | 1 | 0 | 1 | 1 | 0 |
| | | 26 | Uva | 1 | 0 | 0 | 1 | 0 |
| | | 27 | Vanskui | 1 | 0 | 1 | 1 | 1 |
| | | 28 | Vankaner | 1 | 0 | 0 | 1 | 0 |
| 6 | Mandvi | 29 | Sathavav | 1 | 1 | 1 | 1 | 0 |
| | | 30 | Amlidem | 1 | 1 | 1 | 1 | 0 |
| | | 31 | Dadhvada | 1 | 1 | 1 | 1 | 1 |
| | | 32 | Kamlapor | 1 | 0 | 1 | 1 | 0 |
| | | 33 | Boudhan | 1 | 1 | 1 | 1 | 1 |
| | | 34 | Patal | 1 | 1 | 1 | 2 | 0 |
| | | 35 | Tadkeshwar | 1 | 1 | 1 | 1 | 0 |
| | | 36 | Godsamba | 1 | 0 | 0 | 1 | 0 |
| | | 37 | Rataniya | 1 | 0 | 0 | 1 | 0 |
| 7 | Mangrol | 38 | Vankal | 1 | 1 | 0 | 1 | 1 |
| | | 39 | Velachha | 1 | 0 | 0 | 1 | 1 |
| | | 40 | Nani Naroli | 1 | 1 | 0 | 1 | 0 |
| | | 41 | Kosamba | 1 | 1 | 1 | 1 | 1 |
| | | 42 | Simodara | 1 | 1 | 0 | 1 | 1 |
| | | 43 | Lavet | 1 | 1 | 1 | 1 | 1 |
| | | 44 | Verakui | 1 | 1 | 0 | 1 | 1 |
| | | 45 | Palod | 1 | 0 | 1 | 1 | 0 |
| 8 | Umarpada | 46 | Kevdi | 1 | 1 | 1 | 1 | 0 |
| | | 47 | Vadpada | 1 | 0 | 1 | 1 | 0 |
| | | 48 | Vadi | 1 | 1 | 1 | 1 | 0 |
| | | 49 | Dongripada | 1 | 0 | 1 | 1 | 0 |
| 9 | Mahuva | 50 | Valvada | 1 | 0 | 1 | 1 | 0 |
| | | 51 | Karcheliya | 1 | 0 | 1 | 1 | 0 |
| | | 52 | Kharvan | 1 | 0 | 1 | 0 | 0 |
| | | 53 | Naladhara | 1 | 0 | 1 | 1 | 0 |
| | | 54 | Gunasvel | 1 | 0 | 1 | 1 | 1 |
| | | 55 | Vaheval | 1 | 0 | 1 | 2 | 0 |
| | | 56 | Mahuvaria | 1 | 0 | 1 | 1 | 0 |

List of CHCs

| Sr. No. | Name of Taluka | Name of CHCs | Office Contact No. |
|---------|----------------|--------------|--------------------|
| 1 | Bardoli | Bardoli | 02622-220260 |
| 2 | Kamrej | Kamrej | 02621-252319 |
| 3 | Mahuva | Mahuva | 02625-255750 |
| 4 | Mahuva | Anaval | 02625-244213 |
| 5 | Mandvi | Mandvi | 02623-221163 |
| 6 | Mandvi | Areth | 02623-261307 |
| 7 | Mangrol | Mangrol | 02629-220247 |
| 8 | Mangrol | Jankhvav | 02629-256317 |
| 9 | Mangrol | Kharwasa | 0261-2394826 |
| 10 | Olpad | Olpad | 02621-222048 |
| 11 | Olpad | Sayan | 02621-243413 |
| 12 | Palsana | Palsana | 02622-264232 |
| 13 | Umarpada | Umarpada | 02629-253390 |
| 14 | Umarpada | Kathor | 02621-256166 |

Contact Details of District Level Health officers

| Sr. No. | Officer Name | Designation | Office No. | Mobile No. |
|---------|----------------------|-------------|---------------------|------------|
| 1. | Dr. R. K. Kanchhal | RDD | 2460673, 2460260 | 9879553521 |
| 2. | Dr. H. J. Chaudhhary | CHDO | 2430589 | 9727709501 |
| 3. | Dr. M. M. Lakhani | ADHO | 2430780 | 9727709504 |
| 4 | Dr. M. T. Chhari | RCHO | 2430780 | 9727709505 |
| 5. | Dr. P. Y. Shah | EMO | 2430780 | 9727709506 |

Details of Grant in Aid Hospitals

| Sr. No. | Hospital | Address | Phone No. |
|---------|----------------------------|-------------------------------|--------------|
| 1. | Sanjivani Hospital | At.po.Chalthan, Ta.Palsana | 02622-281184 |
| 2. | Sardar Smarak Hospital | Bardoli | 02622-220089 |
| 3. | Damodardas Gandhi Hospital | Kadod, Ta.Bardoli | 02622-246242 |

| | | | |
|----|----------------------------|-----------------------|--------------------------|
| 4. | Rambhai Bhulabhai Hospital | At.Bamani, Ta.Bardoli | 02622-241038 |
| 5. | Chanchalben Ghiyani | At.Kevadi, Ta.Mangrol | |
| 6. | Lions Cancer Hospital | Surat | 0261- 2242862/2240974 |

Contact Details of Taluka/Block Health Officers

| Sr. No. | Name THO | Taluka | Contact No. | Email ID |
|---------|-------------------------|----------|-------------|--|
| 1. | Dr. Shantakumari | Choryasi | 9727709523 | bho_choryasi@yahoo.com thochoryasi.health.surat@gmail.com |
| 2. | Dr. L. M. Khan | Olpad | 9727709527 | bho_olpad786@yahoo.com thoolpad.health.surat@gmail.com |
| 3. | Dr. M. N. Bhati | Kamrej | 9727709539 | kamrej_bho@yahoo.com thokamrej.health.surat@gmail.com |
| 4. | Dr. P. V. Sailor | Palsana | 9727709534 | bho.palsana@yahoo.com thopalsana.health.surat@gmail.com |
| 5. | Dr. J. G. Chauhan | Mandvi | 9727709558 | blockhealthmandvi@yahoo.com thomandvi.health.surat@gmail.com |
| 6. | Dr. Hetalbhai Chaudhari | Bardoli | 9727709545 | bhobardoli@yahoo.com thobardoli.health.surat@gmail.com |
| 7. | Dr. Himanshu Patel | Mahuva | 9727709597 | thomahuva.health.surat@gmail.com thomahuva.health.surat@gmail.com |
| 8. | Dr. R. P. Sahi | Mangrol | 9727709566 | bho_mangrol@yahoo.com thomangrol.health.surat@gmail.com |
| 9. | Dr. Ullas Wagh | Umarpada | 7574803346 | thoumarpada@yahoo.com |

District Rapid Response Team

| Designation | RRT Member's Name | Address | Phone Numbers | | | E-mail id |
|------------------------|-------------------|------------------------------|---------------|--------|------------|--|
| | | | Office | Fax No | Mobile No. | |
| Clinician (Pediatrics) | Dr. Vijay B. Shah | Govt. Medical collage, Surat | | | 9374716006 | Vijaysurat@hotmail.com |

| | | | | | | |
|---|---------------------|------------------------------|--------------|--|------------|--|
| Clinician (Physician) | Dr. Tinkal C. Patel | Govt. Medical collage, Surat | 0261-2208387 | | 9898713223 | pateltinkal@yahoo.com |
| HOD, Micro | Dr. Neeta Khandewal | Govt. Medical collage, Surat | 0261-2208406 | | 9925276950 | microbiologydepartment@yahoo.in |
| Laboratory Officer (Pathologist) | Dr.R.D.Patel | Govt. Medical collage, Surat | 0261-2208410 | | 9898381444 | rdpatel17@gmail.com |
| Public Health Specialist (PSM) | Dr.J.K.Kosmbiya | Govt. Medical collage, Surat | 0261-2241790 | | 9925014333 | jjkkosambiya@gmail.com |
| Epidemiologist (CDHO)i/c | Dr. H.J. Chaudhary | Dist.Panchayat-Surat | 0261-2430780 | | 9727709501 | dpc_surat@yahoo.co.in cdho.health.surat@gmail.com |
| District Surveillance Officer i/c(EMO) | Dr.P.Y.Shah | Dist.Panchayat-Surat | 0261-2430589 | | 9727709506 | dso_surat@yahoo.com |
| Entomologist/ DMO | Chetnaben Desai | New Civil Hospital campus | 0261-2233846 | | 9727709619 | malaria-sur@gujarat.gov.in |

Human Resource at Rural Level

| Sr.No. | Cadre | Information |
|--------|-----------------------|--|
| 1 | THO | 9 (3+6 Incharge) |
| 2 | Medical Officer(MBBS) | 63 |
| 3 | AYUSH | 31 |
| 4 | MPHS | 48 |
| 5 | FHW | 352 |
| 6 | MPW | 306 |
| 7 | Pharmacist | 44 |
| 8 | Lab Technician | 47 |
| 9 | ASHA | ASHA-1273, Urban ASHA-34, ASHA Faci.-126 |
| 10 | Anganwadi Worker | 1721 |

Annexure-9

Relief and Rehabilitation Norms (Standards) Office Memorandum

657/ 512 ની 512 જે અંગત નુકસાન ને SDRF ની સહાયતા
સરકારી બિઝનેસ

No. 32-3/2010-NDM-1
Government of India
Ministry of Home Affairs
(Disaster Management Division)

Most immediate

232/4/14

50/53
24/9/13

B* Wing, 3rd floor, NDCC-II, New Delhi
Dated the 13th August, 2012.

Office Memorandum

Subject: Inclusion of cold wave / frost as an eligible natural calamity in the guidelines for relief assistance under the SDRF/ NDRF- regarding.

The undersigned is directed to refer this Ministry's OM of even number dated 28th September 2010 regarding guidelines on constitution and administration of the State Disaster Response Fund (SDRF) and National Disaster Response Fund (NDRF). The Government of India has approved the inclusion of cold wave/ frost in the list of eligible calamity for assistance from SDRF and NDRF.

2. As such in addition to the natural calamities listed in the Para 3 and Para 3.1 of the Guidelines of SDRF/ NDRF respectively, the cold-wave/ frost may also be added to the list of eligible calamities for financial assistance from SDRF/ NDRF.

3. However, following condition/ criteria stipulated as under will be taken into account while considering the assistance from SDRF/ NDRF for the calamity of cold wave / frost:-

- Severe cold wave conditions would be said to prevail in an area :
 - If minimum temperature is lower than 7^o C in an area where normal minimum temperature is 10^o C or above; and
 - If minimum temperature is lower than 5^o C in an area where normal minimum temperature is less than 10^o C.
- Frost conditions would be said to prevail when temperature falls below 0^o C in an area where it is an abnormal phenomenon during the kharif/ rabi season.
- For declaring a district affected by frost/ cold wave conditions by the State Government concerned, the meteorological data on departure of normal minimum temperature in the affected area, as released by the India Meteorological Department (IMD) shall be taken into consideration for prevalence of frost/ cold wave conditions.
- Areas which suffer crop loss of 50% or more by cold wave/frost conditions will be eligible for assistance from SDRF/ NDRF, as is now allowed in the case of damage due to drought, hailstorm, pest attack and other natural calamities. Similarly, animal husbandry, including poultry sector, would get assistance from SDRF/ NDRF in the wake of cold wave/frost.

50/53
24/9/13
24/8

- e) The composition of the Central Team will be same as the Central Team constituted for the purpose of drought/hailstorm. The Central Team would make a field visit for assessment of damage to agriculture and horticulture production due to cold wave/ frost and shall take into consideration of all concomitant factors such as crops cutting experiment, fall in normal production. Normalized Differential Vegetation Index (NDVI) status of crops in the affected area, crops sown in the area affected, the vulnerability of the cold wave/ frost on standing agriculture/ horticulture crops etc. in the guidelines. The Ministry of Agriculture will be the nodal Ministry for natural calamity of cold wave/ frost.

4. This order will come into force prospectively with immediate effect.

Dev Kumar

(Dev Kumar)
Director (DM-I)
Telefax: 234328123

Distribution:-

1. Ministry of Finance, Department of Expenditure, North Block, New Delhi.
2. Ministry of Agriculture, Department of Agriculture & Cooperation, Krishi Bhavan, New Delhi.
3. National Disaster Management Authority, New Delhi.
4. Chief Secretaries of (All States).
5. The Relief Commissioners/ Secretaries, Department of Disaster Management of (All States).
6. Accountants General of all State Governments.
7. Controller General of Accounts (CGA), New Delhi.
8. Comptroller & Auditor General (CAG), New Delhi.
9. Resident Commissioners of all State Governments.

2/2

DDMP Surat 2019

Encl: As above.

REVISED LIST OF ITEMS AND NORMS OF ASSISTANCE FROM STATE DISASTER RESPONSE FUND (SDRF) AND NATIONAL DISASTER RESPONSE FUND (NDRF)

(Period 2010-15, MHA Letter No. 32-7/2011-NDM-I Dated 16th January 2012, modified vide letter No. 32-3/2012-NDM-I, dated 28th September 2012, modified vide letter No. 32-3/2013-NDM-I, dated 21st June 2013)

| SNO. | ITEM | NORMS OF ASSISTANCE |
|------|---|---|
| 1 | 2 | 3 |
| 1 | GRATUITOUS RELIEF | |
| | a) Ex-Gratia payment to families of deceased persons. | <p>Rs.1.50 lakh per deceased person including those involved in relief operations or associated in preparedness activities, subject to certification regarding cause of death from appropriate authority.</p> <p>- In the case of an Indian citizen who loses his life due to a notified natural calamity in a foreign country, his family would not be paid this relief.</p> <p>- In the case of a Foreign citizen who loses his life due to a notified natural calamity within the territory of India, his family would also not be paid this relief.</p> |
| | b) Ex-Gratia payment for loss of a limb or eye(s). | <p>Rs. 43,500/- per person, when the disability is between 40% and 80%.</p> <p>Rs. 62,000/- per person, when the disability is more than 80%.</p> <p>Subject to certification by a doctor from a hospital or dispensary of Government, regarding extent and cause of disability.</p> |
| | c) Grievous injury requiring hospitalization | <p>Rs. 9,300/- per person requiring hospitalization for more than a week.</p> <p>Rs. 3,100/- per person requiring hospitalization for less than a week.</p> |
| | d) Clothing and utensils/ house-hold goods/ for families whose houses have been washed away/ fully damaged/severely inundated for more than a week due to a natural calamity. | <p>Rs.1,300/- per family, for loss of clothing.</p> <p>Rs.1,400/- per family, for loss of utensils/ household goods.</p> |
| | e) Gratuitous relief for families in dire need of immediate sustenance after a calamity. | <p>Rs. 40/- per adult and Rs. 30/- per child, not housed in relief camps. State Govt. will certify that (i) these persons have no food reserve, or their food reserves have been wiped out in the calamity, and (ii) identified beneficiaries are not housed in relief camps. Further State Government will provide the basis and process for arriving at such beneficiaries district-wise.</p> <p>Period for providing gratuitous relief will be as per assessment of the State Executive Committee (SEC) and the Central Team (in case of NDRF). The default period of assistance will upto to 30 days, which may be extended upto 60 days in the first instance, if required, and subsequently upto 90 days in case of drought/ pest attack.</p> |
| | GR to be provided to those who have no food reserves, or whose food reserves have been wiped out in a calamity, and who have no other immediate means of support. | |

| | |
|--|--|
| 2. SEARCH & RESCUE OPERATIONS | |
| (a) Cost of search and rescue measures/ evacuation of people affected/ likely to be affected | As per actual cost incurred, assessed by SEC and recommended by the Central Team (in case of NDRF). By the time the Central Team visits the affected area, these activities are already over. Therefore, the State Level Committee and the Central Team can recommend actual/ near-actual costs. |
| (b) Hiring of boats for carrying immediate relief and saving lives. | As per actual cost incurred, assessed by SEC and recommended by the Central Team (in case of NDRF). The quantum of assistance will be limited to the actual expenditure incurred on hiring boats and essential equipment required for rescuing stranded people and thereby saving human lives during a notified natural calamity. |
| 3 RELIEF MEASURES | |
| a) Provision for temporary accommodation, food, clothing, medical care, etc. for people affected/ evacuated and sheltered in relief camps. | As per assessment of need by SEC and recommendation of the Central Team (in case of NDRF), for a period up to 30 days. The SEC would need to specify the number of camps, their duration and the number of persons in camps. In case of continuation of calamity like drought, or widespread devastation caused by earthquake or flood etc., this period may be extended to 60 days, and upto 90 days in cases of severe drought. Medical care may be provided from National Rural Health Mission (NRHM). |
| b) Air dropping of essential supplies | As per actual, based on assessment of need by SEC and recommendation of the Central Team (in case of NDRF). The quantum of assistance will be limited to actual amount raised in the bills by the Ministry of Defence for airdropping of essential supplies and rescue operations only. |
| c) Provision of emergency supply of drinking water in rural areas and urban areas | As per actual cost, based on assessment of need by SEC and recommended by the Central Team (in case of NDRF), up to 30 days and may be extended upto 90 days in case of drought. |
| 4. CLEARANCE OF AFFECTED AREAS | |
| a) Clearance of debris in public areas. | As per actual cost within 30 days from the date of start of the work based on assessment of need by SEC for the assistance to be provided under SDRF and as per assessment of the Central team for assistance to be provided under NDRF. |
| b) Draining off flood water in affected areas | As per actual cost within 30 days from the date of start of the work based on assessment of need by SEC for the assistance to be provided under SDRF and as per assessment of the Central team (in case of NDRF). |
| c) Disposal of dead bodies/ Carcasses | As per actual, based on assessment of need by SEC and recommendation of the Central Team (in case of NDRF). |
| 5 AGRICULTURE | |
| (i) Assistance to small and marginal farmers. | |
| A. Assistance for land and other loss | |
| a). De-silting of agricultural land (where thickness of sand/ silt deposit is more than 3", to be certified by the competent authority of the State Government.) | Rs. 8,100/- per hectare for each item. |

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| b) Removal of debris on agricultural land in hilly areas | (Subject to the condition that no other assistance/ subsidy has been availed of by/ is eligible to the beneficiary under any other Government Scheme) |
| c) De-silting/ Restoration/ Repair of fish farms | |
| d) Loss of substantial portion of land caused by landslide, avalanche, change of course of rivers. | Rs. 25,000/- per hectare to only those small and marginal farmers whose ownership of the land is legitimate as per the revenue records. |
| B. Input subsidy (where crop loss is 50% and above) | |
| a) For agriculture crops, horticulture crops and annual plantation crops | Rs. 4,500/- per ha. in rainfed areas and restricted to sown areas. Rs. 9,000/- per ha. in assured irrigated areas, subject to minimum assistance not less than Rs. 750 and restricted to sown areas. |
| b) Perennial crops | Rs. 12,000/- ha. for all types of perennial crops subject to minimum assistance not less than Rs. 1500/- and restricted to sown areas. |
| c) Sericulture | Rs. 3,200/- per ha. for Eri, Mulberry, Tussar Rs. 4,000/- per ha. for Muga. |
| (ii) Input subsidy to farmers other than small and marginal farmers | Rs. 4,500/- per hectare in rainfed areas and restricted to sown areas. Rs. 9,000/- per hectare for areas under assured irrigation and restricted to sown areas. Rs. 12,000/- per hectare for all types of perennial crops and restricted to sown areas. - Assistance may be provided where crop loss is 50% and above, subject to a ceiling of 1 ha. per farmer and upto 2 ha per farmer in case of successive calamities irrespective of the size of holding being large. |
| 6. ANIMAL HUSBANDRY - ASSISTANCE TO SMALL AND MARGINAL FARMERS | |
| i) Replacement of milch animals, draught animals or animals used for haulage. | Milch animals - Rs.16,400/- Buffalo/ cow/ camel/ yak etc. Rs.1650/- Sheep/ Goat Draught animals - Rs.15000/- Camel/ horse/ bullock, etc. Rs.10,000/- Calf/ Donkey/ Pony/ Mule - The assistance may be restricted for the actual loss of economically productive animals and will be subject to a ceiling of 1 large milch animal or 4 small milch animals or 1 large draught animal or 2 small draught animals per household irrespective of whether a household has lost a larger number of animals. (The loss is to be certified by the Competent Authority designated by the State Government). Poultry:- Poultry @ 37/- per bird subject to a ceiling of assistance of Rs 400/- per beneficiary household. The death of the poultry birds should be on account of a natural calamity. Note:- Relief under these norms is not eligible if the assistance is available from any other Government Scheme, e.g. loss of birds due to Avian Influenza or any other diseases for which the Department of Animal Husbandry has a separate scheme for compensating the poultry owners. |

| | | |
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| | ii) Provision of fodder / feed concentrate including water supply and medicines in cattle camps. | Large animals- Rs. 50/- per day. Small animals- Rs. 25/- per day. Period for providing relief will be as per assessment of the State Executive Committee (SEC) and the Central Team (in case of NDRF). The default period for assistance will be upto 30 days, which may be extended upto 60 days in the first instance and in case of severe drought up to 90 days. Based on assessment of need by SEC and recommendation of the Central Team, (in case of NDRF) consistent with estimates of cattle as per Livestock Census and subject to the certificate by the competent authority about the requirement of medicine and vaccine being calamity related. |
| | iii) Transport of fodder to cattle outside cattle camps | As per actual cost of transport, based on assessment of need by SEC and recommendation of the Central Team (in case of NDRF) consistent with estimates of cattle as per Livestock Census. |
| 7 | FISHERY | |
| | i) Assistance to Fisherman for repair / replacement of boats, nets – damaged or lost -- Boat -- Dugout-Canoe -- Catamaran -- net (This assistance will not be provided if the beneficiary is eligible or has availed of any subsidy/ assistance, for the instant calamity, under any other Government Scheme.) | Rs. 3,000/- for repair of partially damaged boats only Rs. 1,500/- for repair of partially damaged net Rs. 7,000/- for replacement of fully damaged boats Rs. 1,850/- for replacement of fully damaged net |
| | ii) Input subsidy for fish seed farm | Rs. 6,000 per hectare. (This assistance will not be provided if the beneficiary is eligible or has availed of any subsidy/ assistance, for the instant calamity, under any other Government Scheme, except the one time subsidy provided under the Scheme of Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture.) |
| 8 | HANDICRAFTS/HANDLOOM – ASSISTANCE TO ARTISANS | |
| | i) For replacement of damaged tools/ equipment | Rs. 3,000 per artisan for equipments. - Subject to certification by the competent authority designated by the Government about damage and its replacement. |
| | ii) For loss of raw material/ goods in process/ finished goods | Rs. 3,000 per artisan for raw material. - Subject to certification by Competent Authority designated by the State Government about loss and its replacement. |
| 9 | HOUSING | |
| | a) Fully damaged/ destroyed houses | |
| | i) Pucca house | Rs. 70,000/- per house |
| | ii) Kutch House | Rs.15,000/- per house |
| | b) Severely damaged houses | |
| | i) Pucca House | Rs.6,300/- per house |
| | ii) Kutch House | Rs.3,200/- per house |

| | |
|---|--|
| (c) Partially Damaged Houses – both pucca/ kutcha (other than huts) where the damage is at least 15 % | Rs. 1,900/- per house |
| d) Damaged / destroyed huts: | Rs. 2,500/- per hut, <i>(Hut means temporary, make shift unit, inferior to Kutcha house, made of thatch, mud, plastic sheets etc. traditionally recognized as hut by the State/ District authorities.)</i> <i>Note: -The damaged house should be an authorized construction duly certified by the Competent Authority of the State Government.</i> |
| e) Cattle shed attached with house : | Rs.1,250/- per shed. |
| 10 INFRASTRUCTURE | |
| <p><i>Repair/restoration (of immediate nature) of damaged infrastructure:</i></p> <p><i>(1) Roads & bridges (2) Drinking Water Supply Works, (3) Irrigation, (4) Power (only limited to immediate restoration of electricity supply in the affected areas), (5) Schools, (6) Primary Health Centres, (7) Community assets owned by Panchayat.</i></p> <p>Sectors such as Telecommunication and Power (except immediate restoration of power supply), which generate their own revenues, and also undertake immediate repair/ restoration works from their own funds/ resources, are excluded.</p> | <p><i>Activities of immediate nature :</i></p> <p>Illustrative lists of activities which may be considered as works of an immediate nature are given in the enclosed Appendix.</p> <p><i>Assessment of requirements :</i></p> <p>Based on assessment of need, as per States' costs/ rates/ schedules for repair, by SEC and recommendation of the Central Team (in case of NDRF).</p> <ul style="list-style-type: none"> - As regards repair of roads, due consideration shall be given to Norms for Maintenance of Roads in India, 2001, as amended from time to time, for repairs of roads affected by heavy rains/floods, cyclone, landslide, sand dunes, etc. to restore traffic. For reference these norms are <ul style="list-style-type: none"> • Normal and Urban areas: upto 15% of the total of Ordinary Repair (OR) and Periodical Repair (PR). • Hills: upto 20% of total of OR and PR. <p><i>Note: States shall first use its provision under the budget for regular maintenance and repair.</i></p> |
| 11 PROCUREMENT | |
| Procurement of essential search, rescue and evacuation equipments including communication equipments, etc. for response to disaster. | <ul style="list-style-type: none"> - Expenditure is to be incurred from SDRF only (and not from NDRF), as assessed by the State Executive Committee (SEC). - The total expenditure on this item should not exceed 5% of the annual allocation of the SDRF. |

Illustrative list of activities Identified as of an immediate Nature

APPENDIX
(Item No. 10)

Illustrative list of activities identified as of an immediate nature.

1. Drinking Water Supply :

- i) Repair of damaged platforms of hand pumps/ring wells/ spring-tapped chambers/public stand posts, cisterns.
- ii) Restoration of damaged stand posts including replacement of damaged pipe lengths with new pipe lengths, cleaning of clear water reservoir (to make it leak proof).
- iii) Repair of damaged pumping machines, leaking overhead reservoirs and water pumps including damaged intake – structure, approach gantries/jetties.

2. Roads

- i) Filling up of breaches and potholes, use of pipe for creating waterways, repair and stone pitching of embankments.
- ii) Repair of breached culverts.
- iii) Providing diversions to the damaged/washed out portions of bridges to restore immediate connectivity.
- iv) Temporary repair of approaches to bridges/embankments of bridges., repair of damaged railing bridges, repair of causeways to restore immediate connectivity, granular sub base, over damaged stretch of roads to restore traffic.

3. Irrigation :

- i) Immediate repair of damaged canal structures and earthen/masonry works of tanks and small reservoirs with the use of cement, sand bags and stones.
- ii) Repair of weak areas such as piping or rat holes in dam walls/ embankments.
- iii) Removal of vegetative material/building material/debris from canal and drainage system.

4. Health :

Repair of damaged approach roads, buildings and electrical lines of PHCs/ community Health Centres.

5. Community assets of Panchayat

- a) Repair of village internal roads.
- b) Removal of debris from drainage/ sewerage lines.
- c) Repair of internal water supply lines.
- d) Repair of street lights.
- e) Temporary repair of primary schools, Panchayat ghars, community halls, *anganwadi*, etc.

Annexure: 10

Evacuation and Shelter Plan

Temporary Shelter:

Urban Area:

Local Nagar Palika and TEOC, -District Primary and Secondary Education Officer will be Responsible to Shift safely of Affected Population during any kind of Disaster ,In Tapi District mainly use school, collage /community hall ,and Samaj Vadi for shifting of Affected people.Also already it has bed identified ward wise by TEOC AND Nagar Palika. The list of Safe Shelter Included in CDMP Plan. Also find list on SDRN Side. At Urban level City Disaster Management Committee and District Administration directly responsible to Evacuate affected people at Safe Place.

Village area:

Mainly village area looking by District and Taluka Panchyat with the support of Liaison officer and Respective mamlatdar. Also already Identified Village wise Safe Shelter at village level, like school/community hall/Samaj vadi ect put Detail List in VDMP Plan. Also find list on SDRN Side. District /Taluka/Village Level - District /Taluka /Village Disaster Management Team directly responsible to Evacuate affected people at Safe Place.

Identified Shelters at Emergency

| Taluka Name | Village Name | Name of Shelter | Capacity (No. of people) |
|--------------------|---------------------|--|---------------------------------|
| Choryasi | Ichchhapor | Prathamik Shala Sharda Vidhyalay Co. Hall | 12126 |
| | Bhatpor | Prathamik Shala Co. Hall, Bhatpor | 3452 |
| | Bhatha | Prathamik Shala Bhatha | 5164 |
| | Malgama | Prathamik Shala Co. Hall temple | 960 |
| | Bhensaan | Prathamik Shala Bhesaan, Lokmanya hall Rander | 2158 |
| | Paali | Prathamik Shala Paali | 7261 |
| | Kawas | Prathamik Shala Co. Hall Kawas | 6193 |
| | Limla | Kribhco Township | 6622 |
| | | | |
| Olpad | | All Prathamik Shala & Community Halls | |
| | | | |
| Kamrej | | All Prathamik Shala & Community Halls | |

| | | | |
|----------------|------------------------|---|----------------|
| Palsana | Maakhinga | Prathamik Shala | 100 |
| | Kanaav | Prathamik Shala | 200 |
| | Malekpor | Prathamik Shala | 0 |
| | Baleshwar | Prathamik Shala | 0 |
| | Vanjhodiya | Prathamik Shala | 300/100 |
| | Amalsadi | Prathamik Shala | 350/200 |
| | Chalthan | Prathamik Shala | 400 |
| | Kadodara | Prathamik Shala | 250 |
| | Haripura | Prathamik Shala | 250 |
| | Gaangpur | Prathamik Shala | 150 |
| | Baarasadi | Prathamik Shala | 125 |
| | Soyani | Prathamik Shala | 150 |
| | | | |
| Mandvi | | All Prathamik Shala & Community Halls | |
| | | | |
| Bardoli | Kadod | Gujarati Kumar and Kanya Shala, Kadod | |
| | Miyawadi | Bachchon ka ghar, Laghumati Sikshan Sanstha | |
| | Isroli | Prathamik Shala, Isroli | |
| | Bamroli | Prathamik Shala, Bamroli | |
| | Kanaai | Prathamik Shala, Kanaai | |
| | Haripura | Prathamik Shala, Haripura | |
| | Uchhrel | Prathamik Shala, Uchhrel | |
| | Astaan | Prathamik Shala, Astaan | |
| | Kharwasa | Prathamik Shala, Kharwasa | |
| | Mowachhi | Prathamik Shala, Mowachhi | |
| | Ishanpor | Community Hall, Ishanpor | |
| | Karachaka | Prathamik Shala, Karachaka | |
| | Pipariya | Prathamik Shala, Pipariya | |
| | Mangroliya | Prathamik Shala & Community Hall | |
| | Khoj | Community Hall | |
| | Pardi kadod | Prathamik Shala, Pardi Kadod | |
| | Waaghecha kadod | Community Hall & Wagheshwar Mahadev Temple | |
| | Timbarwa | Prathamik Shala, Timbarwa | |
| | Rayam | Prathamik Shala, High School & Sahakari Mandali Godown | |
| | Ten | Prathamik Shala & Suruchi Yantra Chhap | |

| | | |
|-------------------------|--|--|
| | Shala | |
| Naandiya | Prathamik Shala, Naandiya | |
| Nijhar | Prathamik Shala, Community Hall | |
| Pathradiya | Prathamik Shala, Pathradiya | |
| Goji | Community Hall | |
| Tajpor bujrang | Prathamik Shala, Community Hall | |
| Tarbhon | Prathamik Shala, Community Hall | |
| Kharad | Prathamik Shala, Kharad | |
| Chhitra | Prathamik Shala, Chhitra | |
| Masaad | Prathamik Shala, Community Hall | |
| Rajwad | Prathamik Shala, Rajwad | |
| Jharimora | Prathamik Shala, Jharimora | |
| Vadhvaniya | Prathamik Shala, Vadhvaniya | |
| Nasuraa | Prathamik Shala, Nasuraa | |
| Bhuwasan | Prathamik Shala, Bhuwasan | |
| Jhankharda | Prathamik Shala, Jhankharda | |
| Ninat | Prathamik Shala, Ninat | |
| Baabla | Prathamik Shala, Baabla | |
| Akoti | Prathamik Shala, Akoti | |
| Palsod | Prathamik Shala, Palsod | |
| Pardi wagha | Prathamik Shala, Pardi Wagha | |
| Nogama | Prathamik Shala, Nogama | |
| Waghecha Sarbhon | Prathamik Shala, Waghecha Sarbhon | |
| Kunwadiya | Prathamik Shala, Kunwadiya | |
| Baalda | Prathamik Shala, Baalda | |
| Bhensudla | Prathamik Shala, Bhensudla | |
| Waanskui | Prathamik Shala, Waanskui | |
| Nani bhatlav | Prathamik Shala, Nani Bhatlav | |
| Baaben | Prathamik Shala, Baaben | |
| Umrraakh | Prathamik Shala, Moni Bapu Ashram | |
| Wadoli | Prathamik Shala, Wadoli | |
| Ancheli | Prathamik Shala, Ancheli | |
| Singod | Prathamik Shala, Singod | |
| Junvani | Prathamik Shala, Junvani | |
| Orgaam | Prathamik Shala, Orgaam | |
| Baamni | Prathamik Shala, Baamni | |
| Bhamaiya | Prathamik Shala, Bhamaiya | |
| Moti falod | Prathamik Shala, Moti Falod | |

| | | | |
|---------------|--------------------------|---|------------|
| | Ruuva bharampor | Prathamik Shala, Ruuva Bharampor | |
| | Maanekpor | Prathamik Shala, Maannekpor | |
| | Uvaa | Prathamik Shala, Uvaa | |
| | Mota | Prathamik Shala, Mota | |
| | Madhi | Prathamik Shala, Madhi | |
| | Vaankaner sarethi | Prathamik Shala, High School | |
| | Waraad | Prathamik Shala, Waraad | |
| | Panda | Prathamik Shala, Panda | |
| | Suraali | Prathamik Shala, Suraali | |
| | Sarbhon | Prathamik Shala, Sarbhon | |
| | Kantadi | Prathamik Shala, Kantadi | |
| | Saankari | Swami Narayan Rest House, Community Hall | |
| | Sejwad | Prathamik Shala, Sejwad | |
| | Hindoliya | Prathamik Shala, Hindoliya | |
| | Allu | Prathamik Shala, Allu | |
| | Pardi valod | Prathamik Shala, Pardi valod | |
| | Samthan | Prathamik Shala & Paaatidar Samaj Hall | |
| | Aafva khali | Prathamik Shala, Aafva Khali | |
| | Gotasa | Prathamik Shala, Gotasa | |
| | Tajpor khurd | Kedareshwar Mandir, Tajpor Khurd | |
| | Kikvad | Prathamik Shala, Kikvad | |
| | Moti bhatlav | Prathamik Shala, Moti bhatlav | |
| | Dhamdod lumbha | Prathamik Shala, Dhamdod | |
| | Utara | Prathamik Shala, Utara | |
| | Vaghava | Prathamik Shala, Vaghava | |
| | | | |
| Mahuva | Ondach | Ondach Prathamik Shala | 350 |
| | Miyapur | Gram Panchayat | 200 |
| | Aamchak | Aamchak Prathamik Shala | 300 |
| | Shekhpur | Shekhpur Prathamik Shala | 300 |
| | Mahuva | G. H. Bhakt | 700 |
| | Budhleshwar | Budhleshwar Prathamik Shala | 200 |
| | Raanat | Raanat Prathamik Shala | 300 |
| | Amroli | Amroli Prathamik Shala | 200 |
| | Kavitha | Kavitha Prathamik Shala | 300 |
| | Sevasan | Sevasan Prathamik Shala | 150 |

| | | | |
|-----------------|-------------------|--|-------------|
| | Wadiya | Wadiya Prathamik Shala | 200 |
| | Umraa | Prathamik Shala/Gram Panchayat | 2000 |
| | Haladwaa | HaladwaPrathamik Shala | 600 |
| | Mahuvariya | Mahuvariya Prathamik Shala | 600 |
| | Vaheval | Vaheval Prathamik Shala | 300 |
| | Walvada | Prathamik Shala/High School | 600 |
| | Kaankariya | Kaankariya Prathamik Shala | 600 |
| | Bhoriya | Bhoriya Prathamik Shala | 300 |
| | Velanpur | Gram Panchayat | 300 |
| | Saamba | Saamba Prathamik Shala | 600 |
| | | | |
| Mangrol | | All Prathamik Shala & Community Halls | |
| | | | |
| Umarpada | | All Prathamik Shala & Community Halls | |

Annexure:11

Media Management Plan

1. Preparedness

External

- Broadcast programs to raise people's awareness of disaster prevention measures
- Develop news sources in emergency situation
- Liaison with community leaders
- Publicize station frequency
- Broadcast public planning meetings
- Outreach to the elderly, women, children, mentally and physically disabled people, as well as other marginalized and other vulnerable groups
- Encourage stockpiling of (hand –powered) radio receivers
- Compile local knowledge on signs of impending disaster and share it with community

Internal

- Back up important documents and files (including audio content) and store in a safe location
- If possible, place a set of minimum broadcast equipment such as a microphone, tape/CD player, transmitter and antennae in a safe location
- Plan radio programs to raise people's awareness of disaster prevention
- First aid training for station personnel
- Technical preparedness (generator, APS, securing, transmitter)
- Guidelines for managing staff and volunteers
- Arrange emergency drills in the station
- Develop a contact list and post in station
- Map community (ethnicity, religion, race, culture, vulnerability)
- Prepare pre-recorded Emergency Response
- Announcements and scripts and post in the studio

2. Mitigation

Develop networks with local Disaster Management and Response (DMR) NGOs, local government and key stakeholders: hold regular meeting with them

- Arrange emergency drills in the community
- Training of on-air personnel - what and how to broadcast

3. Response

External-on air

- Broadcast pre-prepared announcements
- Broadcast emergency public meetings
- Broadcast emergency evacuation announcements
- All announcements broadcast in a reassuring and calm manner
- Dispel myths and rumors and provide timely and accurate

- updates
- Broadcast updates on damage situation
- Produce programs in which victims can express themselves
- Establish contact with the meteorological office and
- broadcast weather information

Internal-behind the scenes

- Ensure safety of all station personnel
- Call station briefing meeting
- Notify CR networks of status
- Monitor all official announcements and activities of
- national government, local government and aid
- agencies(NGOs)
- Enact station evacuation plan if needed
- Log all communications for reference
- Stay calm
- Divide information work so that all voices of the community can be heard and not just male leaders.

4. Relief

Establish Information Support Centre for information sharing and logistic distribution

5. Rehabilitation

External – Networking and Support

- Broadcast pre-prepared announcements
- Broadcast programs to heal victim's psychology trauma.
- Interview trauma counselors, monks, Imams and priests
- Broadcast recovery announcements
- Cooperate with DMR NGOs, local government and key stakeholders
- Broadcast recovery public meetings
- Provide call in or talk-back programs for people to people interactions

Broadcast positive entertainment programming

Annexure: 12

Contacts Directory

District Incident Command Structure-Key Officers

Incident Commander -District Collector:- 9978406222

Alternate Incident Commander- Resident Additional Collector:- 9978405220

| Sr. No | Task-force | Task-force Operation room | Task-force leader/contact Number | Alternate task-force leader -- contact Number |
|---------------|----------------------------|----------------------------------|--|--|
| 1 | Warning and Communications | RAC Office | RAC/9978405220 0261-2660011/2669200 | |
| 2 | Law & Order | Police control room | DSP/0261 2651831-2 CP/ 9978406275 2241301-3 | Dy.SP/ 2479150 ACP/9978408288 |
| 3 | Search & Rescue | Fire brigade CR- | Chief fire Officer- 9724345508 Control room-9724346022, 0261-2414139, 2423751 | |
| 4 | Public Works | Road & Building | Ex. Engr, R&B/ Division-1 0261-2474162 Division-2 0261-2471097 | Div. 9427107041 |
| 5 | Shelter | Education Office-CR | District Education Officer/ 9909970218, 0261-2662903 | |
| 6 | Water Supply | GWSDB-CR | Ex. Engr. GWSDB/ 9978406722 0261-2782088 | Ex. Engr Water works, VMSS/ |
| 7 | Food & Relief supplies | District Supply Officer -CR | DSO- 9913547169 2655751, 0261-2465114 | |
| 8 | Public Health & Sanitation | District Health Centre | CDHO-9727716689 0261-2425752-55/ | |
| 9 | Power | GEB-CR | Supt. Engr. GEB/ 0261-2804491, 2804499 | |
| 10 | Logistics | DDO office | DDO- 0261-2422160 | DDO- 9978406247 |
| 11 | Animal Health & Welfare | A & H Office | Dy. Director, A&H 0261-2425751-55 | |
| 12 | Damage Assessment-Survey | Res. Add. Coll. office | Res.Addl. Collector/ 9978405220 | |

| | | | | |
|----|---------------------------------------|----------------------------|--|------------------------------------|
| 13 | Media/public Information | Information Dept. CR | District Info Officer/ 9879412185, 0261-2465541 | Dy. DIO/ Mohan Vadvi/9879412186 |
| 14 | Planning and coordination | Collector's office- | Collector-0261-2471121 9978406222 | Res. Add. Coll. 9978405220 |
| 15 | Finance/Adminis- tration /protocol | Res. Add. Coll. office- | Res. Add. Coll. 9978405220 | |

❖ Control Rooms- Contact Numbers

On receipt of information about the incident, all Task force leaders shall report immediately to the collector in the district EOC. The coordinator of each taskforce shall send communication to their members to report immediately in their respective control rooms. Taluka liaison Officers shall report to Mamlatdars in their respective Taluka control rooms.

Control Rooms- Contact Numbers

| Sr.No. | EOCs/ Control rooms | STD COde | Contact Numbers |
|--------|---|----------|---|
| 1 | State EOC | 079 | 23251902, 23251914, 23251900, 23251916- F 079-23251907 Mam. |
| 2 | Relief Commissioner | 079 | 9978406109 (M) 23251509/68 |
| 3 | Director of Relief | 079 | 9978406087 (M) 23251611/2 |
| 4. | CEO,GSDMA Jt. CEO, GSDMA | 079 | 9978405600 (M) 23259220, 9978407003 (M) 23259451 |
| 5 | Pri. Secretary Revenue Department | 079 | 23251591 23251591 |
| 6 | Dy. Collector (SEOC) | 079 | 23251990 23251916-12 |
| 7 | India Meteorology Department , Ahmedabad | 079 | 22865012 , 22865449 22865165 , 22861413 |
| 8 | Institute of seismological Gandhinagar | 079 | 66739000, 23257641 23252703 |
| 9 | NDRF team Gandhinagar | 079 | 23201551, F- 23202540 |
| 10 | Commandant of NDRF team Gandhinagar | 079 | 23202540 094288 26445 |
| 11 | District EOC Help line | 0261 | 1077 |
| 12 | Stats EOC Help line | 079 | 1070 |
| 13 | NDMA | 011 | 26701728, 26701729(F) |
| 14 | VTs, Hajira(GMB) | 0261 | 6586788, 6546788, 2977007(F) mob. 9909903748 |

| TASK FORCE OPERATION ROOM | | |
|----------------------------------|-----------------------------------|--|
| Sr. No | TASK FORCE | Phone Number |
| 1 | Warning and Communications | 9978405220 |
| 2 | Law & Order | 0261-2651831 |
| 3 | Search & Rescue | 972434508 0261-2414195/ 962423751 |
| 4 | Public Works | R&B-1 mob. 9427107041 0261-2474162 R&B-2 mob. 9825164701 0261-2471097 |
| 5 | Shelter | 0261-2662903 |
| 6 | Water Supply | 0261-2782088 |
| 7 | Food & Relief supplies | 0261-2465114, 8758401001 |
| 8 | Public Health & Sanitation | 0261-2425751, 2425751-55 |
| 9 | Power | 0261-2804491/99 |
| 10 | Logistics | 0261-2422160 -2425751-55 |
| 11 | Animal Health & Welfare | 0261-2425751 |
| 12 | Damage assessment/Survey | 0261-2660011, 2669200 9978405220 |
| 13 | Media/public Information | 0261-2465541, 2474423 |
| 14 | Planning and coordination | 0261-2472471, 2471121 |
| 15 | Finance/ Administration/ protocol | 0261-2472211, 2463819 9978405220 |
| 16 | EOC Surat | 0261-2663200 0261-2664800-F |

| <u>Taluka Emergency Operation Center</u> | | | |
|---|--------------------|-----------------|---------------------|
| Sr. No | Taluka EOCs | STD Code | Phone Number |
| 1 | Bardoli | 02622 | 220024 |
| 2 | Choryasi | 0261 | 2663800 |
| 3 | Kamrej | 02621 | 252078 |
| 4 | Mahuva | 02625 | 255721 |
| 5 | Mandvi | 02623 | 221023 |
| 6 | Mangrol | 02629 | 220227 |
| 7 | Olpad | 02621 | 221245/222444 |
| 8 | Palsana | 02622 | 264228 |

| | | | |
|----|------------|-------|-----------------|
| 9 | Surat City | 0261 | 2650335/2650337 |
| 10 | Umarpada | 02629 | 253399 |

Taluka Liaison and Nodal Officers

| Sr. No | Taluka | Liaison Officers and Designation | Mobile No. | Nodal Officers and Designation | Mobile No. |
|--------|----------|---|------------|--|------------|
| 1 | Bardoli | P. N. Rabari | 9998714826 | A. M. Bharada | 9978405647 |
| 2 | Mahuva | - Dy. Collector, Bardoli Prant | | -Project Administrator Tribal Sub Plan | |
| 3 | Palsana | D. J. Vasava -Dy. DDO(Revenue) | 9567017800 | | |
| 4 | Mandvi | Dr. B. S. Prajapati -PO cum TDO Mandvi | 8849152853 | A. K. Baraiya | 7567011470 |
| 5 | Mangrol | N. R. Patel -(I/c) Dy.DDO (Develop) | 9099051463 | -Prant Officer, Mandvi | |
| 6 | Umarpada | Smt. Nilanjasha Rajput -(I/c) Dy.DDO (Panchayat) | 9567075805 | | |
| 7 | Kamrej | K. G. Vaghela - Kamrej Prant | 9825200106 | D. J. Vasava | 9909751001 |
| 8 | Choryasi | A. K. Prajapati -Divisional Dy. Commissioner | 9978408689 | -Director, DRDA, Surat | |
| 9 | Olpad | R. P. Patel -Olpad Prant | 9978405222 | | |

Surat City Liaison and Nodal Officers

| | | | | | |
|---|----------------------------|--|------------|-------------------------------|------------|
| 1 | Central Zone | P. R. Jani -City Prant | 9978405221 | Upadhyay N. V. | 9724345001 |
| 2 | South West Zone(Athva) | Y. A. Desai - Dy. Collector, Tenancy, Surat | 9879303600 | -Dy. Commissioner, SMC, Surat | |
| 3 | West Zone (Rander, Adajan) | C. V. Patel -Dy. Collector GIDC, Surat | 9099957972 | | |
| 4 | South Zone (Udhana) | S. H. Verma -Dy. Director (SPIPA), Surat | 9978441502 | | |
| 5 | East Zone | B. R. Ahir | 9978405222 | D. M. Patel | 9724345210 |

| | | | | | |
|---|-------------------------------|--|------------|---|--|
| | (Varachha) | -DSO, Surat | | -Zonal chief and Additional City Engineer Katargam Zone, Surat | |
| 6 | North Zone (Katargam) | U. N. Jadeja -Dy. Collector | 9726512588 | | |
| 7 | South East Zone (limbayat) | J. B. Mahtra -I/C L.A.Q-4, Surat | 9712916327 | | |

- **Note:** In addition to the above, the **Plan Annexes** should include information as per the proposed list given below. Or all the annexes can be put into a separate booklet called “**Emergency Operation Reference Manual**”.

| LIST OF IMPORTANT TELEPHONE NOs | | | | | | |
|--|--------------------------|------------------------|--------------------|--------------------|----------------|------------|
| Sr. No | Office | Name of Officer | Office | Res. | Mob.No. | Fax |
| 1 | Collector | Dr. Dhaval Patel | 2652525 2655151 | 2669080 2669580 | 99784 06222 | 2655757 |
| 2 | Resi. Addl. Collector | S. D. Vasava | 2660011 | | 9978405220 | 2655757 |
| 3 | D. S. O. | B.R.Ahir | 6599749 | 2655752 | 9978405223 | 2655752 |
| 4 | P.O. Surat City | P.R.Jani | 2665800 | 2655155 | 99784 05221 | 2665700 |
| 5 | Mam. Majura | K.M.Dhimmar | 2650335 | | 9879666764 | |
| 7 | Mam. Udhana | Y.G.Mehta | 2650335 | | 8320528021 | 2650337 |
| 8 | Mam. Adajan | G.R.Gamit | 0261-2471416 | | 9427895243 | |
| 9 | Mam. Puna | R.C.Chauhan | 0261-2465118 | | 9825134487 | |
| 10 | Mam.Katargam | V.D.Patel | 0261-2464601 | | 7574958005 | |
| 11 | P.O. Mandvi | A.K.Bariya | 221178 | | 7567011470 | 221178 |
| 12 | Mam. Mandvi | S.L.Damor | 02623 221023 | 02623 221044 | 9426057601 | 221178 |
| 13 | Mam. Mangrol | M.M.Vasava | 02629 220227 | 02629 233570 | 7567006758 | 220094 |
| 14 | Mam. Umarpada | B.C.Gamit | 02629 253399 | | 7016311624 | |
| 15 | P.O. Olpad | R.C.Patel | 02621 241244 | 2656088 | 9978405222 | 221246 |
| 16 | Mam. Olpad | R.R.Bhabhor | 02621 -222444 | | 7567006504 | |

| | | | | | | |
|----|-------------------------------|--------------------------|------------------------|-----------------|------------|-----------------|
| 17 | Mam. Choryasi | Mehul V. Desai | 0261-2663800 | | 9825734581 | |
| 18 | P.O. Kamrej | K.G.Vaghela | 02621 253400 | | 9825200106 | 253500 |
| 19 | Mam. Kamrej | Smt. Astha Xitij Solanki | 02621-252078 | | 9427891001 | |
| 20 | Mam. Palsana | N.C.Bhavsar | 02622-264228 | | 9825818421 | |
| 21 | P.O. Bardoli | Shri V.N.Rabari | 02622 221124 | | 9998714826 | 229091 |
| 22 | Mam. Mahuva | B.R.Rana | 02625 255721 255363 | 02625 255738 | 9426424841 | 02625 255366 |
| 23 | Mam. Bardoli | M.V. Lachhun | 02622-220024 | | 9825664858 | |
| 24 | Add. Ex.Mag | | 02650103 | | | |
| 25 | L.A.Q. (1) | | 0261 2465294 | | 9824230331 | |
| 26 | L.A.Q. (4) | J. B. Mahtra | 0261 2460139 | | 9712916327 | |
| 29 | Dy. Collector Stemp duty 1 | | 0261 2465339 | 2262837 | 9824103764 | |
| 30 | Stemp duty 2 | | 0261 2461893 | | | |
| 31 | LRC | S S Vagh | 0261 2465120 | 2492697 | 9427757086 | |
| 32 | NIC | Akshay Padhiyar | 0261 2471042 | 2663030 | 9998876540 | |

| <u>ZONE OFFICE</u> | | | | | |
|---------------------------|-------------|--|------------------|-------------------|----------------|
| No. | Area | | Phone No. | Mobile No. | Fax No. |
| 1 | Chowk bazar | | 0261 2465945 | 9898785850 | |
| 2 | Nanpura | | 0261 2460055 | 9825817744 | |
| 3 | Udhana | | 0261 2279735 | 9925434500 | |
| 4 | Rander | | 0261 2783531 | 9998330114 | |
| 5 | Varachha | | 0261 2540167 | 9913843227 | |

| | | | | | |
|---|----------|--|-----------------|------------|--|
| 6 | Katargam | | 0261 2407210 | 9824658989 | |
| 7 | Limbayat | | 0261 2528733 | 9428814302 | |
| 8 | Majura | | 0261 2460055 | 9537170208 | |
| 9 | Puna | | 0261 2573911 | 9824728447 | |

| <u>Control Rooms</u> | | | | |
|-----------------------------|--|------------------|--------------------------|----------------|
| No. | Place | Phone No. | Mobile No. | Fax No. |
| 1 | Surat controlroom (DEOC) | 0261 2663200 | | 2664800 |
| 2 | Emergency control room,SMC | 0261 2423750-55 | 9724346021 | |
| 3 | Fire control room,SMC | 0261 2414195-96 | 9724346022 | |
| 4 | Police control room | 0261 2651832 | | 2651831 |
| 5 | Emergency Ambulance | 0261 2462600,108 | | |
| 6 | District Epidemic Control | 0261 2430589 | 9727706505 | |
| 7 | District Panchayat | 0261 2425751 | | |
| 8 | Irrigation Circle | 0261 2667426/69 | 9429276205 | |
| 9 | Surat Canal Division | 0261 2668716 | 9429276205 | |
| 10 | Ukai Dam | 02624-233267 | 9825141643 | |
| 11 | Kakrapar Dam | 02626-231685 | 9978291903 9879774261 | |
| 12 | Hathnur dem | 02582 277044 | 09403942566 | |
| 13 | Causeway Rander | 0261-2761365 | 9724346024 | |
| 14 | Flood control SMC | | 9724346023 | |
| 15 | E.R PWD Div.-1 | 0261 2464161-63 | | |
| 16 | R & B E.S Div. | 0261 2464161 | | |
| 17 | DGVCL | 0261 2804491 | | |
| 18 | Torent Power | 0261 2419967 | 9824116487 | |
| 19 | Gujarata Water Supply and Sewerage Board | 0261 2782088 | 9978441289 | |
| 20 | Gujarat Gas | 0261 2733373 | | 2736324 |
| 21 | Hazira Notified Area | 0261 2802108 | | |
| 22 | Forestry Dprt. | 0261 2733831 | 9978968799 | |
| 23 | Regional Transport Office | 0261 2977191 | | 2977193 |
| 24 | GSRTC, Surat | 0261 2424972 | 9998953098 | |

| | | | | |
|----|-------------------------|-------------------|------------|-------------|
| 25 | Highway Authority | 0261 2221223 | | |
| 26 | Information Dpmt. | 0261 2465541 | | |
| 27 | Safety and Health Dpmt. | 0261 2653502 | | 2653501 |
| 28 | VTIS, Hajira(GMB) | 6586788, 6546788, | 9909903748 | 2977007(F) |
| 29 | NDMA | 011-26701728, | | 26701729(F) |
| 30 | G'nagar control (SEOC) | 079232 51914 | | |

Emergency Contact Numbers for Nuclear Radiation

| N o | Name of the Department | Mobile Number | Landline Number | Fax Number | Email id |
|----------------|---|-----------------------------|-------------------------------|-------------------------------|--|
| 1 | CEO- GSDMA, | 99784 05600, 99784 07003 | 079232 59502, 079232 59276 | 079232 59275 | ceo.gsdma@gmail.com |
| 2 | Relief Commissioner, Revenue Dept. | 99784 06491 | 079232 51509, 079232 51926 | 079232 51916 079232 51568 | revcontrol1@gujarat.gov.in revcontrol2@gujarat.gov.in |
| 3 | Principal Secretary, Revenue Dept. | 99784 05930 | 079232 51501, 079232 51503 | 079232 51591, 079232 51507 | secrev@gujarat.gov.in |
| 4 | Bhabha Atomic Research Centre (BARC), Mumbai | | 22-25505050, 22-25592000 | 22-25505151, 22-25519613 | webmaster@barc.gov.in |
| 5 | National Disaster Management Authority (NDMA), Delhi | | 011 26701700, 011 26701728 | 011 26701729 | website@ndma.gov.in |
| 6 | Chief Secretary, GOG | 96876 11155 | 079232 50301, 079232 50302 | 079232 50305 | chiefsecretary@gujarat.gov.in |
| 7 | Secretary of Hon Chief Minister, GOG | 99784 06358 | 079232 50021 079232 50023 | 079232 22101 | sec2cm@gujarat.gov.in |
| 8 | Additional Chief Secretary, Home Dept. | 99784 06138 | 079232 50502 079232 50505 | 079232 52075 | secpers@gujarat.gov.in |
| 9 | KAPS, Site Director Kakrapar, Surat | 94298 92073 | 02626 230370 | 02626 230727 | alok@npcil.co.in |
| | KAPS, main control room Kakrapar, Surat | | 02626 230400 02626 230444 | | prcell_kaps@npcil.co.in |
| 10 | Secretary of Dep. Of Atomic Energy, New Delhi | | 02222 862702 | 02222 048476 | chairman@dae.gov.in |
| 11 | Nodal officer, Physical Research Laboratory (PRL),Ahmedabad | | 079263 14000, 079263 02129 | 079263 14900 | root@prl.res.in |
| 12 | Director of PRL | 9898586326 | 079263 08550 079263 14241 | 079263 00374 | director@prl.res.in |
| 13 | PS to Director of PRL | 9909950963 | 079263 14855 | | pauline@prl.res.in |
| 14 | State Emg. Oper. | 9978406087 | 079232 51611, | 079232 51912 | |

| | | | | | |
|--|------------------------------------|--|--------------|--------------|--|
| | Centre(SEOC) Director of relief | | 079232 51612 | 079232 51916 | |
|--|------------------------------------|--|--------------|--------------|--|

DISTRICT PANCHAYAT

| No | DEPARTMENT AGENCY | OFFICE | Fax | MOBILE |
|-----------|------------------------------------|--------------------------------|------------|---------------------------|
| 1 | District Panchayat President | 2422118,2412546 | | |
| 2 | District Development Officer | 2422160, 2425751 | 2667453 | 9978406247 |
| 3 | Dy. DDO(Revenue) | 2425750 to 55 | 2412543 | 7567078000 |
| 4 | Dy. DDO (Development) | 2425751 Ex.113 | | |
| 5 | Dy. DDO (Panchayat) | 2425751 Ex.113 | | 7567017783 |
| 6 | District Agriculture Officer | 2425751 Ex.131 | | 9978354901 |
| 7 | Dy. Director Animal Husbandry | 2425751 Ex.155 2544071 | | 9825496545, 9825800968 |
| 8 | Chief District Health officer | 2425751 Ex.136 0261-2413066 | | 9727709501 |
| 9 | Exe. Engineer (R&B) | 2476894 | | |
| | Exe. Engineer (Irrigation) | 2425751 Ex.146 | | 9426683611 |
| 10 | Exe. Engineer R&B Panchayat | 2472337 | | 9426842467 |
| 11 | District Primary Education Officer | 2595903 | 2595902 | 9537536433 |
| 12 | T.D.O. CHORYASI | 0261-2669660 | | 75670 15932 |
| 13 | T.D.O. OLPAD | 02621-221253 | 292995 | 7567015971 |
| 14 | T.D.O. KAMREJ | 02621- 252087/255163 | 255264 | 8980030905 |
| 15 | T.D.O. PALSANA | 02622-264224 | 264123 | 7567015805 |
| 16 | T.D.O. BARDOLI | 02622-220046 | 220701 | 7567015834 |
| 17 | T.D.O - Mangrol | 02629-220224 | 253484 | 9265608150 |
| 18 | T.D.O - Mandvi | 02623-221024 | 222886 | 9825221680 |
| 19 | T.D.O- Umarpada | 02629-253484 | | 9426161819 |
| 20 | T.D.O. MAHUVA | 02625-255890 | 255749 | 7567015957 |

Nagar Palika Chief Officer

| NO. | DEPARTMENT | OFFICE | FAX | MOBILE |
|------------|----------------------|---------------------|-------------------|---------------|
| 1 | Bardoli nagar palika | 02622-220084/85 | 223084 | 8849568634 |
| 2 | Mandvi nagar palika | 02623-221057/221810 | 222755 | 9586651710 |
| 3 | Tarsadi nagar palika | 02629-232600 | 232151, 232592 | 9898507472 |
| 4 | Kankpur Kansad nagar | 0261-2391704 | | 9825808418 |

| | | | | |
|---|-----------------------|--------------|--|------------|
| | palika | | | |
| 5 | Sachin nagar palika | 0261-2391109 | | 9522955725 |
| 6 | Kadodara nagar palika | 02622-272008 | | 9824397537 |

POLICE DEPARTMENT (Rural)

| NO. | DEPARTMENT AGENCY | OFFICE | MOBILE | FAX |
|-----|---|--------|------------|--------------|
| 1 | District Suprentendent of Police | | 9978405082 | 0261 261834 |
| 2 | Dy. District Suprentendent of Police (Headquater) | | 9099946399 | 0261 261834 |
| 3 | Dy. District Suprentendent of Police, Bardoli | | 9099030693 | 02622 226861 |
| 4 | Police Inspector L.C.B | | 9825790822 | 0261 261834 |
| 5 | Police Inspector L.I.B | | 9312133311 | 0261 261834 |
| 6 | Police Inspector S.O.G. | | 9727479191 | |
| 7 | Police Inspector C.P.I. Surat | | 9725609262 | |
| 8 | Police Sub-Inspector, District Traffic | | 8980049700 | 0261 2651834 |
| 9 | Police Sub-Inspector, Rider to S.P. | | 9909032683 | 0261 2651834 |
| 10 | Police Sub-Inspector, live Reserve | | 9825158259 | 0261 2651834 |

POLICE DEPARTMENT (Urban)

| NO. | DEPARTMENT AGENCY | OFFICE | RESIDENT | MOBILE |
|-----|-------------------------------------|---------|-----------------|------------|
| 1 | COMMISSIONER OF POLICE | 2244440 | 2667322 | 9978406275 |
| 2 | Joint police commissioner (Range 1) | 2244446 | 2720212/2668999 | 9978407285 |
| 3 | Joint police commissioner (Range 2) | 2244447 | 2254544 | 9978406992 |
| 4 | Additional Police Commissioner | 2463636 | 2651900 | 9978406290 |
| 5 | Dy. Police Commissioner (Zone1) | 2554760 | 2259198 | 9978406096 |
| 6 | Dy. Police Commissioner (Zone2) | 2414102 | 2253270 | 9978405576 |
| 7 | Dy. Police Commissioner (Zone3) | 2244101 | 2651096 | 9978405052 |
| 8 | Dy. Police Commissioner (Zone4) | 2734103 | 2654457 | 9978406097 |
| 9 | Dy. Police Commissioner (Crime) | 2460892 | 2652159 | 9978405622 |
| 10 | Dy. Police Commissioner (H Q) | 2669500 | | 9978408288 |

POLICE DEPARTMENT (Other Info.)

| NO. | Police Station with Address & Phone No. | Designated Contact Persons with Address & Phone Nos. |
|-----|---|--|
| 1 | Police Inspector Wireless (O) 0261-2669564 | R.R.Avasthi ACP "E" (O) 0261-2462570 |

| | | |
|----|--|--|
| 2 | Police Inspector, Ichchhapor (O) 0261-2860197 (R) 0261-2793333 | Mr. M.I.Pathan (M) 9925012109 |
| 3 | Police Inspector, Kapodra (O) 0261-2577579/2574965 | Mr. M. K. Gurjar (M) 8980047007 |
| 4 | Police Inspector, Udhna (O) 0261-2277155/2282329 | Mr. H. V. Goti (M) 9825387862 |
| 5 | ACP Traffic (Region-1) (O) 0261-2365417 | Mr. Z. A. Shaikh (M) 9825149944 |
| 6 | Police Inspector Traffic Circle-2 (O) 0261-2365417 | Mr. R. N. Patel (M) 9974339602 |
| 7 | Police Inspector Traffic Circle-4 (O) 0261-2535917 | (I/C) Mr. S. N. Sagarka (M) 9979362122 |
| 8 | Police Inspector Traffic Circle-5 (O) 0261-2535917 | (I/C) Mr. A. K. Kuvadiya (M) 9727505176 |
| 9 | Police Inspector Traffic Circle-6 (O) 0261-2535917 | Mr. L. G. Kharadi (M) 9099978052 |
| 10 | Police Inspector Traffic Circle-7 (O) 0261-2365417 | (I/C) Mr. S. F. Shaikh (M) 8980044533 |
| 11 | Police Inspector Traffic Circle-8 (O) 0261-2365417 | (I/C) Mr. M.G. Chauhan (M) 8000213444 |
| 12 | Police Inspector Traffic Circle-9 (O) 0261-2365417 | Mr. R. C. Vyas (M) 9427456928 |
| 13 | Police Inspector Traffic Circle-10 (O) 0261- | I/C Mr. H. C. Masani (M) 9979013192 |
| 14 | Police Inspector, Limbayat (O) 0261-2277001 | Mr. V. M. Makwana (M) 9725013130 |
| 15 | Police Inspector, Salabatpura (O) 0261-2324229 | Mr. V. J. Chaudhari (M) 9727780111 |
| 16 | Police Inspector, Mahidharpura (O) 0261-2422163 | Mr. P. A. Arya (M) 9825486829 |
| 17 | Police Inspector, Katargam (O) 0261-2532535 | Mr. Z. N. Ghasura (M) 9978999700 |
| 18 | Police Inspector, Athwalines (O) 0261-2460959 | Mr. S. B. Bharwad (M) 9925114222 |
| 19 | Police Inspector, Chowk Bazar (O) 0261-2424185 | Mr. S.B.Shaikh (M) 9825040365 |
| 20 | Police Inspector, Umraa (O) 0261-2669428 | Mr. K. A. Gadhavi (M) 9978445700 |
| 21 | Police Inspector, Pandesara | Mr. K.B.Zala |

| | | |
|----|---|--|
| | (O) 0261-2890200, 2899033 | (M) 9727780130 |
| 22 | Police Inspector, Rander (O) 0261-2766152 | Mr. M. I. Zala (M) 9825805593 |
| 23 | Police Inspector, Adajan (O) 0261-2734100, 2736100 | A.K.Chauhan (M) 9099091153 |
| 24 | Police Station, Rander (O) 0261-2766152 | Mr. M. I. Zala (M) 9825805593 |
| 25 | Police Station, Varachha-I (O) 0261-2544496, 2554486 | Mr. M.P.Patel (M) 9099355333 |
| 26 | Police Station, Varachha-II | (O) 0261-2544496 |
| 27 | Police Station, Limbayat | P.I. Mr. N.D.Solanki (O) 0261-2277001, 2282328 (M) 9714362620 |
| 28 | Police Station, Salabatpura | P.I. Mr. V.J.Chaudhari (O) 0261-2324229, 2368896 (M) 9727780111 |
| 29 | Police Station, Chowk Bazar | P.I. Mr. S.B.Shaikh (O) 0261-2424185 (M) 9825040365 |
| 30 | Police Station, Wireless | P.I. Mr. R.R.Avasthi (O) 0261-2669574 (M) 9825939556 |
| 31 | Police Station, Sachin | P.I. Mr. R.J.Gohil (O) 0261-2392258, 2395734 (M) 9925022423 |
| 32 | Police Station, Ichchhapur | P.I. Mr. G.A.Patel (O) 0261-2860197 (M) 7201088299 |
| 33 | Police Station, Punagam | P.I. Mr. B.N.Sagar (O) 0261-2640500 (M) 8980399899 |
| 34 | Police Station, PCB | P.I. R.R.Chaudhari |

| | | |
|----|------------------------------|---|
| | | (O) 0261-2244450 (M) 9824863399 |
| 35 | Police Station, Amroli | P.I. M.B.Vaghela (O) 0261-2497700 (M) 9825167096 |
| 36 | Police Station, M.T.Sec | P.S.I. Mr. B.D.Solanki (O) 0261-2660437 (M) 9409553000 |
| 37 | Police Station, Khatodra | P.I. Mr. H.R.Bhrahmbhatt (O) 0261-2633800 (M) 7567875400 |
| 38 | Police Station, Adajan | P.I. A.K.Chauhan (O) 0261-2734100, 2736100 (M) 9099091153 |
| 39 | Police Station, Jahangirpura | P.S.I. I/C Smt. H.A.Sindha (O) 0261-2770030 (M) 9924099979 |
| 40 | Police Station, Hazira | P.I. P.A.Arya (O) 2912711/12 (M) 9825486829 |
| 41 | Police Station, D.C.B. | P.I. B.N.Dave (O) 0261-2415572 (M) 9825084301 |
| 42 | Police Station, D.C.B. | P.I. P.L.Chaudhri (O) 0261-2415572 (M) 9925046214 |

Surat Fire & Emergency Services
List of Officers & Fire Station Incharge

**SMC Control Room: 0261-2423751 to 2423756, 2422285 to 2422287
EXT. 250 9724346026/27/34 Fire Control Room: 0261-2414139/95/96,
9724346022, 9099004528, 101/102 EXT. 324**

| NO. | Fire Station (Zone wise) | Name | Designation | Contact No. | Fire Station No. |
|-----|----------------------------|---|-------------------------|--|-------------------------------|
| | Fire Control Room (SMC) | B. K. Pareekh | I/c. CFO | 9724345553 | O-EXT-229 |
| | | S. K. Acharya | Dy. CFO | 9724345508 | O-EXT-322 |
| | | Nirav Rana | W. O. | 9427881184 | O-EXT-251 |
| | Central Zone | | | | |
| 1 | Muglisara | R. I. Rajput | F. O. | 9724345688 | 2400172 EXT-413 |
| 2 | Ghanchi Sheri | P. R. Patel | S. O. | 9724345690 | 2400173 |
| 3 | Navsari Bazar | J. J. Patel | F. O. | 9724345684 | 2400246 |
| | East Zone (Varachha) | | | | |
| 4 | Kapodra | K. J. Mod | F. O. | 9724345020 | 2571388 |
| 5 | Mota Varachha | A. R. Salunke | F. O. | 9724345685 | 2494244 |
| | West Zone (Rander) | | | | |
| 6 | Adajan | V. B. Vadhvana I. M. Patel F. J. Gadhvi | D. O. F. O. S. O. | 9724345513 9724345694 9974656780 | 2781232 2781232 2781232 |
| 7 | Mora Bhagal | S. D. Dhobi | F. O. | 9724345695 | 2770768 |
| 8 | Palanpor | O. S. Mishra B. I. Rawat | F. O. S. O. | 9724345693 9574540404 | - - |
| | North Zone (Katargam) | | | | |
| 9 | Katargam | L. M. Patel H. T. Thakor | S. O. S. O. | 9727740969 7573048372 | 2482269 2482269 |
| 10 | Kosad | R. N. Patel | S. O. | 9727740970 | 2497240 |
| | South Zone (Udhna) | | | | |
| 11 | Bhestan | R. K. Gaikwad H. R. Borste | F. O. F. O. | 9724345686 9727740994 | 2902734 2902734 |
| | South West Zone (Limbayat) | | | | |
| 12 | Maan Darwaja | K. N. Mod R. H. Khadiya | S. O. S. O. | 8141968382 9978252506 | 2331357 2331357 |
| 13 | Dumbhal | B. K. Solanki H. A. Patel | S. O. S. O. | 9727740996 8347473734 | 2913509 2913509 |
| | South East Zone (Athwa) | | | | |

| | | | | | |
|----|--------|-----------------|-------|------------|---------|
| 14 | Majura | D. H. Makhijani | D. O. | 9724345510 | 2230686 |
| | | V. B. Tiwari | F. O. | 9724345689 | 2230686 |
| | | H. A. Gadhavi | S. O. | 9727740995 | 2230686 |

SURAT MUNICIPAL CORPORATION

| NO. | DEPARTMENT AGENCY | OFFICE | RESIDENT | MOBILE |
|-----|---------------------------------|---------------|--------------|------------------|
| 1 | Municipal Commissioner | 2422240 | 2258393 | 9724345000 |
| 2 | Dy.Municipal Commissioner (Gen) | 2423340 | 2252593 | 9724345002 |
| 3 | Dy.Municipal Commissioner (Sp.) | 2422221 | 2256030 | 9724345001 |
| 4 | East Zone (Varachha) | 2547750 | control room | 9724346030-33 |
| | | 2548365 | 2551363 | |
| 5 | West Zone (Rander) | 2786181 to 83 | control room | 9724346025-26 |
| | | | 2781439 | 9724345211 |
| 6 | North Zone (Katargam) | 2480518 | control room | 9724345466 to 13 |
| | | 3015280 | 2535100 | |
| | | | 2530518 | |
| 7 | South Zone (Udhana) | 2278429 | control room | 9724346060-61 |
| | | | 2276145 | |
| | | | 2277043 | |
| 8 | Central Zone (Muglisara) | 2420547 | control room | 9724346019-20 |
| | | | 3918901-02 | |
| 9 | South - West Zone (Athawa) | 2663049 – 50 | control room | 9724343015 to 18 |
| | | | 2663050 | |
| 10 | South - East Zone(Limbayat) | 2331903 to 05 | | 9724346049 to 52 |

MEDICAL & HEALTH

| NO. | DEPARTMENT AGENCY | OFFICE | RESIDENT | MOBILE |
|-----|--|---------------------------|----------|------------|
| 1 | Medical Superintendent new civil hospital surat | 2244985, 2244456 to 59 | 2266120 | 9825555387 |
| 2 | district Health Officer district panchayat surat | 2430589 | 2669801 | 9727709505 |
| 3 | Old civil hospital surat | 2479311, 2479610 | | |
| 4 | new civil hospital surat | 2244456 to 59 | | |
| 5 | mahavir hospital surat | 2339181-2330274 | | |
| 6 | surat general hospital surat | 2422040-41, 2427265 | | |
| 7 | maskati hospital surat | 2420412 | | 9724346066 |
| 8 | mission hospital surat | 2652890 | | |

| | | | | |
|----|--------------------------------------|-----------------------------|--|------------|
| 9 | ESIC general hospital surat | 2244110 | | |
| 10 | CHC & referral hospital olpad surat | 02621-222048 | | 9327397573 |
| 11 | CHC & referral hospital kamrej surat | 02621-252319 | | 7567873626 |
| 13 | Lokhat Rampura | 2422080-81 | | |
| 14 | mahavir city scene center | 2470114,4082000, 402020, | | |
| 15 | Walk heart hospital | 2656590-91 | | |
| 16 | Pramukhswami hospital (BAPS) | 2781000 | | |
| 17 | sanjivni hospital chalthan surat | 281083 | | |

WESTERN RAILWAY

| NO. | DEPARTMENT AGENCY | OFFICE | RESIDENT | MOBILE |
|-----|--------------------------------------|--------|----------|------------|
| 1 | Senior Divisional Engineer | | | 9004499201 |
| 2 | Assistant Divisional Engineer, Surat | | | 9724099260 |
| 3 | Senior Sectional Engineer | | | 9724099271 |

OTHER DEPARTMENT & ORGANIZATION

ST Depot , Surat City Station and Railway Station, Surat

| NO. | DEPARTMENT AGENCY | OFFICE | RESIDENT | MOBILE |
|-------------------------------|---|---------------------|-------------|------------|
| 1 | Divisional Controlor, Surat | 2424972 | | 9998953098 |
| 2 | Divisional Mechanical Engineer | | | 9998953099 |
| 3 | Divisional Traffic Suprintendent Office | | | 9998953100 |
| 4 | Depot Manager, Surat Rural | | | 9998953103 |
| 5 | Depot Manager,Bardoli | | | 9998953104 |
| 6 | Depot Manager,Surat City | | | 9998953105 |
| 7 | Depot Manager, Mandvi | | | 9998953107 |
| 8 | Depot Manager, Olpad | | | 9998953108 |
| 9 | Depot Manager, Songadh | | | 9998953109 |
| 10 | Depot Manager, Navsari | | | 9998953121 |
| 11 | Depot Manager, Zagadia | | | 9998953093 |
| 12 | Surat City Bus Station | 0261-2439090 | | |
| Airport, Surat | | | | |
| 14 | Airport Director | 0261 2700200/295 | 2700244(F) | |
| 15 | AGM (Second in command) | 0261 2700203 | 2700244(F) | |
| Railway Station, Surat | | | | |
| 16 | Area Manager, Surat | | 02267641500 | 9724099903 |
| 17 | Station Superintendent | | | 9724099942 |
| 18 | Assistant Station Superintendent | 0261-2450144 | | |

| | | | | |
|----------------------------|--------------------------------------|-------------------------------------|-------------|------------|
| 19 | Linear bus stand | 2424972 | | |
| Power Supply, Surat | | | | |
| 20 | Executive director Torrent power ltd | 2452441,2400240 2551912 | 2422171 (F) | |
| 21 | South Guj.Vij.Co.Ltd.-Udhana | 2277248 | | |
| | South Guj.Vij.Co.Ltd.- Kapodara | 2506000/200 | 2572636 (F) | |
| 22 | South Guj.Vij.Co.Ltd.-Rander 1 - 2 | rander1:2776122 rander2: 2762670 | | |
| 23 | Regional transport officer RTO | 2465188 | 2464902 fax | 9426560574 |
| 24 | PWD | 2464162 | | |
| 25 | Gujarat Gas Company | 2736373, 4065000 | 2736362 (F) | 9924004000 |
| 26 | Chamber Of Commerce | 2470083 | | |

Annexure 13
Industrial Details

| CHAIRMAN LOCAL CRISIS GROUP | | | | |
|------------------------------------|---|---------------|-----------------|---------------|
| NO. | DEPARTMENT AGENCY | OFFICE | RESIDENT | MOBILE |
| 1 | Surat 1 : Hazira -Olpad-Mangrol-Mandvi & Umarpada industrial pocket | 2464393 | 2655155 | 9978405221 |
| 2 | Surat 2 : Hazira area palsana,bardoli ,mahuva, kamrej industrial pocket | 221124 | | 9825300729 |

| NEWS MEDIA | | | | |
|-------------------|--------------------------|---------------|-----------------|---------------|
| NO. | DEPARTMENT AGENCY | OFFICE | RESIDENT | MOBILE |
| 1 | Gujarat Mitra | 2599991 | | 9825496195 |
| 2 | Sandesh | 2543000 | | 9825544303 |
| 3 | Gujarat Samachar | 2634645-6 | | 9898988137 |
| 4 | Times Of India | 2256164 | | 9879539255 |
| 5 | Indian Express | 2470374 | | 9925130345 |
| 6 | Divyabhaskar | 3988885 | | 9909956100 |
| 7 | Gujarat Gaurdian | 4010203 | | |

| <u>OTHER GOVERNMENT DEPARTMENT</u> | | | | |
|---|--|-------------------------------|--------------------|---------------|
| NO. | DEPARTMENT AGENCY | OFFICE | RESIDENT | MOBILE |
| 1 | Joint director, industrial safety & health surat | 2653501/2 | 2667692 | 9825058741 |
| 2 | Regional Officer, GPCB surat | 2442696/ 2411192 | fax 2429733 | 9825088867 |
| 3 | Regional Manager, GIDC, surat | 0261-2668948, 2661257(fax) | | 9879110014 |
| 4 | Joint director district agricultural officer | 2425751 | 2687137 | 9427460219 |
| 5 | district information officer surat | 2479177 2474423 | 2669077 2669178 | 9825793182 |
| 6 | chief civil defense surat | 2464102 | 2772368 | 9429090764 |
| 7 | Regional Transport Office, surat | 0261-2465188, 2464902 | 2465818 | 9427686622 |
| 8 | ExEr.,public health & machanical Dn. | 0261-2687376 | 2220564 | |
| 9 | district supply officer surat | 0261-2465114, 2667750 | | 9913547169 |
| 10 | boiler inspector surat | 0261-2472427 | | |

| | | | | |
|----|---|--------------------------|---------|------------|
| 11 | chairman surat | 0261-2465848 | | |
| 12 | the executive engineer, R& B division (state) surat 1 | 0261-2464162 | | 9427107041 |
| | R& B division surat 2 | 0261-2464161-63 | | 9825164701 |
| 13 | Port officer | 0261-2423781 | 2435645 | 9925153038 |
| 14 | Port Exe. Enginneer | 0261-2430533 | | 9925153096 |
| 15 | Port Traffic Inspector | 0261-2430533 | | 9879463627 |
| 16 | Vessel Traffic Management Solutions (VTMS) Control room hazira | | | 9909903748 |
| 17 | Assistant Director Fisheries | 0261-2462846, 2463946 | 2462848 | 9879335412 |
| 18 | Fishing Officer | 0261-2460782 | | 9427468833 |
| 19 | DFO-Forest | 0261-2733831 | | 9737918010 |
| 20 | DCF-Forest | 0261-2733831 | | 9978406167 |
| 21 | RFO-Forest | 0261-2733831 | | 9978968799 |
| 22 | Circuit House | 0261-2669218/178 | | 9727645857 |

**Contacts of Emergency Response Centre (ERC),
Poison Control Centre (PCC)**

| Sr. No. | ERC/PCC Description & Facilities Available | Location | Contact Authority Name, Address & Contact No. |
|---------|--|-------------------------|---|
| 1. | Disaster Management Cell, Collector Office | Collector Office, Surat | Mrs. Rita Patel (O) 0261-2663200 (M) 9913072614 |
| 2. | Police Control Room | Surat | J. K. Pandya (O) 0261-2241301/302/303 (M) 992595000 |
| 3. | Emergency Control Room, SMC | Surat | I/C B. K. Pareek, SMC Surat (O) 0261-2422285 (M) 9724345553 |
| 4. | Fire Control Room, SMC | Surat | S. K. Acharya, SMC Surat (O) 0261-2414139 (M) 9724345508 |
| 5. | Emergency Ambulance | Surat | 108 |

Contacts Of The Surat District Crisis Group

| SR N O. | DESIGNATION | DESIGNATION & DEPARTMENT | TELEPHONE NUMBERS | | | |
|---------------|------------------------------------|--|-------------------|------------------|------------|------------|
| | SURAT CRISIS GROUP | DEPARTMENT | STD CODE | OFFICE | RESIDENT | MOBILE |
| 1 | CHAIR PERSON | DISTRICT MAGISTRATE | 261 | 2652525 | 2669080 | 9878406222 |
| | | COLLECTOR,SURAT | | 2655151 | 2669580 | |
| 2 | MEMBER | Municipal COMMISSIONER | 261 | 2422240 | 2258393 | 9724345000 |
| | | SMC,SURAT | | 2423751 TO 56 | | |
| 3 | MEMBER | POLICE COMMISSIONER | 261 | 2244440 | 2668555 | 9988406275 |
| | | MSBLDG,nanpura,surat | | | | |
| 4 | MEMBER | Superintendent of Police, Surat | 261 | 265183/1 32 | 2665666 | 9978405082 |
| 5 | MEMBER & CHAIRPERSON (LCG-1) | SDM,choryasi | 261 | 2464393 | 2655155 | 9978405221 |
| 6 | MEMBER & CHAIRPERSON (LCG-2) | SDM,choryasi | 261 | 2464393 | 2655155 | 9978405221 |
| 7 | MEMBER | Executive engineer | 261 | 2792740 | 9978441270 | 9978406648 |
| | | public health -gujarat water supply & sewerage board,surat | | | | |
| 8 | MEMBER | superintendent Engineer | 261 | 2804491 | | 9879200617 |
| | | DGVCL surat | | 2804499 | | 9879201257 |
| 9 | MEMBER | District health officer | 261 | 2425751/ 55 | 2669801 | 9727709505 |
| | | district panchayat,surat | | | | |
| 10 | MEMBER | medical superintendent new civil hospital surat | 261 | 2244985 | 6508651 | 9825555387 |
| | | hospital surat | | 2244456- 59 | | |

| | | | | | | |
|----|-------------------------------|---|-----|---------|------------|------------|
| 11 | MEMBER | chief fire officer surat municipal | 261 | 2422285 | ext.226,m. | 9724345553 |
| | | corporation surat | | | | |
| 12 | MEMBER | chief civil defense | 261 | 2464102 | 2772368 | 9429090764 |
| | | officer surat | | | | |
| 13 | MEMBER | dy.chief controller of explosive, 8th floor yashkumar building , | 261 | 2225159 | 2343078 | |
| | | sayajigunj vadodra | | | | |
| 14 | MEMBER | regional officer gujarat pollution control board surat | 261 | 2442696 | | |
| | | | | | | |
| | | | | 2429733 | | 9825088667 |
| 15 | MEMBER | regional transport officer | 261 | 2465188 | | |
| | | surat | | | | |
| | | | | 2464902 | 2465818 | 9427686622 |
| 16 | MEMBER | the executive engineer | 261 | 2464162 | 2655077 | 9824039551 |
| | | R & B division(state) | | | | |
| 17 | MEMBER | joint director district | 261 | 2425751 | 2687137 | 9427460219 |
| | | agriculture office | | | | |
| 18 | MEMBER (IND. REPRESENTIVE) | mr.kiritbhai gandhi | 261 | 2890122 | 2244666 | 9825056865 |
| 19 | MEMBER- EXPERT | mr.d.m.reddy | 261 | 4135069 | 4137249 | 9898876565 |
| | | vp reliance | | | | |
| 20 | MEMBER- EXPERT | dr.a.v.mevara | 261 | 2835070 | 4137432 | 9998011550 |
| | | cmo reliance | | | | |
| 21 | MEMBER- EXPERT | dr.pankaj desai (msc,phd) | 261 | 2890122 | 2650027 | 9825057933 |
| | | colourtex ind. Ltd. | | | | |
| 22 | MEMBER- EXPERT | shri p murugesan | 261 | 2840039 | 6581569 | 9925036510 |
| | | dgm gail hazira | | | | |
| 23 | MEMBER | shri naishadh desai | 261 | 2424767 | | |
| | | trade union representative | | | | |
| 24 | MEMBER SECRETARY | dy.director indutrial safety & health | 261 | 2473501 | 2650085 | |
| | | | | | | |
| | | | | | 2667692 | 9825058741 |

Evacuation Information – Sheltering

| Sr. No. | Evacuation Area Location | Capacity (No. of People) | Contact Authority Name with Address & Phone No. |
|----------------|--|--|--|
| 1. | Dhamanwala Complex, G.I.D.C., Pandesara, Surat | 100 people | Mr. Ramanbhai (O) Pandesara Association (O) 0261-2899205 (M) 9825804697 |
| 2. | D. B. High School ITI Palsana Gayatri Mandir Hall Bhatt Eng. Medium School Poly Tech. College Sanskar Vidhya Sankul | 2500 500 300 1000 1000 2500 | Mr. Balbirsingh Pilnia Spectrum Dyes & Chemical Pvt. Ltd. Plots, No.-484, 502, 503, 504 N.H. #8, Palsana-394315, Surat (O) 2622-264259 (R) 02622-264162 (M) 09824106565 |
| 3. | Laxmiben Dahyabhai High School, Station Road, Sachin | 1000 | Principal (O) 2392221/2395836 |
| 4. | Udhyog Bharati School, GIDC, Pandesara | 200 | Principal (O) 0261-2893469 |
| 5. | R. N. Naik High School, Ranchhod Nagar, Udhna | 1000 | Principal (O) 0261-2272970 |
| 6. | HCC Housing Colony, 1.2 KM South Side | 1000 | 02621-221682 |
| 7. | School Building In. Mahadev Shashtri Mahavidhya Bhavan, 1 KM Olpad | 1000 | 02621-221214 02621-320129 |
| 8. | Shree Vivekanand College of Commerce | 1000 | 0261-2915488 0261-3295488 |
| 9. | R. V. Patel College of Commerce | 1500 | 0261-2918222 0261-2914182 |
| 10. | J. B. Dharukawala Arts & J. B. Gabani Commerce College | 5000 | 0261-2573802 0261-2571103 |

Details Of Chemicals Properties, Fire Fighting Agents, Antidotes, First Aid & Medical Treatment

| Sr No | Name Of Chemical | Hazard Characteristics | Fire Fighting Agent | Antidote / First Aid / Medical Treatment |
|-------|-------------------------|------------------------|---|--|
| 1 | Acetic Acid | Corrosive | Carbon Dioxide, Dry Chemical Powder, Water Spray and Alcohol Resistant Foam | Remove the victim to fresh air. If there is a difficulty in breathing, give Oxygen. If heartbeats are absent, give external Cardiac compression. If substance has gone in eyes, wash with plenty of water for 15 minutes, holding eyes open and obtain medical treatment urgently. |
| 2 | Ammonia | Flammable, Toxic | Stop flow of gas, use water spray to cool fire exposed containers. Exposed fire fighter must wear positive pressure self-contained breathing-apparatus and full protective clothing. | Remove the victim to fresh air. If there is a difficulty in breathing, give Oxygen. Inhalation of steam or vinegar vapour is recommended. If substance has gone in eyes, wash with plenty of water for 15 minutes To relieve restlessness, ingestion morphine 15mg to relieve Dyspnoea, Oxygen inhalation. |
| 3 | Ammonium Carbonate | Corrosive | Non-flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give Oxygen. If substance has gone in eyes, wash with plenty of water for 15 minutes, holding eyes open. |
| 4 | Ammonium Nitrate (Melt) | - | Use plenty of water to cool fire exposed containers. Exposed fire fighter must wear positive pressure self-contained breathing apparatus and full protective clothing. Container may explode in fire. | In case of burns due to hot Ammonium Nitrate solution, part should be flushed with large quantity of water and treated according to usual burns. |
| 5. | Carbon Dioxide | Asphyxiant | Non-flammable | It is simple asphyxiant and can cause oxygen deficiency in confined space / non ventilated areas. Respiratory protection is required. |
| 6. | Carbon Monoxide | Flammable, Toxic | Carbon monoxide, dry chemical powder, wear self contained breathing apparatus. Let fire burn, shut off gas while using the chemicals. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If hearts beats are absent, give external cardiac compression. Do not use mouth to mouth ventilation. Administer 100% oxygen till carboxyhemoglobin level is |

| | | | | |
|-----|--------------------|-----------------------|--|---|
| | | | | measured. Cerebral edema and convulsions must be controlled. Ethylene blue must not be injected. |
| 7. | Chlorine | Toxic | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give external cardiac compression. In case of eye exposure, wash with copious amount of water for 15 minutes, keeping eyelids apart |
| 8. | Coal | Flammable | Dry chemical powder, water supply | Incomplete combustion may produce CO ₁ , sulphur dioxide, hence respiratory protection may be required to fight the fire. |
| 9. | Formic Acid | Flammable , Corrosive | Carbon dioxide, dry chemical powder, water spray and alcohol resistant, foam all purpose foam. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If hearts beats are absent, give external cardiac compression. If substance has gone in eyes, wash with plenty of water for 15 minutes, holding eyes open and obtain medical treatment urgently. |
| 10. | Fuel Oil | Flammable | Carbon dioxide, dry chemical powder, foam | Remove the contaminated clothes. Wash the affected parts of skin with plenty of soap and water and seek medical advice immediately for inhalation of vapors / fumes. |
| 11. | High Speed Diesel | Flammable | Dry chemical powder, foam | - do - |
| 12. | Hydro-chloric Acid | Corrosive | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give artificial respiration. Do not give alkaline substances or carbonate preparation. Skin should be treated with 5% Trietanol amine. If substance has gone in eyes, wash with plenty of water for 15 minutes, holding eyes open and obtain medical treatment urgently. |
| 13. | Hydroge n | Flammable , Explosive | Dry chemical powder, halon. Let fire burn under control. Stop flow of gas. | It is simple asphyxiant and can cause oxygen deficiency in confined space / non ventilated areas. Move victim to the fresh air and apply resuscitation methods. |
| 14. | Hydroge n Iodide | Toxic | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If hearts beats are absent, give external cardiac compression. Incase of eye exposure, wash with copious amount of water for 15 minutes, keeping eyelids apart. |

| | | | | |
|-----|-------------------|-----------------------|---|---|
| 15 | Hydrogen Sulphide | Flammable , Toxic | Carbon dioxide, dry chemical powder. Wear self-contained breathing apparatus. Alcohol resistant foam is also advisable to be used to stop fire. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. Patient with significant exposure, should be hospitalized for 72 hours of medical observation for delayed pulmonary edema. The respiratory centre may be stimulated by injection of LOBGIN and nika thamide. Vitamin C may be injected intravenously. In case of eye exposure, it should be treated with boric acid solution. |
| 16 | Iodine | Toxic | Use water spray or carbon dioxide. Do not use foam or dry chemical. Wear full protective clothing and self contained breathing apparatus for fire fighting. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If heart beats absent, give external cardiac compression. Patient with significant exposure should be hospitalized for 72 hours of medical observation. Consider administration of multiple metered doses of topical steroid hormone or 30 mg/kg of methyl prednisolone IV. |
| 17. | LPG | Flammable , Explosive | Carbon dioxide, dry chemical powder, water spray | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If substance has gone in eyes, wash with plenty of water for 15 minutes holding eyes open. |
| 18. | Methane | Flammable , Explosive | Carbon dioxide, dry chemical powder. Shut off gas. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If substance has gone in eyes wash with plenty of water. |
| 19. | Methanol | Flammable , Toxic | Carbon dioxide, dry chemical powder, water spray and alcohol resistant foam. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. Never administer anything by mouth if a victim is losing consciousness. Do not induce vomiting. Do not use mouth to mouth respiration. Massive alkalization in life saving and eye saving measures. Give small quantity of Ethyl alcohol every 4 hourly. If substance has gone in eyes, wash with plenty of water for 15 minutes holding eyes open. |
| 20. | Methyl Acetate | Flammable , Toxic | Carbon dioxide, dry chemical powder and alcohol resistant foam. Water may be ineffective. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If substance heart beats are absent, give external cardiac compression. If substance has gone in eyes, wash with plenty of water for 15 minutes holding eyes open and obtain medical treatment urgently. |
| 21 | Methyl | Flammable | Carbon dioxide, dry | Remove the victim to fresh air. If there is a |

| | | | | |
|----|----------------------|-------------------|---|---|
| | Formate | , Toxic | chemical powder, water spray and alcohol resistant foam. | difficulty in breathing, give oxygen. If substance heart beats are absent, give external cardiac compression. If substance has gone in eyes, wash with plenty of water for 15 minutes holding eyes open and obtain medical treatment urgently. |
| 22 | Methyl Iodide | Toxic | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If substance heartbeats are absent, give external cardiac compression. Do not use mouth to mouth ventilation. Keep under medical surveillance for 48 hours. Consider administration of multiple metered doses of topical steroid by inhalation and or upto 30 mg / kg of methyl prednisolone. Incase of eye, contact immediately, refer to ophthalmologist. |
| 23 | Mono Ethylene Glycol | Flammable , Toxic | Carbon dioxide, dry chemical powder and alcohol resistant foam. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If heartbeats are absent, give external cardiac compression. If substance has gone in eyes, wash with plenty of water. |
| 24 | Naphtha | Flammable | Foam dry chemical powder, carbon dioxide. Apply water fog from as far distance as possible. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. The decision of whether to induce vomiting or not should be made by an attending physician. If heartbeats are absent, give external cardiac compression. If substance has gone in eyes, wash with plenty of water. |
| 25 | Natural Gas | Flammable | Stop flow of gas. Dry chemical powder, carbon dioxide. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If substance has gone in eyes, wash with plenty of water for 15 minutes, holding eyes open. |
| 26 | Nitric Acid | Corrosive, Toxic | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give Oxygen. Do not induce vomiting. If heartbeats are absent, give external Cardiac compression. If substance has gone in eyes, wash with plenty of water for 15 minutes, holding eyes open and obtain medical treatment urgently. |
| 27 | Nitric Oxide | Corrosive, Toxic | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. Do not allow to walk. Fatal symptoms may be delayed upto 48 hours even though victim |

| | | | | |
|----|----------------------|--------------------|---|--|
| | | | | may seem normal after exposure. If hearts beats are absent, give external cardia compression. If substance has gone in eyes, wash with plenty of water for 15 minutes holding eyes open and obtain medical treatment urgently. Methemoglobinemia due to no resolve in hours with oxygen therapy. |
| 28 | Nitrogen | Asphyxiate | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If hearts beats are absent, give external cardia compression. Treat for frostbite with lukewarm water. |
| 29 | Oxygen | - | Non flammable | Inhalation of 100 % oxygen can cause nausea, dizziness, irritation of lungs, pulmonary edema, pneumonia and collapse. Liquid oxygen will cause frostbite. |
| 30 | Nitrogen Dioxide | Corrosive, Toxic | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. Enforce complete rest for 24 to 48 hours. Incase of high exposure keep patient under medical observation for atleast 72 hours. Some individuals who had symptoms of acute exposure with or without edema, develop in immune reaction 10 days or 6 weeks after exposure. Symptoms include severe cough, cyanbosis (tuning blue) fever hypoxemia and X ray may show fire scattered nodes in the lungs are vulnerable to virus. |
| 31 | Potassiu mHydrox ide | Corrosive Toxic | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If substance heart beats are absent, give external cardiac compression. Incase of eye contact immediately refer for opt homological opinion. Treat skin burns conventionally. |
| 32 | Potassiu mMeth oxide | Flammable , Toxic | Only dry chemical powder is allowed to be used. In reacts with water and CO2. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. Never administer anything by mouth if a victim is losing consciousness. Do not induce vomiting. Do not use mouth to mouth respiration. Backing soda in glass of water should be given. |
| 33 | Prop ionicAcid | Flammable , Toxic, | Foam, dry chemical powder, carbon dioxide. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If |

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| | | Corrosive | Apply water fog from as far distance as possible. | heart beats are absent, give external cardiac compression. In case of eye contact flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with water & soap. |
| 34 | Rhodium Trioxide | - | Non flammable | Remove the victim to fresh air. Material cause irritation of nose, throat and respiratory tract. Repeated exposure to skin can cause allergic sensitization. In case of eye contact, flush with plenty of water for 15 minutes. |
| 35 | Sodium Hydroxide | Corrosive, Toxic | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. In case of eye contact flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with water & soap. |
| 36 | Sulphur Dioxide | Corrosive, Toxic | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If heart beats are absent, give external cardiac compression. Atrophic rhinitis and pharyngitis may be treated by inhalation of 5% solution of sodium chloride, followed by inhalation of 5% solution of sodium chloride, followed by inhalation of vitamin A. In case of eye contact, flush with 2% sodium bicarbonate solution, drops of 2 to 3 % phedrine should be instilled in the nose. |
| 37 | Sulphuric Acid | Corrosive, Toxic | Non flammable, react with water to form large amount of heat and corrosive fumes. Do not use water to existing fire in the nearby area. | Remove the victim to fresh air. If there is a difficulty in breathing, give Oxygen. In case eye contact flush with plenty of water for 15 minutes. Remove wet clothes and wash affected area with plenty of water. |
| 38 | Tricolor Ethylene | Flammable, Toxic | Carbon dioxide, dry chemical powder, water spray and alcohol resistant foam. | Remove the victim to fresh air. If there is a difficulty in breathing, give Oxygen. Do not induce vomiting. If heart beats are absent, give external Cardiac compression. If substance has gone in eyes, wash with plenty of water for 15 minutes, holding eyes open and obtain medical treatment urgently. |
| 39 | Ortho Dichloride Benzene | Flammable, Toxic | Foam dry chemical powder, carbon dioxide. Apply water fog from as far distance as possible. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. In case of eye contact flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty |

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| | | | | of water. |
| 40 | Trichloro Acetyl Chloride | Corrosive, Toxic | Foam dry chemical powder, carbon dioxide. | It is very corrosive liquid. Exposure will produce tears in the eyes and severe chemical burns. Move the person to fresh air. If not breathing, perform artificial respiration. If required, give oxygen. Wash the affected skin thoroughly with soap and water. Flush and irrigate eyes with copious quantity of water for at least 15 minutes. Do not induce vomiting. |
| 41 | Acrylonitrile | Flammable, Toxic | Carbon dioxide, dry chemical powder | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If the unconscious, crush an amyl nitrile ampoule in a cloth and hold it under the nose for 15 seconds in every minute. Do not interrupt artificial respiration during this process. |
| 42 | Copper Compounds | - | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If heart beats are absent, give external cardiac compression. If substance has gone in eyes wash with plenty of water for about 15 minutes, holding eyes open and obtain medical treatment urgently. |
| 43 | Aniline | Flammable, Toxic | Foam, dry chemical powder, carbon dioxide | Remove the victim to fresh air. If there is a difficulty in breathing, give Oxygen. Aniline is very toxic, if splashed on skin. It passes through the skin, causing methemoglobinemia. Antidote is methylene blue. In case of eye contact flush with plenty of water for 15 minutes. Remove wet clothes and wash affected area with plenty of water. |
| 44 | Benzen e | Flammable, Toxic | Foam, dry chemical powder, carbon dioxide | Remove the victim to fresh air. If there is a difficulty in breathing, give Oxygen. Benzene is very toxic or if splashed on skin. Chronic exposure may lead to leukemia. In case of eye contact flush with plenty of water for 15 minutes. Remove wet clothes and wash affected area with plenty of water. |
| 45 | Nitrobenzene | Flammable, Toxic | Foam, dry chemical powder, carbon dioxide | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. NB is very toxic if splashed on skin. It passes through the skin causing methemoglobinemia. Antidote is methylene blue. In case of eye contact flush with plenty of water for about 15 minutes. |

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| | | | | Remove wet clothes and wash affected area with plenty of water. |
| 46 | Phosgene | Corrosive Toxic | Non flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. Phosgene is very toxic in case of inhalation. It has very low TLV – 0.1 ppm. Keep the person under observation for 72 hours for possibility of delayed effect. In case of eye contact, flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty of water. |
| 47 | Toluene | Flammable , Toxic | Foam, dry chemical powder, carbon dioxide | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. Toluene is very toxic if splashed on skin. In case of eye contact flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty of water. |
| 48 | Di Nitro Toluene | Flammable , Explosive | Use plenty of water to cool fire exposed containers. Exposed fire fighter must wear positive self contained breathing apparatus. Foam and dry chemical powder and carbon dioxide can be used. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. Di Nitro Toluene is very toxic if splashed on skin. In case of eye contact flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty of water. |
| 49. | Metaoluene Di Amine | Flammable , Toxic | Foam dry chemical powder, carbon dioxide. Apply water fog from as far distance as possible. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. Metaoluene Di Amine is toxic, if splashed on skin. In case of eye contact flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty of water. |
| 50 | Toluene Di Isocyanate | Corrosive, Toxic | Dry chemical powder, carbon dioxide. Do not apply water as it reacts violently with water at elevated temperature. | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. Toluene Di Isocyanate is very toxic if inhaled.. In case pulmonary edema. TLV of TDI vapor is very low i.e. 0.0005 ppm. If splashed on skin, incases sensitization of skin tissue. In case of eye contact, flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty of water. |
| 51 | Methyl Iodine | Toxic | Non Flammable | Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If |

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| | | | | heart beats are absent, give external cardiac compression. Do not use mouth to mouth ventilation. Keep under medical surveillance for 48 hours. Consider administration of multiple metered doses of topical steroid aerosol by inhalation and or upto 30 mg / kg of methyl prednisolone. In case of eye, contact immediately, refer to ophthalmologist. |
| 52 | Chloro Sulphonic Acid | A poison to irritant, corrosive | Use DCP, foam if exposed to fire. | Remove victim to fresh air. If there is a difficulty breathing, give oxygen. Do not induce vomiting. Obtain medical treatment urgently. |
| 53 | Carbon Di Sulphide | Flammable , Explosive | Use DCP, CO2 | Remove victim to fresh air. If there is a difficulty breathing, give oxygen. Do not induce vomiting. Obtain medical treatment urgently. |
| 54 | Ethylene Oxide | Flammable , Carcinogen | Use DCP | Remove victim to fresh air. If there is a difficulty breathing, give oxygen. Do not induce vomiting. Obtain medical treatment urgently. |
| 55 | Acephate Anilophos Ethion Phorate Quinalphos | Non flammable | Use DCP, foam if exposed to fire. | Atropine sulphate in dose 2 – 4 mg for adult, 2 pm 1000 – 2000 mg / im. |
| 56 | Alachor Carbendazim Thiophanate – M | Non flammable | Use DCP, foam is exposed to fire | Inject 1 gm of Eraldioxime chloride IV. Do not induce vomiting if the injected poison is principally a hydrocarbon solvent. |
| 57 | Mancozeb Thiram | Non flammable | Use DCP, foam is exposed to fire | Low toxicity, no specific treatment. |
| 58 | Allethrin Cypermethrin Fenvalerate | Toxic | Use DCP, foam is exposed to fire | The treatment is symptomatic. |
| 59 | Aluminium Phosphate | Non flammable | Use DCP, foam is exposed to fire | Injection copper sulphate 0.25 gm. |
| 60 | Isoproturon | Non flammable | Use DCP, foam is exposed to fire | Supportive treatment. |
| 61 | Hexaconazole | Non flammable | Use DCP, foam is exposed to fire | There is no specific antidotes and treats the victim symptomatically. |

| | | | | |
|----|-----------------|-----------------------|--------------------|------------|
| | Propi-conazole | | | |
| 62 | Propane | Flamm-able, Explosive | DCP, Water | First aid. |
| 63 | Butadine | Flamm-able, Explosive | DCP, Water | First aid. |
| 64 | Propylene | Flamm-able, Explosive | DCP, Water | First aid. |
| 65 | Styrene Monomer | Flamm-able | DCP, Foam compound | - |

Emergency Resources – Antidote Suppliers

| Sr. No. | Toxic Chemicals Handled in District (ESP. in MAH Units) | Antidotes required | Antidote Supplier* Name with Address & Ph. Nos of Contact Persons | Quantity of Antidotes Available |
|---------|---|--|---|---------------------------------|
| 1 | Ammonia | 0.4% Benzocain for eyes | Local Chemists | |
| 2 | Chlorine | Derrifyline Dexona, CP Malate, Milk of Meghnesiya | Local Chemists | |
| 3 | Hydrogen Chloride | Milk of Meghnesiya | - Local Chemists - Yash Medical Stores, Ground floor, Yashkamal Apartment, Near Jivanjyot Cinema, Udhana, Surat- 394210, (O)-6959264 | |
| 4 | Hydrogen Fluoride | INJ Cal Gluconate | - Maheshbhai Hiralaln Chemist, Opp. Surat General Hospital (M)- 9825338442 - Navin Fluorine, Bhestan, Surat | 150 Ampule |
| 5 | Oleum (Sulphur Trioxide) | Milk of Meghnesiya | Local Chemists | |
| 6 | Acrilonitrile/ Sodium/ | Cynide Antidote | Sarvodaya Instruments, | |

| | | | | |
|---|-------------------|--------------------------------|---|--|
| | Potassium Cyanide | Kit | Sarvodaya Nagar, SPS road, Bhandup, Mumbai-78, (O)-25765195 (M)-09869228851 | |
| 7 | | Oxygen Administration Facility | Ashok Jyot Oxygen, Udhna, Road No. 9, (O)-0261-2278760 | |
| 8 | | Cyanides Antidote Kit | M/S. Troikaa Pharmaceuticals Ltd. THOL-382728 (Gujarat) | |

Emergency Resources – Earth Moving Equipments

| Sr. No. | Name of MAH Unit | Name of Earthmoving Equipment with Quantity & Contact Persons |
|---------|--|---|
| 1. | Bharat Petroleum Corp. Ltd. | NIL |
| 2. | Bharat Petroleum Corp. Ltd. Bottling plant | NIL |
| 3. | Colourtex Industries Pvt. Ltd., Pandesara | JCB-2, Bus-2, Dumper-1, Tractor-5, Crane-1 |
| 4. | Colourtex Industries Pvt. Ltd., Sachin | JCB-2, Bus-2, Dumper-1, Tractor-5, Crane-1 |
| 5. | ESSAR Steel Ltd. | JCB-2, Bus-5, Dumper-3, Tractor-2, Crane-2 |
| 6. | Hazira-LNG Pvt. Ltd. | JCB-0, Bus-2, Dumper-0, Tractor-0, Crane-0 |
| 7. | Hindustan Chemicals Company | NIL |
| 8. | Hindustan Petroleum Co. Ltd. (HPCL) | JCB-2 |
| 9. | Indian Oil Corp. Ltd. | NIL |
| 10. | Indian Oil Corp. Ltd.-Bottling plant | NIL |
| 11. | Krishak Bharati Co-op Fertilizers Ltd. | Bus-4, Dumper-1, Truck-1, Crane-1 |
| 12. | Navin Fluorine International | Crane-1 |
| 13. | Nove Dyestuff Ind. Pvt. Ltd. | NIL |
| 14. | NTPC – Kawas Gas Power Project | NIL |
| 15. | ONGC – Hazira Gas Processing Complex | NIL |
| 16. | Reliance Industries Ltd. | JCB-1, Dumper-1, Tractor-0, Crane-1 |
| 17. | Shree Sayan Vibhag Sahakari Khand Udhog Ltd. | NIL |
| 18. | Shri Chalthan Vibhagkhand Udyog Sahakari Mandal Ltd. | JCB-4, Tractor-8 |
| 19. | Shri Kamrej Vibhag Khand Udyog Sahakari Mandal Ltd. | JCB-1, Bus-1, Truck-2 |
| 20. | Shri Madhi Vibhag Khand Udyog Sahakari Mandal Ltd. | NIL |

| | | |
|-----|---|------------------------------|
| 21. | Shri Mahuva Vibhag Khand Udyog Sahakari Mandal Ltd. | Bus-2, Tractor-1, Crane-2 |
| 22. | Spectrum Dyes & Chemicals (P) Ltd. | Bus-2, Tractor-1 |
| 23. | Rander Water Works, SMC | JCB, Tempo, Dumper, Buldozer |
| 24. | Katargam Water Works, SMC | JCB, Tempo, Dumper, Buldozer |
| 25. | Sarthana Water Works, SMC | JCB, Tempo, Dumper, Buldozer |
| 26. | Head Water Works, Varachha, SMC | JCB, Tempo, Dumper, Buldozer |
| 27. | Gujarat Woodlam Products Pvt. Ltd. | |

Emergency Response Vehicles

| Sr. No. | Emergency Response Vehicle Description & Facilities Available | Location | Contact Authority Name, Address & Contact No. |
|----------------|--|---|---|
| 1. | Car – 09 Ambulance Van – 2 | Navin Fluorine, Navsari Road, Bhestan, Surat | Mr. G. C. Jain Navin Fluorine International Ltd. (O) 0261-6715303 (M) 8347459700 |
| 2. | Jeep-1, Bus-1 (24 Person), Car-1 (5 Person) | Kamrej Sugar Factory | B. I. Patel Kamrej Sugar Factory, Navi Pardi (O) 234500, (R) 290336 (M) 9099974477 |
| 3. | Van-7, Bus-4, Tempo-5, Ambulance Van-1, Car-1, | Spectrum Dyes & Chemical Pvt. Ltd. Plot No.-484, 502, 503 & 504, N. H. #8, Palsana-394315, Surat. Ph.: 2622-264259/9824407575 Fax: 2622-264615 | Mr. Balbirsingh Pilnia Spectrum Dyes & Chemical Pvt. Ltd. Plots, No.-484, 502, 503, 504 N.H. #8, Palsana-394315, Surat (O) 2622-264259 (R) 02622-264162 (M) 09824106565 |
| 4. | Ambulance Van-1, Car-2 | Colourtex Industries Ltd.(Unit 1) Plot No.-288/1, 288/2, 289/2, 8108/2, GIDC Estate of Sachin & Block No.-272/P, 273/P, 274/P, 278/P, 283/P, 284/P, 285 to 288, 294 to 397, 310, | Mr. Kirit G. Gandhi General Manager (A & P) Colourtex Industries Ltd. (O) 2399666 (R) 2240568 (M) 09824106565 |

| | | | |
|----|---------------------------------------|--|--|
| | | Gabheni, Surat, Gujarat | |
| 5. | Bus-2, Car-20, Ambulance-1, Jeep-1 | Hindustan Chemicals Company GIDC Industrial Estate, Olpad- 394540, Surat, Gujarat Ph.: 02621-221681/83 | |
| 6. | Foam-29, DCP-566, Ambulance-2 | At Fire Station inside the M/S Krishak Bharati Cooperative Ltd. (KRIBHCO), P.O. Kribhco Nagar, Hazira Road, Surat-394515 | |

Annexure 14

Dos & Don'ts in Various Disaster

Cyclone Safety

A cyclone is a storm accompanied by high-speed whistling and howling winds. It brings torrential rains.

Where does a cyclone come from?

A cyclonic storm develops over tropical oceans like the Indian Ocean and Bay of Bengal and the Arabian Sea. Its strong winds blow at great speed, which can be more than 118 kilometers per hour.

What are the visible signs of a cyclone?

When a cyclonic storm approaches, the skies begin to darken accompanied by lightning and thunder and a continuous downpour of rain.

How does a cyclone affect us?

- A cyclone causes heavy floods.
- It uproots electricity supply and telecommunication lines. Power supply shuts down and telephones stop functioning.
- Road and rail movements come to halt because floods damage rail tracks and breach roads. Rail movements are also disrupted because of communication failure.
- The inclement weather conditions also disrupt Air services. Seaports stop work due to high winds, heavy rains and poor visibility. Sometimes ships overturn or are washed ashore. The high speed winds bends and plucks out trees and plants.
- A cyclone tears away wall sidings and blows off roofs of houses.
- Houses collapse and people are rendered homeless. In villages kachha houses get blown away. The speeding winds cause loose metal and wooden sheets to fly turning them to potential killers. Broken glass pieces can cause serious injuries.
- The floodwaters can take time to recede.
- The floodwaters can turn the fields salty.
- Bridges, dams and embankments suffer serious damages.
- Floods wash away human beings and animals and make water unfit for drinking. There can be outbreak of diseases like Cholera, Jaundice or Viral fever due to intake of impure water. Water gets contaminated because of floating corpses of animals and human beings and mixing of sewage stored food supplies, gets damaged.

Which areas are exposed to a cyclone in Gujarat?

In Gujarat, the Saurashtra-Kachchh region experiences a cyclone. The port towns of Veraval, Porbandar, Jamnagar, Dwarka, Okha, Kandla and Bhavnagar and other minor port towns suffer most.

Does a cyclone follow a particular path?

It is often difficult to predict where a cyclone will strike. When it starts moving from oceans (in Gujarat it is Arabian Sea) towards the land area, a cyclone can change track and hit areas other than those anticipated earlier.

Has any early warning system been evolved for the occurrence of a cyclone?

Yes. In India, the Indian Meteorological Department has developed a four-stage warning system for a cyclone.

How does the system operate?

This warning is about the possibility of a cyclone when a low pressure depression develops in oceans. For Gujarat, the development of such a depression in the Arabian Sea is indicative of a cyclone attack.

- **The Alert stage**

This warning is given 48 hours prior to the time when a cyclone is expected to hit the land.

- **The Warning stage**

This is the stage when a cyclone gets formed. The warning is given 24 hours before the anticipated time of arrival of a cyclone.

- **Cyclone arrival**

This warning is issued 12 hours before a cyclone is due to hit the land. The warning gives information about cyclone and will continue until the winds subside. In sea ports, danger signal are hoisted about the impending cyclone.

From where can people access cyclone storm warnings?

Warnings about storms, their intensity and the likely path they may take are regularly broadcasted by radio and television network continuously until the storm passes over.

What to do before and during a cyclone.

- Have your dwellings checked before a cyclone season starts and carry out whatever repairs that are needed.
- Talk to children and explain about cyclones without scaring them.
- Create storm awareness by discussing effects of a cyclonic storm with family members so that everyone knows what one can and should do in an emergency. This helps to remove fear and anxiety and prepares everyone to respond to emergencies quickly.
- Keep your valuables and documents in containers, which cannot be damaged by water.
- Keep information about your blood group.
- Keep lanterns filled with kerosene, torches and spare batteries. These must be kept in secure places and handy.
- Make plans for people who are either sick, suffer from disabilities, aged and children.
- Store up at least seven-day stock of essential food articles, medicines and water supply.
- Keep blankets & clothes ready for making beds. Also keep cotton bandages and several copies of photographs of family members in case they are needed for identification purposes after the storm.
- Store some wooden boards so that they can be used to cover windows.
- Keep trees and shrubs trimmed. Remove damaged and decayed parts of trees to make them resist wind and reduce the potential for damage. Cut weak branches and make winds blow through.
- All doors, windows and openings should be secured.
- Continue to listen to warning bulletins and keep in touch with local officials. Keep radio sets in working condition. Battery powered radio sets are desirable.
- Evacuate people to places of safety when advised.
- Take steps to protect your assets.
- Store extra drinking water in covered vessels.
- Remain calm.

What one should not do during a Cyclone attack?

- During the storm do not venture out unless advised to evacuate.

- If you have a vehicle and wish to move out of your house, leave early before the onset of a cyclone. It is often best to stay at home
- Avoid remaining on the top floor of dwellings. Stay close to the ground.

Earthquake safety

- Tell the facts about earthquake to your family members
- Construct new buildings with earthquake resistant method and strengthen the old buildings
- Insure your house and family members
- Take the training for first aid and fire fighting
- Do not keep cots near the glass window
- Do not keep heavy and fragile things in the selves
- Do don't hang photo frames, mirrors, or glasses up your bed
- Keep your important documents, some cash and necessary articles ready in a bag
- Get your house insured before the earthquake
- Identify special skills of neighbor (medical, technical) so that it can be utilized in emergency

During Earthquake

- Do not panic
- If already inside, than Stay indoors! Get under a heavy desk or table and hang on to it.
- If fire breaks out, drop on the floor and crawl towards the exist
- If you are out doors during the quake, keep away from buildings, trees and electricity lines. Walk towards open places, in a calm and composed manner.
- If you are driving, quickly but carefully move your car as far out of traffic as possible and stop. Do not stop on or under a bridge or overpass or under trees, light posts, power lines, or signs. Stay inside the car until shaking stops
- If you are in a school, get under a desk or table and hold on

After the Earthquake

- Do not be afraid of the aftershocks
- Listen to radio-TV and other media for Government Announcement
- Check for injuries to yourself and those around you. Take first aid where you can
- Extinguish fire, if any
- Examine walls, floors, doors, staircases and windows to make sure that the building is not in danger of collapsing
- Do not enter into the unsafe or risky houses or buildings
- Inspect for Gas leaks-If you smell gas or hear blowing or hissing noises, open a window and quickly leave the building. Don't light your kitchen stove if you suspect a gas leak.
- Do not keep telephone lines busy unnecessarily
- Switch off electric lines

Fire safety

Dos

- Buy Fireworks from the licensed shop.
- Keep fireworks in a closed box

- Store crackers away from source of fire or inflammation
- Follow all safety precautions issued with the fire works
- Go to open spaces like playgrounds, fields
- Light them at arm's length using a taper.
- Stand back while lighting the crackers
- Discard used fireworks in a bucket of water
- Keep buckets of water and blankets ready, incase a firebreaks out.
- Wear thick cotton clothes for maximum safety from fire.
- If clothes catch fire, Stop, Drop and Roll
- In case of uncontrolled fire wrap the victim in a blanket, till it stop.
- In case of burns splash tap water (not ice water), the process may be repeated till the burning sensation reduces.
- If fingers or toes are burned, separate them with dry, sterile, non-adhesive dressings.
- Make sure the burn victim is breathing, if breathing has stopped or if the victim's airway is blocked then open the airway and if necessary begin rescue breathing.
- Elevate the burned area and protect it from pressure and friction.
- Cover the area of the burn with a moist sterile bandage, of clean cloth (do not use blanket or towel for healing burns).
- Consult the doctor as soon as possible for the proper medication
- Consult an ophthalmologist immediately in case of eye injuries.
- Do contact at the Fire Brigade (Tel.No. 101), for getting the details of the doctors on duty during the festival.

Don'ts

- Don't burn crackers in crowded, congested places, narrow lanes or inside the house.
- Don't let children burst crackers unaccompanied by an adult
- Don't put fireworks in your pocket or throw them
- Don't cover crackers with tin containers or glass bottles for extra sound effect
- Don't dare to examine unburst crackers...leave it!! Light a new cracker
- Don't show the Dare-devilry of lighting crackers on own hands.
- Don't use fireworks inside a vehicle
- Avoid long loose clothes, as they are fast in catching fire
- Don't remove burnt clothing (unless it comes off easily), but do ensure that the victim is not still in contact with smoldering materials.
- Don't apply adhesive dressing on the burnt area.
- Don't break the burst blister

Flood Safety

Do's and Don'ts after flood

- There is a possibility of spread of water borne diseases after flood, and hence
- Medical treatment should be taken immediately.
- Do not enter deep, unknown waters.
- Do not go near the riverbank even after the floodwater has receded.
- Sprinkle medicines in the stagnant dirty water.

- Inspect your house for any cracks or other damage. Check all the walls, floor, ceiling, doors and windows, so that any chance of house falling down can be known and you can be aware about the immediate danger.
- If the floodwater has entered the house or has surrounded the house, then it is advisable not to enter such house.
- Keep listening to weather forecast on radio and television. Move to your residence only when instructed by the competent authority. It is not safe to believe that the problems have ended after the flood water have receded.
- Inform the competent authority/officer for restoration of the necessary connections like gas, electricity, telephone, drainage, etc.
- Beware of the various insects or poisonous snakes that may have been dragged inside the house along with the floodwater.
- Destroy the food commodities that have been affected by floodwater.
- Check properly all the electric circuits, floor level furnace, boilers, gas cylinders, or electric equipments like motor pump etc. Check whether any inflammable or explosive item has not entered along with the floodwater.
- Switch off the main electric supply, if any damage is noticed to the electric equipments.
- If you find any breakage in the drainage system stop using latrines and do not use tap water.
- Do not use polluted water.
- Sewerage system should be checked and any damage should be repaired immediately so as to curtail spread of diseases.
- Empty the water clogged in the basement slowly with help of water pump so that damage to infrastructure can be minimized.
- Check gas leakage which can be known by smell of gas or by hearing the sound of leakage; immediately open all windows and leave the house.
- Boil drinking water before usage and drink chlorinated water.
- Eat safe food.
- Rescue work should be undertaken immediately after flood situation as per the instruction. Do not follow any shortcut for rescue work.
- Do not try to leave the safe shelter to go back home until the local officials declare normalcy after flood and instruction to return home are not given.

Tsunami:

The phenomenon Tsunami is a series of traveling ocean waves of extremely long length generated primarily by earthquakes occurring below or near the ocean floor:

Following safety measures need to be learnt before, during and after the occurrence of tsunami:

Before

- Be familiar with the tsunami warning signals. People living along the coast should consider an earthquake or a sizable ground rumbling as a warning signal. A noticeable rapid rise or fall in coastal waters is also a sign that a tsunami is approaching.
- Make sure all family members know how to respond to a tsunami. Make evacuation plans. Pick an inland location that is elevated.
- After an earthquake or other natural disaster, roads in and out of the vicinity may be blocked, so pick more than one evacuation route.

- Teach family members how and when to turn off gas, electricity, and water
- Children should be taught in advance about the evacuation plans
- Prepare emergency kit beforehand. The emergency kit should contain Flashlight and extra batteries, battery-operated radio and extra batteries, First aid kit
- Emergency food and water, Essential medicines etc

During

- Listen to a radio or television to get the latest emergency information, and be ready to evacuate if asked to do so.
- If you hear a tsunami warning, move at once to higher ground and stay there until local authorities say it is safe to return home.
- Move in an orderly, calm and safe manner to the evacuation site
- Stay away from the beach. Never go down to the beach to watch a tsunami come in.
- If you can see the wave you are too close to escape it.
- Return home only after authorities advise it is safe to do so.

After

- Stay tuned to a battery-operated radio for the latest emergency information.
- Help injured or trapped persons.
- Stay out of damaged buildings. Return home only when authorities say it is safe.
- Enter your home with caution. Use a flashlight/torch when entering damaged buildings. Check for electrical shorts and live wires. Do not use appliances or lights until an electrician has checked the electrical system.
- Open windows and doors to help dry the building.
- Shovel mud while it is still moist to give walls and floors an opportunity to dry.
- Check food supplies and test drinking water.
- Fresh food that has come in contact with flood waters may be contaminated and should be thrown out

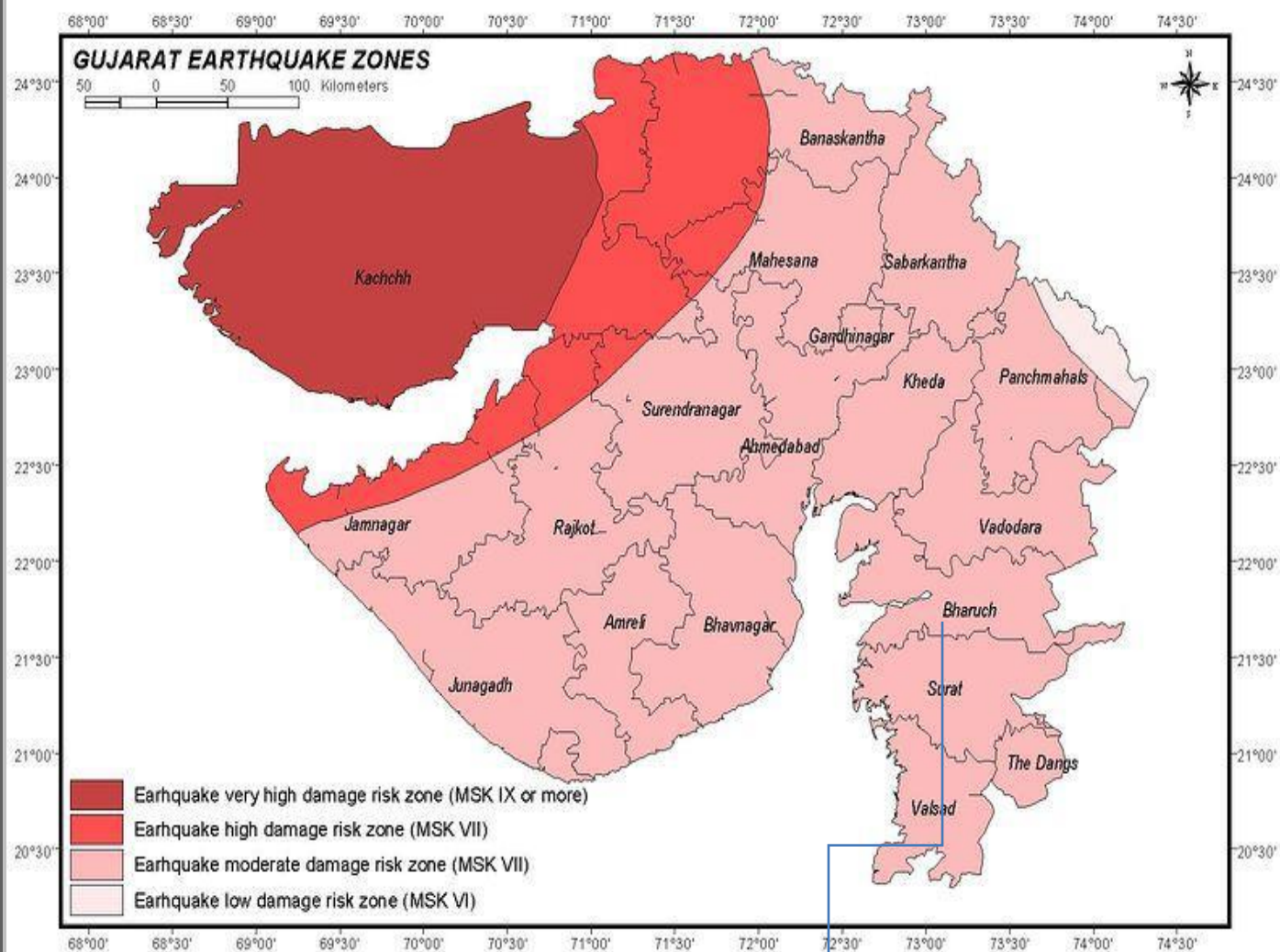
Various Maps of Surat District

Map showing Surat District

Hazard Maps

Map Showing Gujarat Earthquake Zones

Surat District come in Zone III

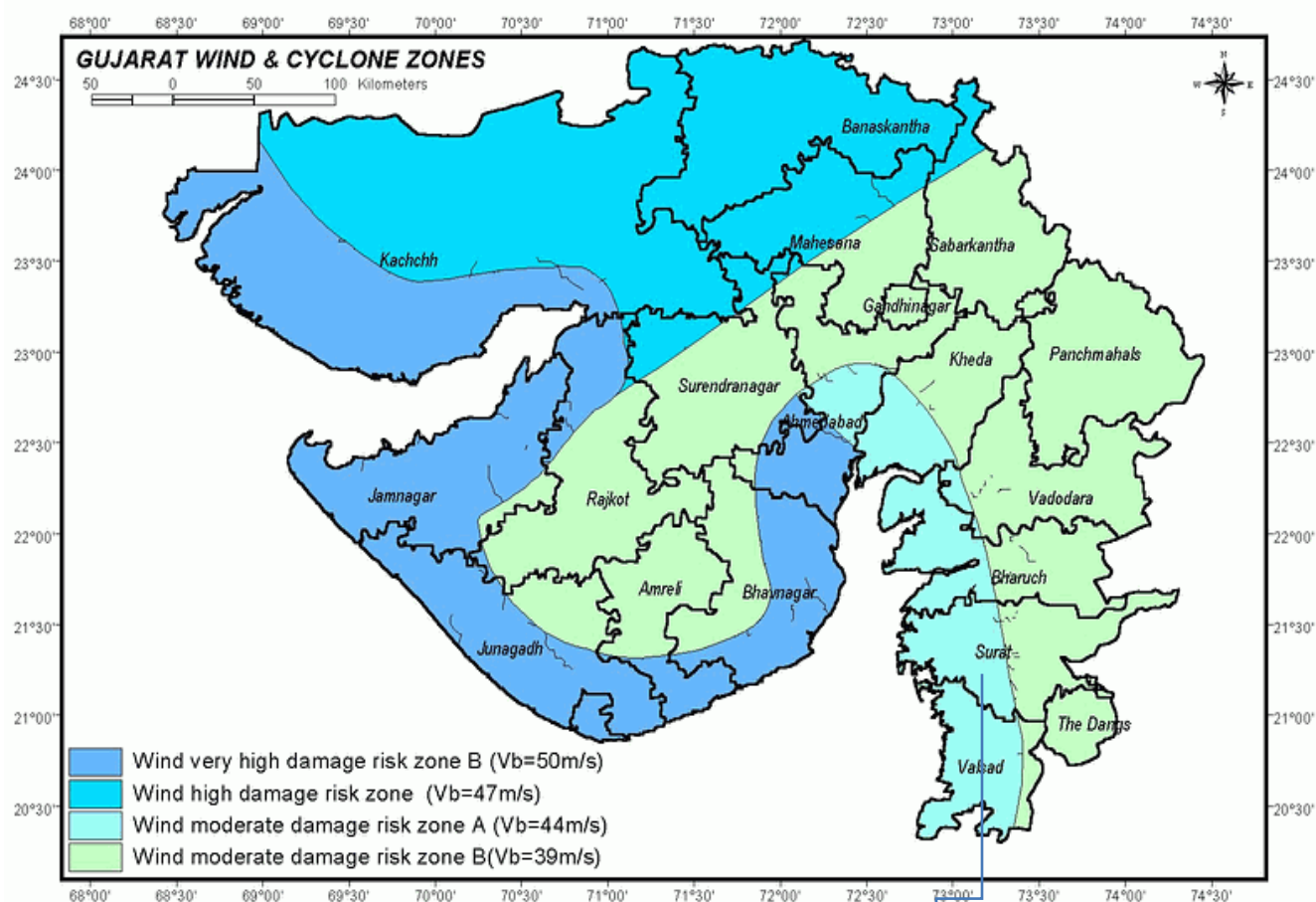


Disclaimer: This map was collated based on the data/information compiled by the Ministry of Urban Development and Poverty Alleviation. UNDP has not verified the accuracy of information of the Map.
Source: BMTPC, India

Surat District

Map Showing Gujarat Wind and Cyclone Zones

Tapi District Costal area come Zone B (vb=39m/s)

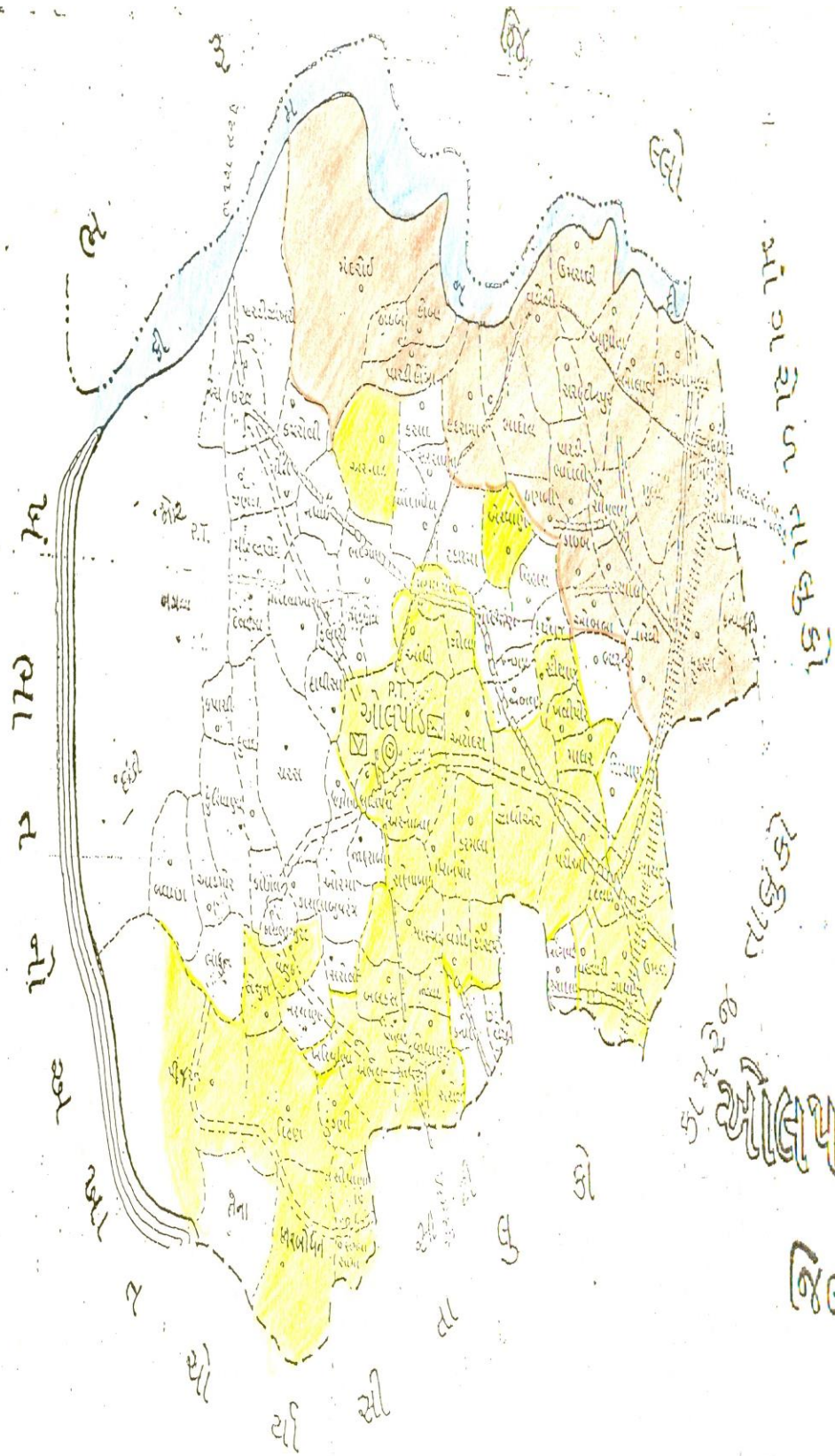


Disclaimer: This map was collated based on the data/information compiled by the Ministry of Urban Development and Poverty Alleviation. UNDP has not verified the accuracy of information of the Map.
Source: BMTPC, India

Surat District

Khadi of Olpad Taluka:

Tapi Affected Villages of Olpad Taluka:



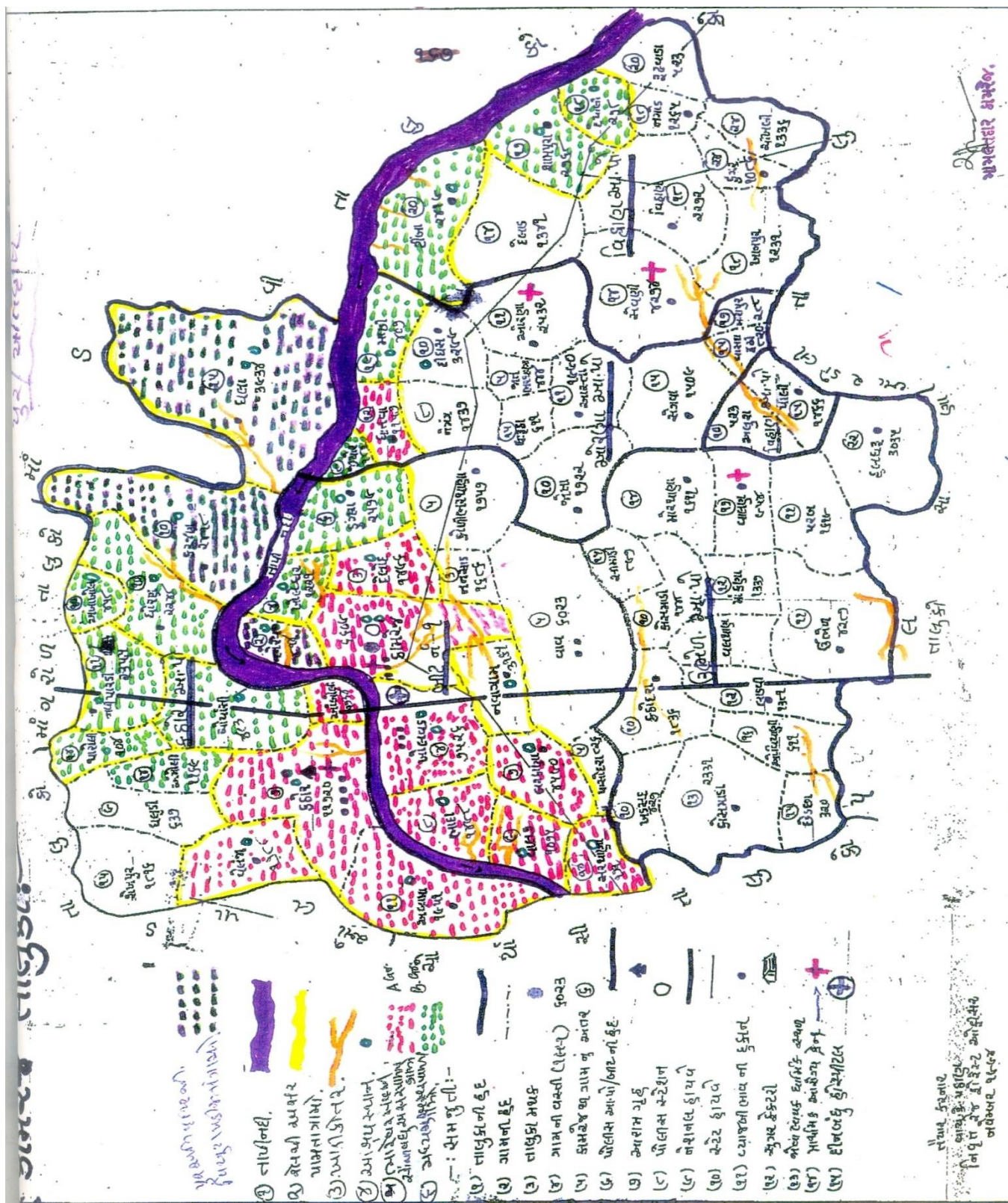
- ડીમ નદી
- ડીમ નદીથી અસર પામતા ગામો
- તાપી નદીથી અસર પામતા ગામો

ઓલપાડ તાલુકો

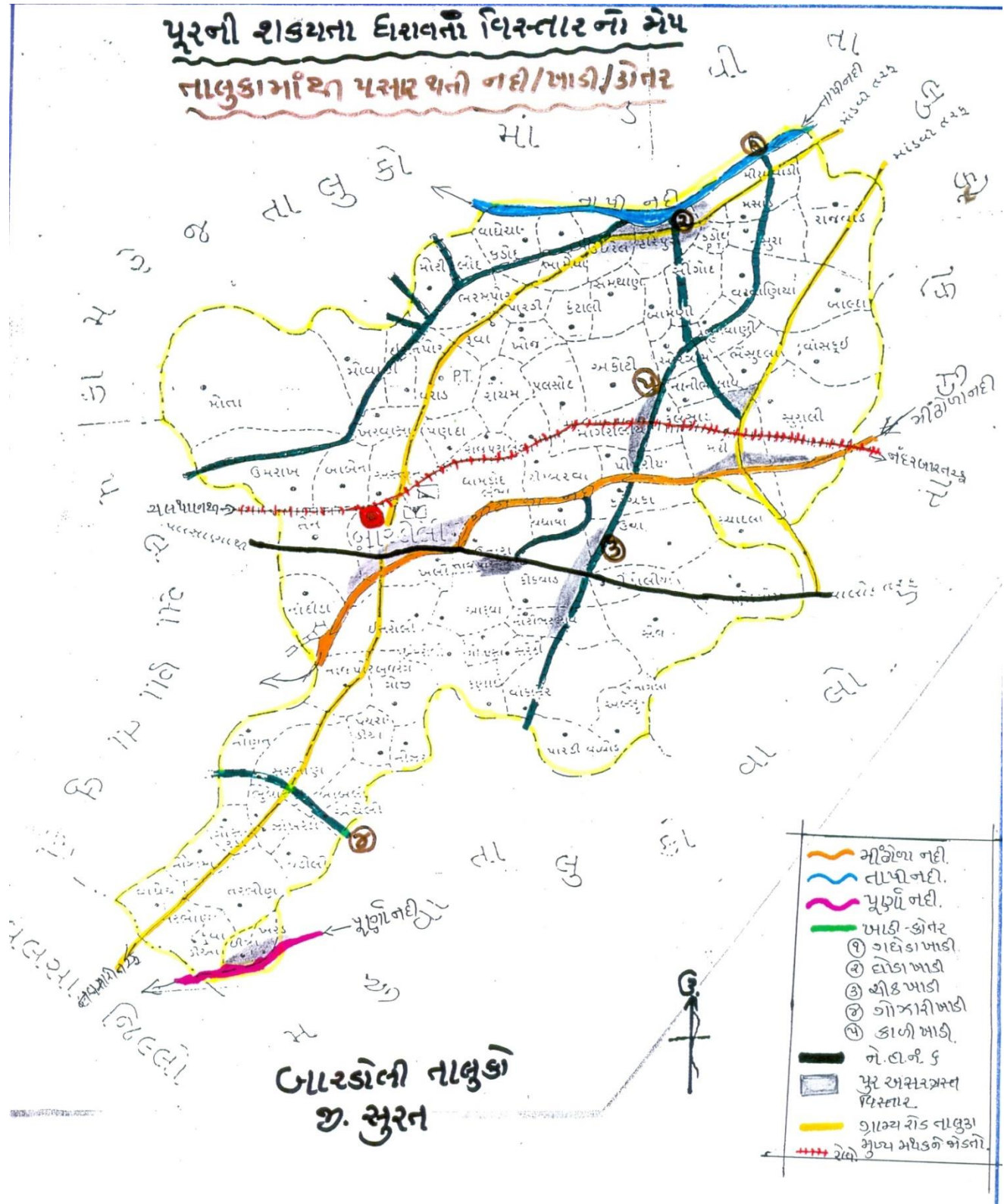
જિલ્લો સુરત



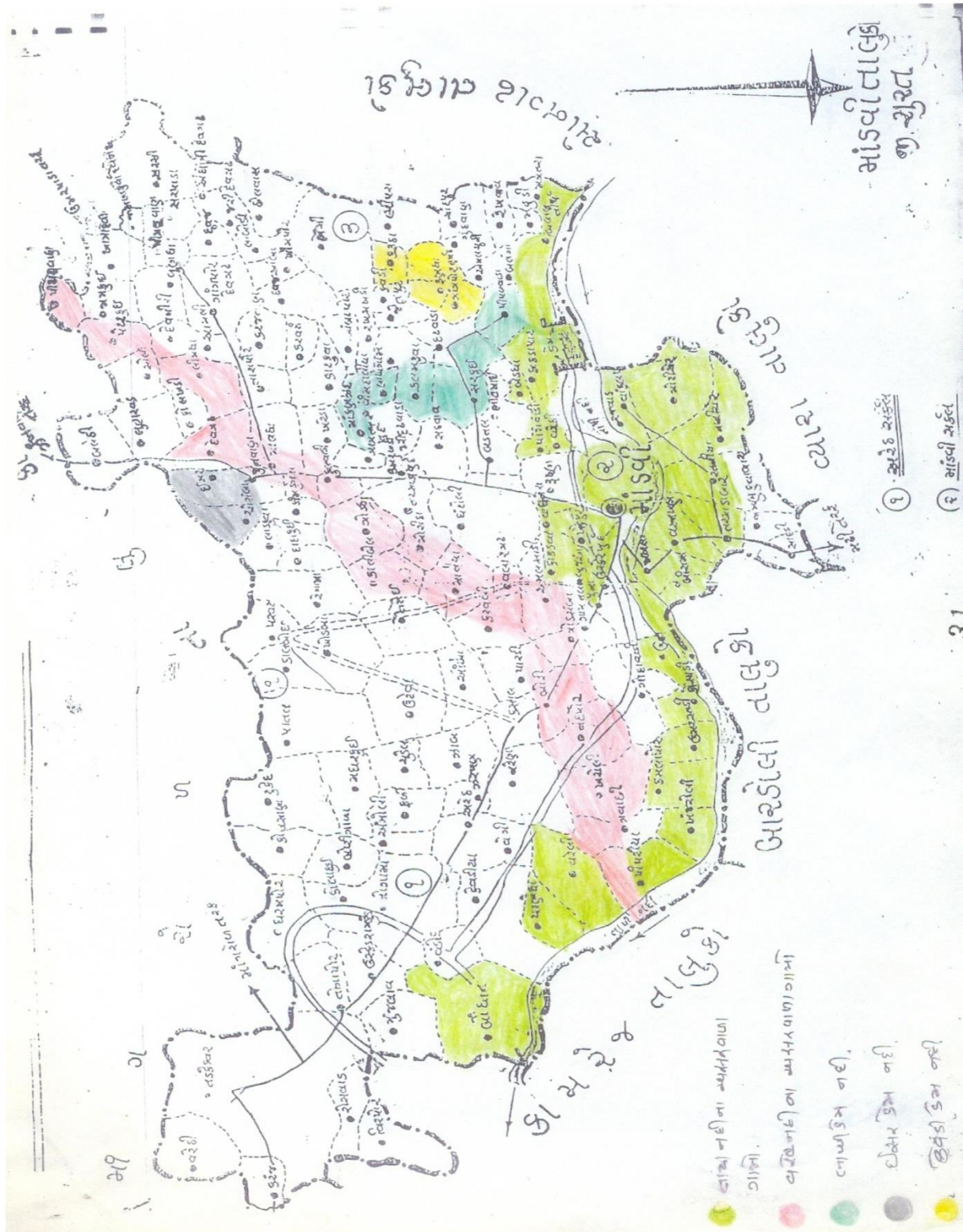
કામરેજ:



બારડોલી:



મિડવી:





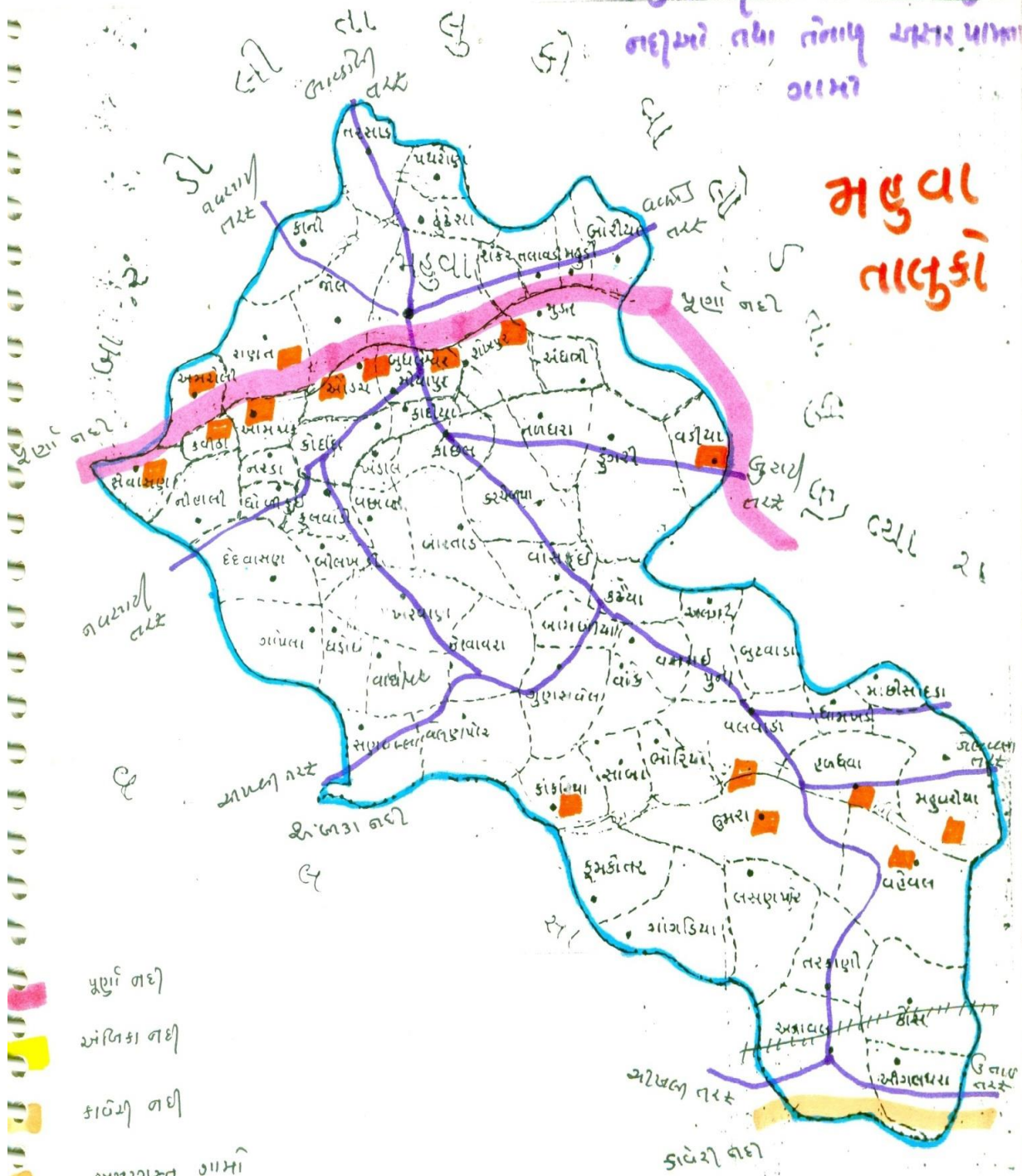
गण्डकी प्रदेश
काठमाडौं

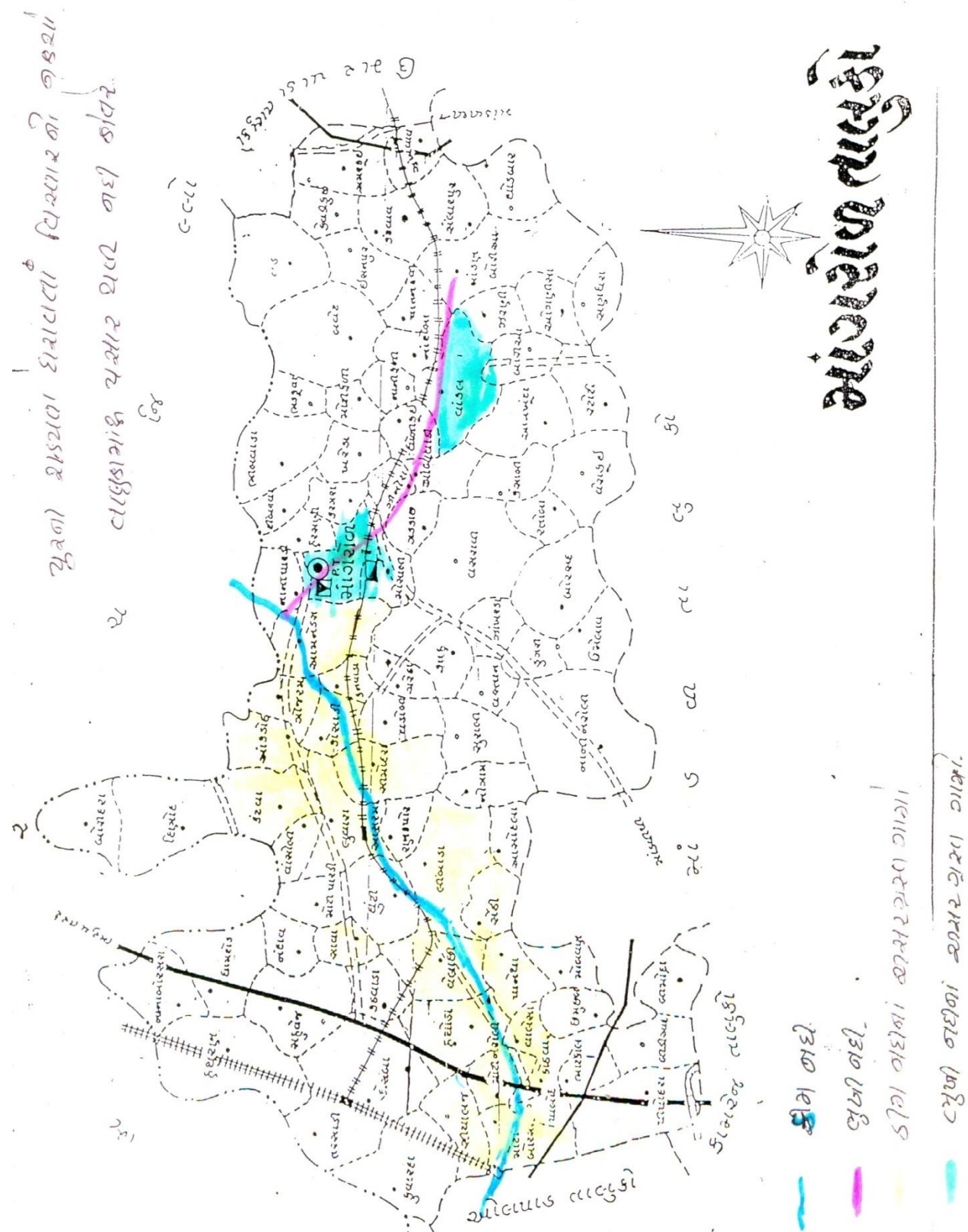
१. आन्ध्र प्रदेश

२. आन्ध्र प्रदेश

તાલુકામાંથી પસાર પતી મુખ્ય
નદીઓ તથા તેનાં અસર પામતા
ગામો

મહુવા
તાલુકો





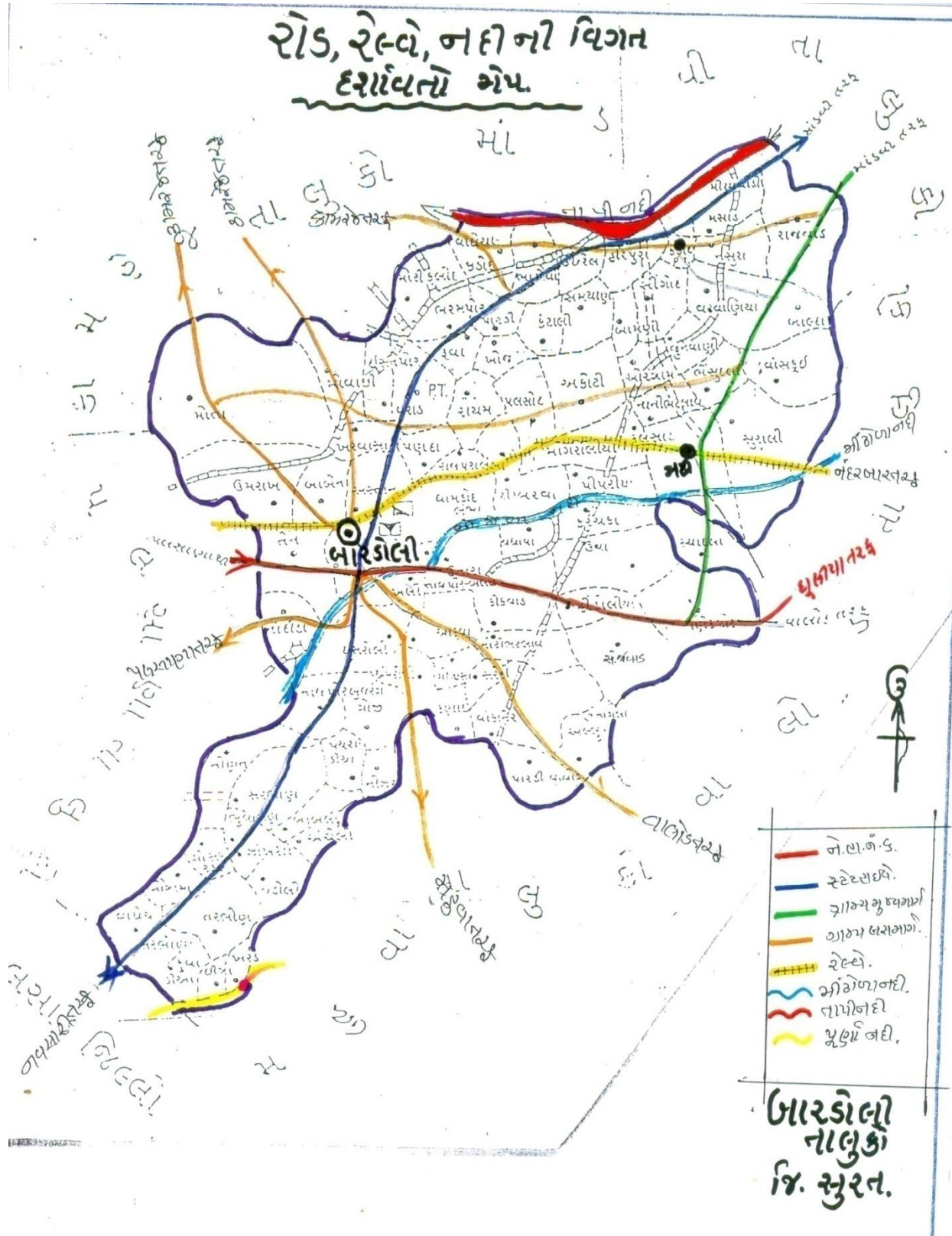
Ta: Choryasi





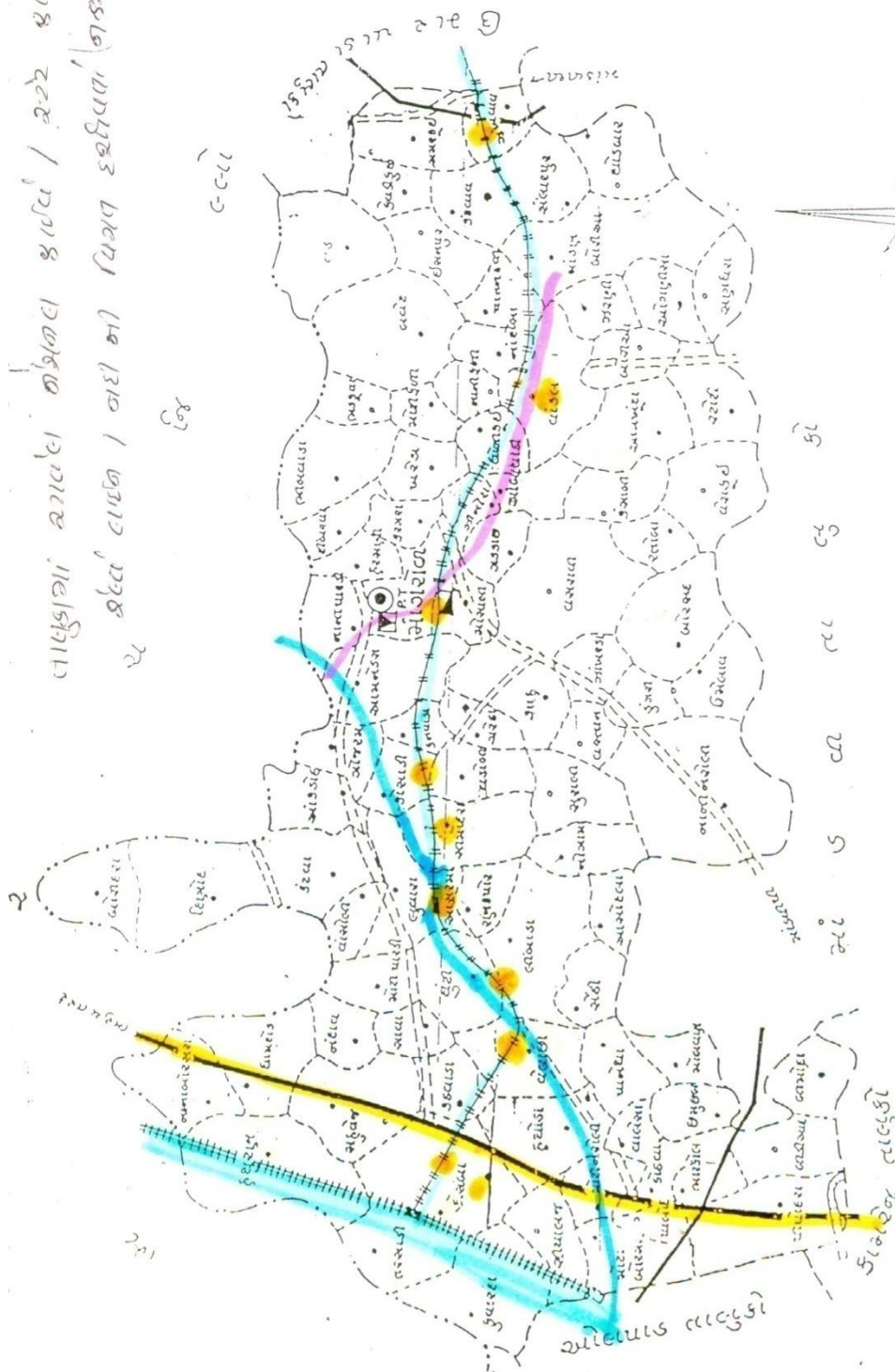
Ta: Bardoli

Map showing details of Road, Railway, River



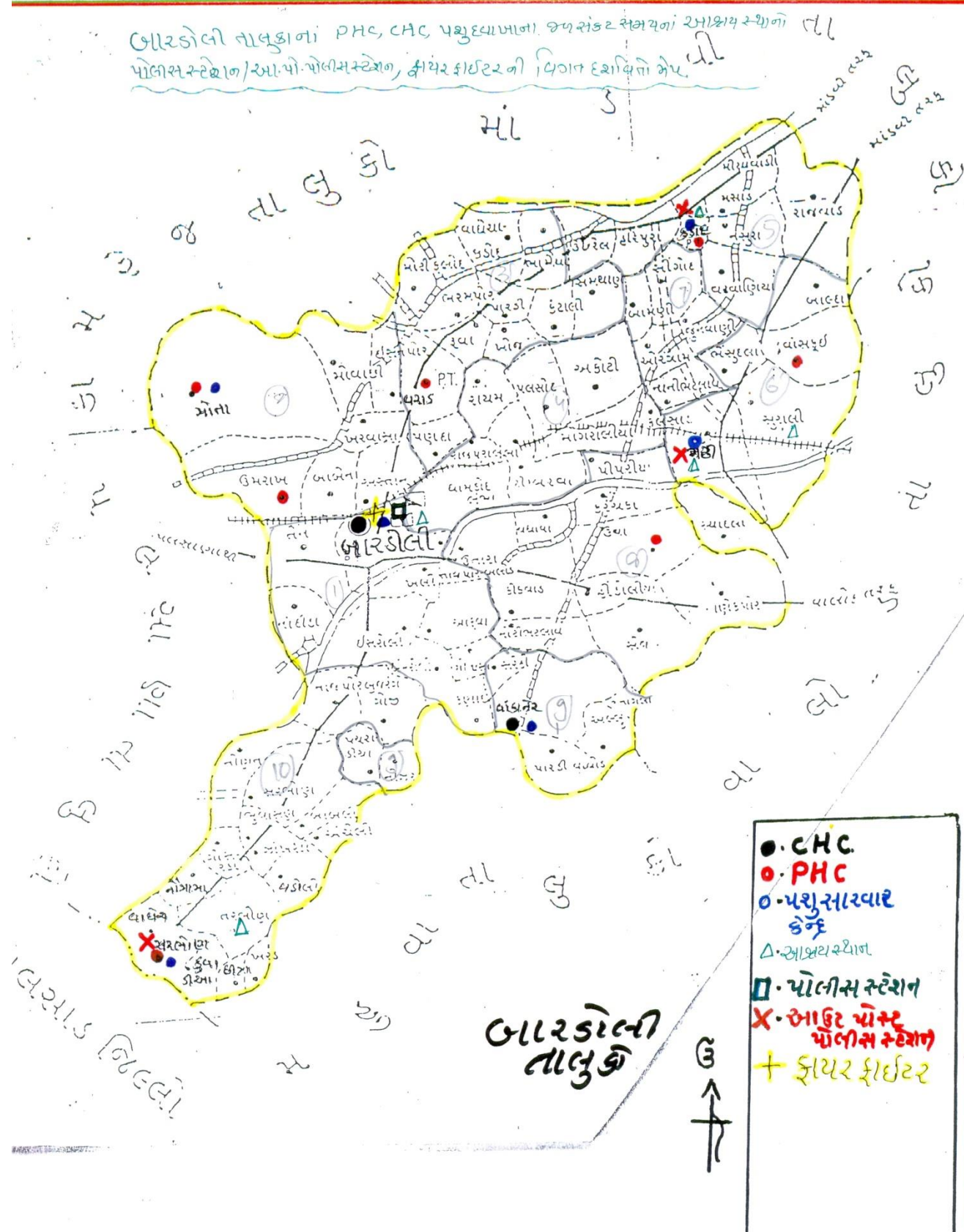
Ta: Mahuva

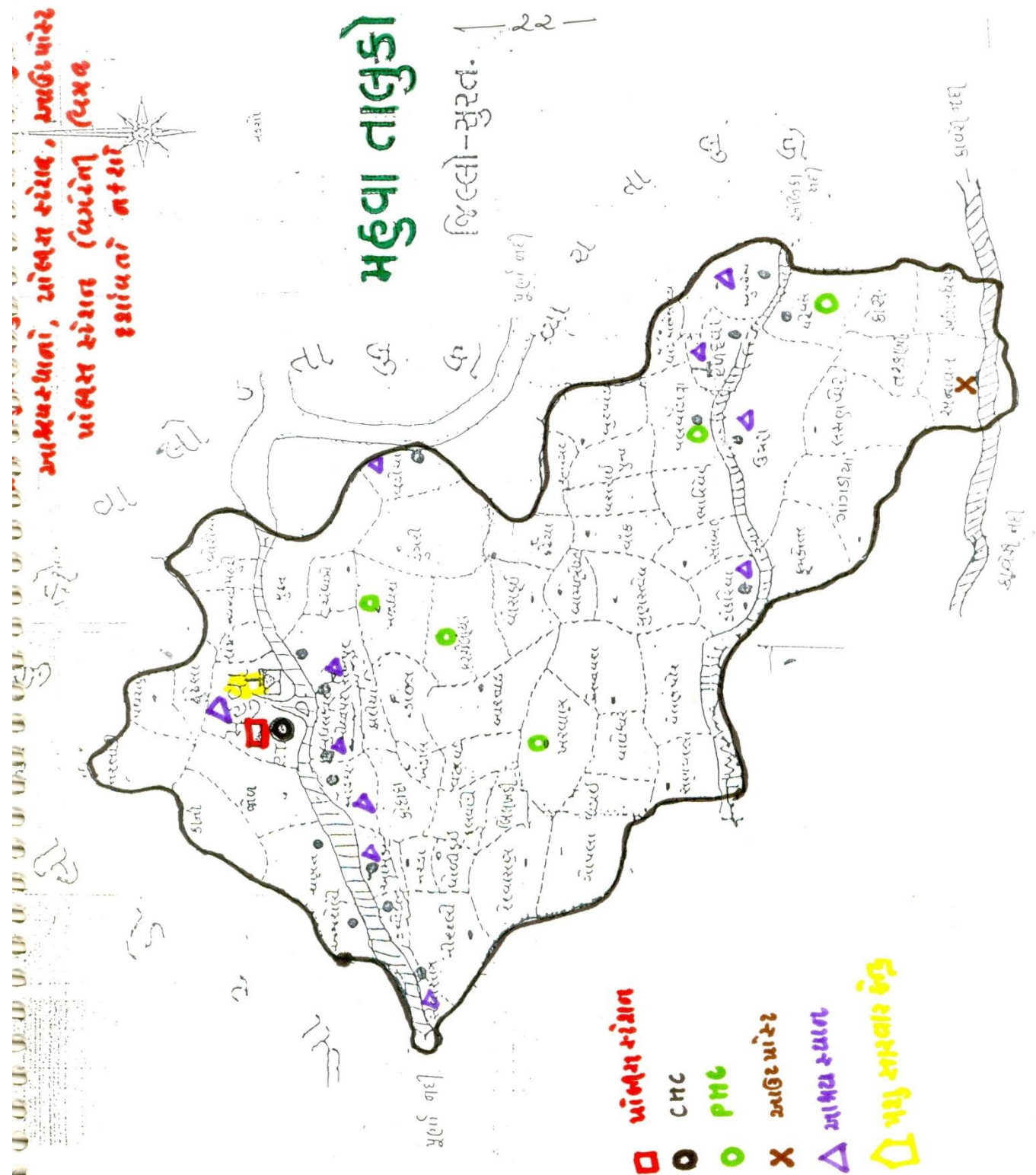
પાલિકાના અગ્રણી સભ્યો / સરકારી સંસ્થાઓ, ગામડાં
 ૨. સર્કલના અગ્રણી / સરકારી સંસ્થાઓ, ગામડાં



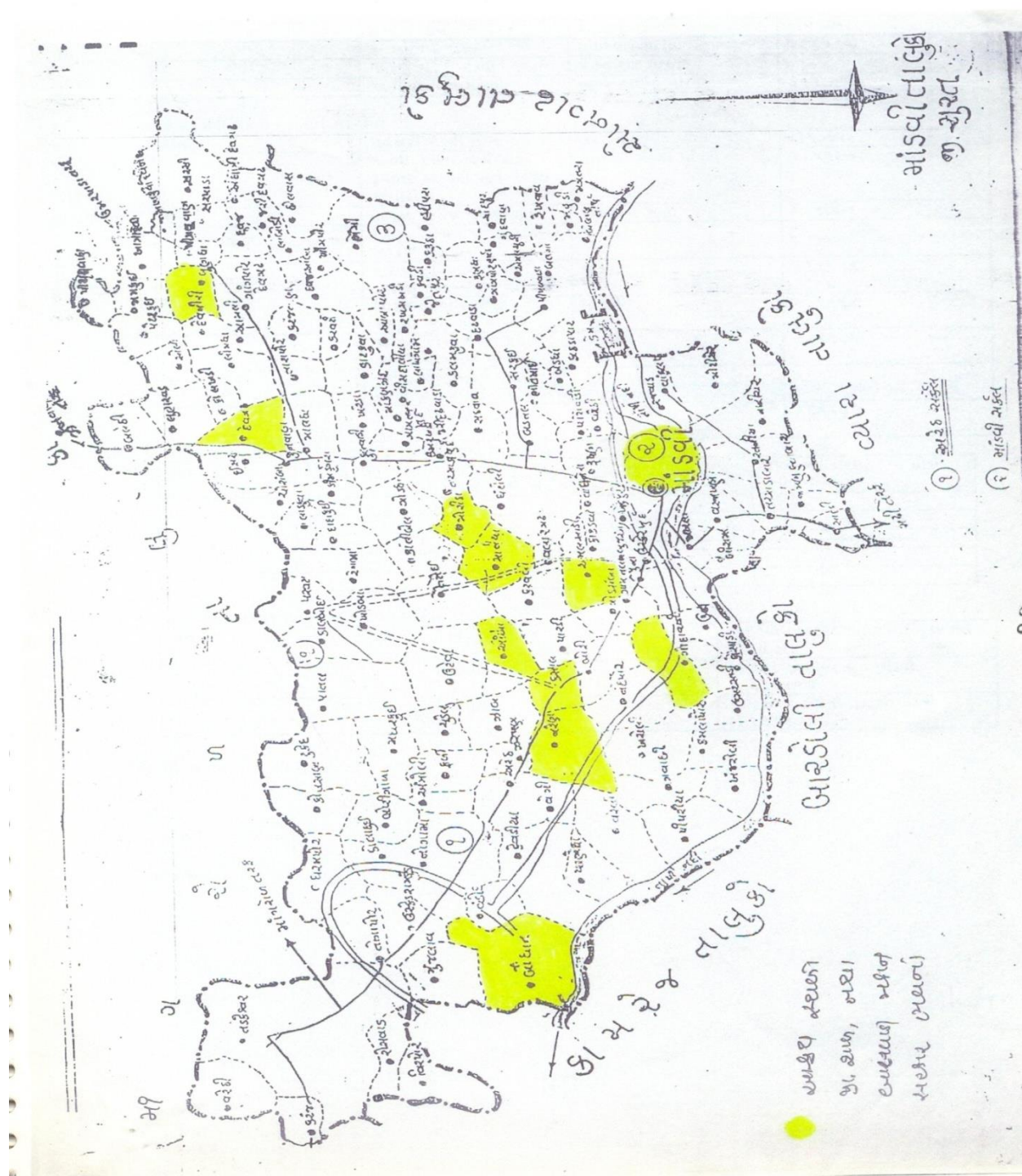
કાંઠાની રોડ
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Ta: Bardoli

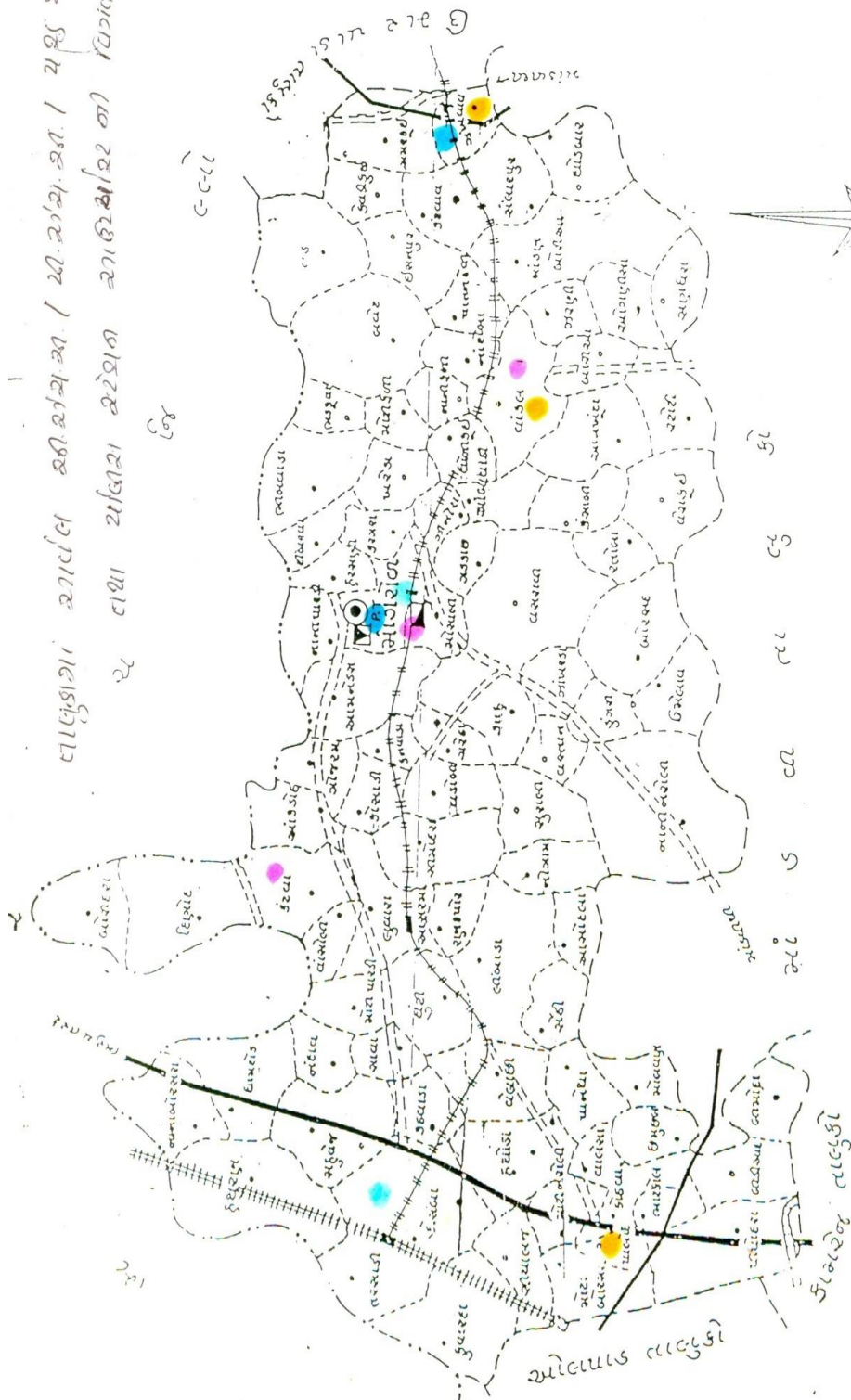




DDMP Surat 2019



2. 1991 21/04/21 22/04/21 23/04/21 24/05/21

[illegible]

Handwritten text: *Handwritten text, possibly a signature or name, written vertically.*

