



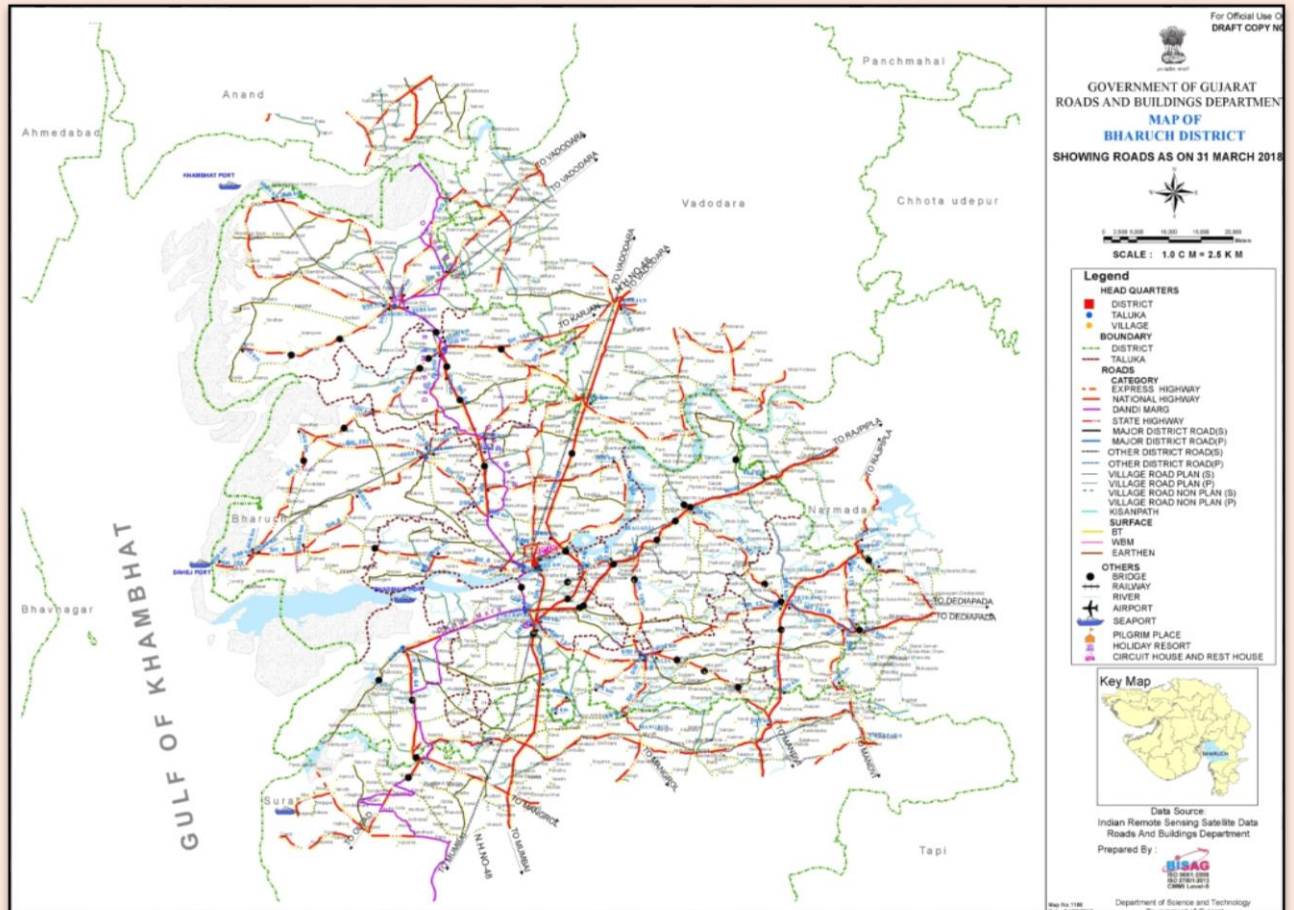
सत्यमेव जयते  
Government of India

## Bharuch District

# Disaster Management Plan 2022-2023



સત્યમેવ જયતે  
ગુજરાત સરકાર



Collector Office - Bharuch

&

Gujarat State Disaster Management Authority



## **BHARUCH DISTRICT DISASTER MANAGEMENT PLAN**

**Name of the District :- Bharuch**

**Date (Plan Last Submitted) :- May 2021**

**Date (Plan Last Updated) :- May 2022**

**Signature of District Collector :-**

**Emergency Operation Center, Collector Office, Bharuch**

**&**

**Gujarat State Disaster Management Authority**

**May2022**



**Tushar D Sumera (IAS)**

## **PREFACE**

The district disaster management plan is part of multi- level planning advocated by the Disaster Risk Management Programme an initiative of the government of Gujarat Preparedness of such a plan for Bharuch assumes significance given multi hazards scenario of the district i.e. natural and Disaster includes flood, cyclone, and storm surge and man-made includes industrial- chemical, fire, building collapse, communal right are main hazards of the district. Several efforts have been made over the years to address all these hazards by the district administration. However there remained several gaps which needed urgent plugging in.

The Multi –Hazards District Disaster Management Plan of Bharuch District is basically action plan for various hazards, which envisages an Incident Response System with a clear line of command but also provide greater role clarity with delegation of specific power and responsibility to each staff in the structure

**This is a comprehensive document covering all possible hazards, with a systematic analysis of risk & vulnerability, elements at risk and level of impact through scientific and experience developed by the team of district administration.**

I appreciate the work carried out by Mamlatdar (Disaster), District Project Officer (GSDMA), Dy. Mamlatdar (Disaster) who has been taken lead for developing and compiling DDMP for the year 2022-2023. I also appreciate support from Disaster Management Team members. I hope that each and every administrative unit of the district, industrial stake holders and Mutual Aid Members will use this action plan in the true spirit. I wish that no disasters ever occur, but in case of their occurrence, this action plan indicating preparedness of macro to micro level will be very helpful to the people of the district and state as a whole. Hope for safe world.

I think this plan will be useful to the entire department to understand the IRS, District Hazard, Risk, and Vulnerability assessment of the district.

**Tushar D Sumera (IAS)  
Collector & District Magistrate  
Bharuch**

## **CHECKLIST**

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 ensures 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 role 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, and 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



## **Abbreviation**

AAI	Airport Authority of India
ACWCs	Area Cyclone Warning Centres
AERB	Atomic Energy Regulatory Board
BARC	Bhabha Atomic Research Centre
BIS	Bureau of Indian Standard
BISAG	Bhaskaracharya Institute for Space Applications and Geo-Informatics
BOOT	Build Own Operate and Transfer
BPL	Below Poverty Line
CBOs	Community Based Organizations
CBRN	Chemical, Biological, Radiological and Nuclear
CCG	Central Crisis Management Group
CDMA	Code Division Multiple Access
CDO	Central Design Organization
CEO	Chief Executive Officer
CFO	Chief Fire Officer
CMG	Crisis Management Group
CoH	Commissioner of Health
COR	Commissioner of Relief
CP	Commissioner of Police
CWC	Central Water Commission
CWCs	Cyclone Warning Centers
CWCS	Cyclone Warning Dissemination System
DAE	Department of Atomic Energy
DCG	District Crisis Management Group
DCR	District Control Room
DDO	District Development Officer
DEOCs	District Emergency Operation Centres
DG	Director General
DGHS	Directorate General of the Health Services
DGP	Director General of Police
DIG	Deputy Inspector General
DSO	District Supply Officer
DSP	District Superintendent of Police
DISH	Director Industrial Safety & Health
DM	Disaster Management
DoR	Director of Relief
DP&S	Directorate of Purchase and Stores
DPR	Detailed Project Report
DRM	Disaster Risk Management DRM
DRMP	Disaster Risk Management Programme
EFC	Expenditure Finance Committee
EMS	Emergency Medical Services
EOC	Emergency Operation Centre
ERCs	Emergency Response Centres
ERTs	Emergency Response Teams
ERU	Emergency Response Unit
F&ES	Fire and Emergency Services
GAD	General Administration Department

GEB	Gujarat Electricity Board
GERI	Gujarat Engineering Research Institute
GIDC	Gujarat Industrial Development Corporation
GIDM	Gujarat Institute of Disaster Management
GIS	Geographic Information System
GMB	Gujarat Maritime Board
GoG	Government of Gujarat
GoI	Government of India
GPCB	Gujarat Pollution Control Board
GSDMA	Gujarat State Disaster Management Authority
GSI	Geological Survey of India
GSM	Global System for Mobile Communications
GSWAN	Gujarat state Wide Area Network
GUVNL	Gujarat Urja Vikas Nigam Limited
GWSSB	Gujarat Water Supply & Sewerage board
HAZCHEM	Hazardous Chemicals
HF/VHF	High Frequency/VeryHigh Frequency
HoD	Head of Department
HRVA	Hazard, Risk and Vulnerability Assessment
HWB	Heavy Water Board
IDRN	India Disaster Resource Network
IEC	Information Education Communication
IMD	Indian Meteorology Department
INCOIS	Indian National Centre for Ocean Information Services
INSAT	Indian National Satellite System
IRC	Indian Road Congress
IRIS	Incorporated Research Institute for Seismology
ISR	Institute of Seismological Research
ISRO	Indian Space Research Organisation
ITC	Information and Communication Technology
ITCS	Information Communications Technology System
KAPS	Kakrapar Atomic Power Station
LCG	Local Crisis Management Group
MAH	Major Accident Hazard
MFRs	Medical First Responders
MHA	Ministry of Home Affairs
MoA	Ministry of Agriculture
MoC & F	Ministry of Chemicals and Fertilizers
MoC & I	Ministry of Commerce and Industry
MoD	Ministry of Defence
MoEF	Ministry of Environment & Forests
MoF	Ministry of Finance
MoLE	Ministry of Labour and Employment
MoP & NG	Ministry of Petroleum and Natural Gas
MoSRT&H	Ministry of Shipping, Road Transport and Highways
MSDS	Material Safety Data Sheet
MSZ	Makran Subduction Zone
NCC	National Cadet Corps
NCMC	National Crisis Management Committee
NDRF	National Disaster Response Force
NEC	National Executive Committee
NEIC	National Earthquake Information Centre
NGO	Non Government Organization

NGRI	National Geophysical Research Institute
NIDM	National institute of Disaster Management
NIOT	National Institute of Ocean Technology
NPCIL	Nuclear Power Corporation of India Ltd.
NSRA	Nevada Seismic Research Affiliates
NWRWS	Narmada Water Resouces Water Supply
PESO	Petroleum and Explosive Safety Organization
PPE	Personal Protective Equipments
PFZ	Potential Fishing Zones
PGA	Peak Ground Acceleration
PMO	Prime Minister's Office
PMS	Probable Maximum Surge
PPP	Public private Partnership
PS	Principal Secretary
QCI	Quality Council of India
QRMT	Quick Reaction Medical Team
R & B Dept.	Roads & buildings Department
R & R	Rehabilitation & Reconstruction
RDD	Radiological Dispersal Device
RED	Radiation Exposure Device
RESECO	Remote Sensing and Communication Centre
RSO	Radiological Safety Officer
SAR	Search and Rescue
SCG	State Crisis Management Group
SCMC	State Crisis Management Committee
SDMA	State disaster Management Authority
SDMP	State Disaster Management Plan
SDRF	State Disaster Response Force
SDRN	State Disaster response Network
SED	Site Emergency Director
SEOC	State Emergency Operation Centre
SMS	Short Messaging Service
SOG	Standard Operations Guide
SOP	Standard Operation Procedure
SRPF	State Reserve Police Force
SSNNL	Sardar Sarovar Narmada Nigam Limited
SST	Sea Surface Temperature
SWP	Single Wire Protocol
TEOCs	Taluka Emergency Operation Centers
UD & UHD	Urban Development & Urban Housing Development
UNDP	United Nations Development Programme
UTs	Union Territories
WALMI	Water and Land Management Institute
WAN	Wide Area Network
WSEAC	World Scientific and Engineering Academy and Society

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# Chapter 1

## INTRODUCTION



## Chapter 1 INTRODUCTION

Disaster threatens sustainable economic development worldwide. In the past twenty years, earthquakes, floods, tropical storms, droughts and other calamities have killed millions of people, inflicted injury, disease and caused homelessness and misery to around one billion others in the world. These have caused damage to infrastructure worth millions of rupees. Disaster destroys decades of human effort and investments, thereby, placing new demands on society for reconstruction and rehabilitation. Disaster management thus requires a multi-disciplinary and proactive approach. The community, civil society organizations, media and the proverbial man on the street, everyone has to play a role in case such exigency occurs. The various prevention and mitigation measures outlined below are aimed at building up capabilities as also how to deal with disasters.

### **1.1 OBJECTIVE**

The objective of a Disaster management plan is to localize a Disaster and contain its effect to the greatest extent so as to minimize its impact on life, environment and property. Response to any disaster, in the absence of a well-defined plan, would be arbitrary, leading to overemphasis of some actions and absence of other critical actions. A formal plan for Managing Disaster is therefore necessary. This Disaster management plan has a strong preparedness focus which aims at reducing our vulnerability to disasters and at the same time, it includes a plan of action/response mechanism for dealing with earthquakes, floods, cyclones, epidemics, industrial and chemical accidents, road accidents and fires.

This document provides basic information required for the management of disasters in Bharuch District by:

- Defining the Risks and Vulnerabilities of citizens of the district to different disasters;
- Identifying private and public sector stakeholders with prime and supporting responsibilities to reduce or negate these vulnerabilities
- Defines actions to be taken by these parties to avoid or mitigate the impact of possible disasters in the district.

Subsidiary plans are developed at the:

At the Village and Taluka level;

- For major industrial sites located in the district (Off-site Emergency plan for Industrial Accidents available with DISH);
- Through Standard Operating Procedures (SOPs) of Line Departments detailing how specific disaster response actions will be accomplished.

Developing and maintaining SOPs<sup>1</sup> are the responsibility of parties with designated prime or supporting tasks assigned by this plan.

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<sup>1</sup> Standard operating procedure simply sets out the steps normally and routinely taken to accomplish a specific task. The basic SOP starts with a statement as to when or under what conditions it should be used, followed by the exact sequence of actions to be taken. The user is not expected to make any choices in following the SOP.

Keeping in view all the possible aspects of the aforesaid problem in mind and to keep the Administration prepared in all possible ways to respond properly to various Disaster situations with minimum delay, possible Disaster situations have been identified and the component plans have also been identified & mentioned in detail in this document.

**(A) Natural Calamities**

- |  |              |
|--|--------------|
| * Floods   | * Earthquake |
| * Cyclone  | * Fire       |
| * Biological Disaster or Epidemic of Human/livestock/crops |              |

**(B) Man Made Calamities**

- |                              |                                     |
|------------------------------|-------------------------------------|
| * Industrial Disaster        | * Radiological Disaster             |
| * Accidents                  | * Railways                          |
| * Road                       | * Air                               |
| * Building Collapse          | * Bomb Blast (Terrorist Activities) |
| * Stampede at crowded Places | * Food Poisoning                    |

The mode, degree and extent of response to fight out any Disaster depend upon the nature, degree and extent of Disaster, but some points are common to all kinds of situations. For example, first and foremost, appropriate and adequate steps for preventing the disaster should be undertaken. Secondly, preparedness is required to contain the damages and casualties resulting from the Disaster. Thirdly, steps for rehabilitation and restoration of community life within a reasonable time should be focused on.

Hence, some necessary and common steps are as below:

1. Establishment of Central Control Rooms and capacity enhancement of Emergency Operation Centers.
2. District Disaster Management Committee to meet post early warning or immediately post disaster occurrence.
3. A general line of action and some special duties to various officers and departments will have to be assigned, keeping in mind a timeline for finishing specific tasks.
4. Voluntary Organizations may have to be involved and their role will have to be clearly specified and coordinated.
5. Media may have to be briefed to suppress all kinds of rumors.
6. Information regarding resource inventory of Health Services, Transport Services, Evacuation & Rehabilitation Centers and Food etc. needs to be kept handy so that resources can be deployed where required.
7. Consistent follow-up of relief operations and constant reporting of pre and post disaster work.

Broad guidelines have been given in the following pages and "Standard Procedure" has been formulated which is to be adhered to by all concerned. Once the Disaster take place and the authorities are informed of the same, they will take the necessary action with the help of the individual Disaster management plans prepared for the respective Disaster/situations.

The main objectives of various preparedness measures are:

- 1) Minimizing the loss of human lives.

- 2)Minimizing the loss of livestock. Minimizing the loss to property and infrastructure.
- 3)Minimizing ill effects on the health of the affected population.
- 4)Bringing the human activities in the locality to normal soon after.

## Chapter 1 INTRODUCTION

To achieve the above objectives, different tasks have to be performed by Government Departments and other agencies before, during and after the Disaster. Each Department's role and responsibilities have to be clearly identified and an action plan needs to be drawn up by each department. For close cooperation between the various Department and Agencies, close coordination is required between the Collector at the District Headquarters and Prant Officers (SDM) at the Sub-division or taluka level. The responsibility to manage any type of Disaster in the district rests with the **District Disaster Management Committee** headed by the Collector Bharuch, who may, depending upon the gravity of the situation, seek the help of **State Disaster Management Committee** and the **National Disaster Management Committee**. This tiered and hierarchical structure ensures that the best possible response is accorded to any disaster situation, depending upon the severity of damage. For operational expediency, the level of Disasters have been categorized and classified as under:

### **Level of Disasters**

**L** concept has been developed to define different levels of disasters in order to facilitate the responses and assistances to States and Districts.

**L0 level** denotes normal times which will be utilized for close monitoring, documentation, prevention and preparatory activities. Training on search and rescue, rehearsals, evaluation and inventory updation for response activities will be carried out during this time.

**L1 level** specifies disaster that can be managed at the District level, however, the State and centre will remain in readiness to provide assistance if needed.

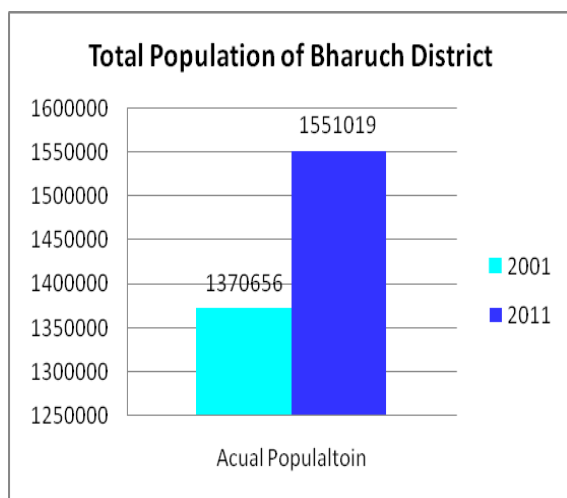
**L2 level** disaster situations are those, which require assistance and active participation of the state, mobilization of its resources for management of disasters.

**L3 level** disaster situation is in case of large scale disaster where the State and District authorities have been overwhelmed and require assistance from the Central Government for reinstating the State and District machinery as well as for rescue, relief, other response and recovery measures. In most cases, the scale and intensity of the disaster as determined by the concerned technical agency like IMD are sufficient for the declaration of L3 disaster.

## Chapter 1 INTRODUCTION

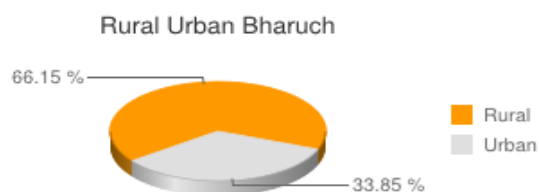
### 1.2 Bharuch District Profile

Description	2011	2001
Actual Population	1551019	1370656
Male	805707	713676
Female	745312	656980
Population Growth	13.16%	19.37%
Area Sq.Km	6509	6509
Density/km <sup>2</sup>	238	210
Proportion to Gujarat Pop.	2.57%	2.71%
Sex Ratio (per 1000)	925	921
Child Sex Ratio(0-6yrs)	920	918
Average Literacy (%)	81.51	74.41
Male Literacy (%)	87.45	82.98
Female Literacy (%)	75.09	65.11
Total Child Pop(0-6yrs)	179103	194025
Male(0-6yrs)	93265	101176
Female(0-6yrs)	85838	92849
Literate Population	1118276	875519
Male Literates	623047	508240
Female Literates	495229	367279
Child Proportion(0-6yrs)	11.55%	14.16%
Boys Prop(0-6yrs)	11.58%	14.18%

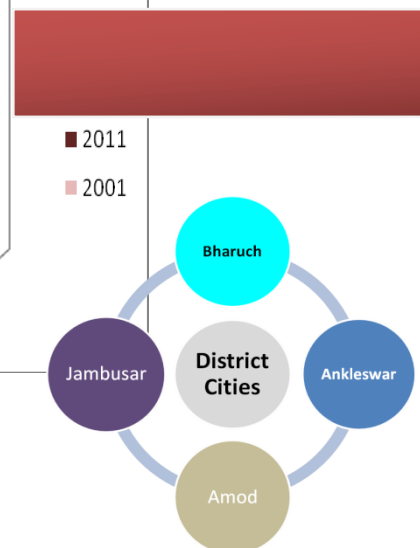
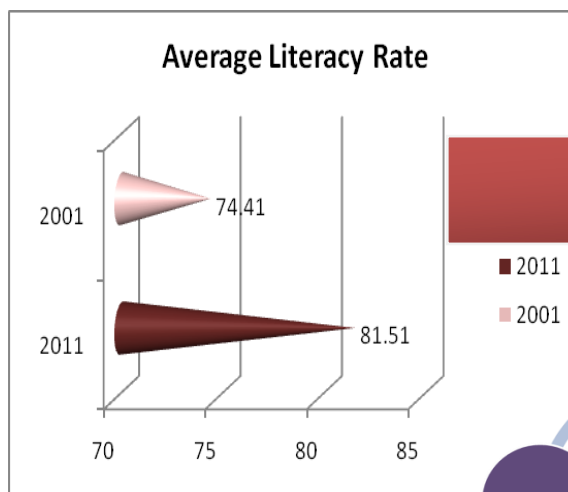
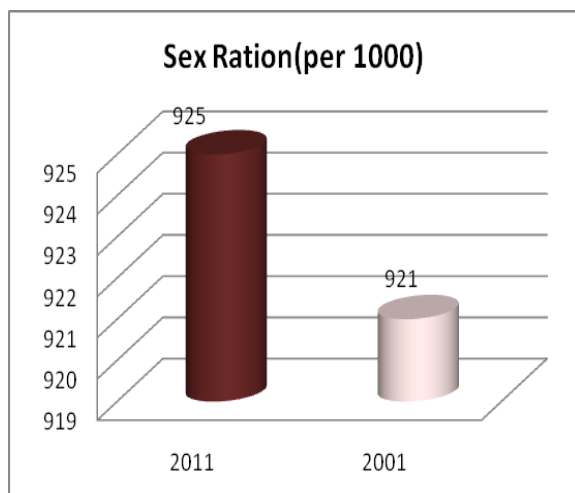


Girls Prop(0-6yrs)	11.52%	14.13%
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Bharuch is Located in the Southern part of Gujarat State. Its mainland extends between 21-degree - 41 min and 21 degrees - 50-min north latitude and between 72 degree 59 Min and 72 degree - 40-min longitude. It is bounded by Vadodara district in the North, Surat district in the South, Narmada district in the east and Arabian Sea in the west. Its coastline is 286 km long and the district lies in an area of 5254



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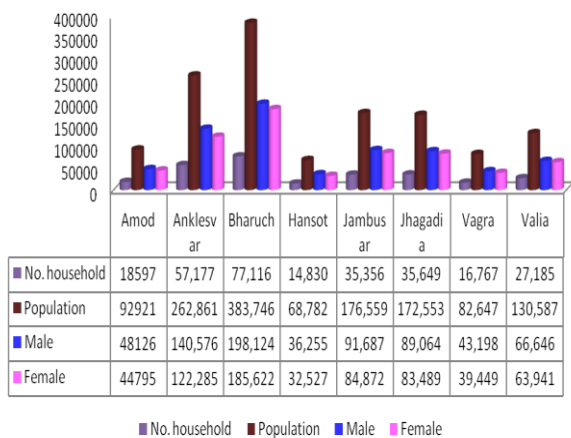


### 1.3 Taluka level Information:

Taluka	North Latitude	East Longitude	Total Villages
Jambusar	22'-00'	72'- 45'	82
Amod	21'- 45'	72'- 45'	54
Vagra	21'- 45'	72'- 45'	68
Bharuch	21'- 70'	72'- 99'	100
Ankleshvar	21'- 30'	73'- 00'	60

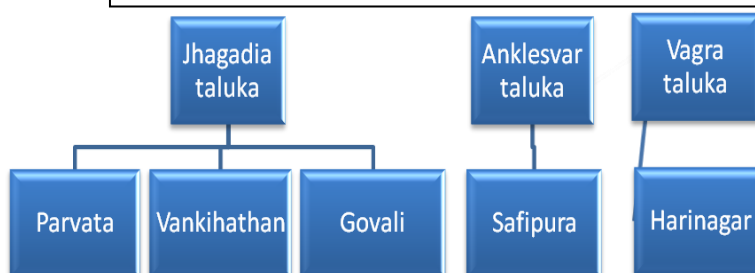


### Taluka Population of Bharuch District



Hansot	21'- 30'	72'- 45'	46
Jhagadia	21'- 45'	73'- 00'	125
Valia	21'- 30'	73'- 15'	59
Netrang	21'- 64'	73'- 35'	78
<b>Total</b>			<b>672</b>

### 5 Uninhabited villages of Bharuch district



### 1.4 Climate:

The temperature at Bharuch District Headquarters ranges from **42.0** degree centigrade (highest) in summer and **10.2** degree centigrade (lowest) in winter. The air is humid owing to a long Coastal belt.

### 1.5 River, Dam & Rainfall Information

The average annual rainfall is 640 mm. The soil found in the District is largely black soil, except for the coastal areas where the soils characterized as alkaline.

The District has one major river i.e. the Narmada and seasonal rivers Dhadhar & Kim. These rivers flow towards the Gulf of Khambhat in the west. The District has no Major Dam; however, it has 3 check dams controlled by the Minor Irrigation Department.

## Chapter 1 INTRODUCTION

### 1.6 RAINFALL DATA OF BHARUCH DISTRICT

The average annual rainfall is 640 mm

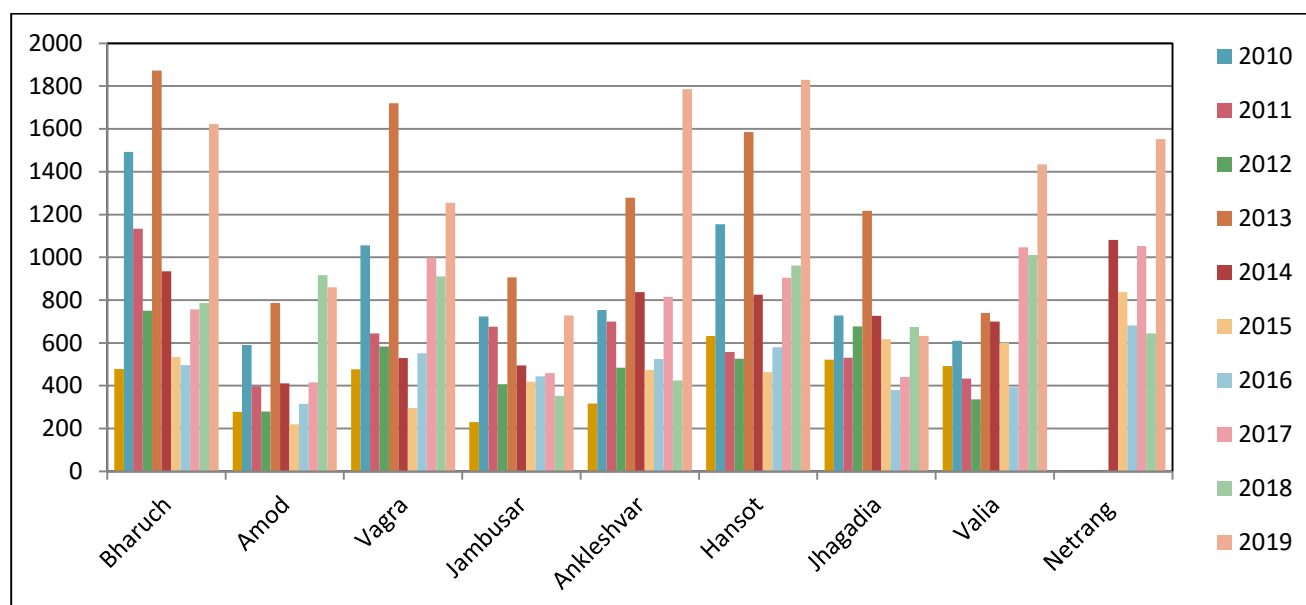


Table: Taluka-wise Rainfall Data of Bharuch District between 2011-2021

Sr.	Taluka	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	Bharuch	1134	750	1873	935	533	496	756	911	1610	1162	957
2	Amod	398	279	786	411	219	315	415	353	856	720	411
3	Vagra	644	583	1720	529	296	552	999	674	1230	1025	757
4	Jambusar	676	406	906	494	418	444	459	425	723	617	495
5	Ankleshvar	700	484	1278	837	474	525	815	916	1744	1295	1162
6	Hansot	557	526	1585	826	464	580	904	786	1804	1102	1135
7	Jhagadia	530	677	1217	726	618	380	441	564	625	720	601
8	Valia	433	336	740	700	601	393	1047	1011	1418	1368	917
9	Netrang	-	-	-	1081	837	681	1053	962	1541	1753	875

### 1.7 Coastal Areas, Ports & Fisheries:-

S. No.	Taluka	Number of Villages	Population
1	Jambusar	21	22,098
2	Vagra	16	19,934
3	Amod	2	2,075
4	Hansot	7	7,571
	<b>TOTAL</b>	<b>36</b>	<b>51,678</b>

Out of the 1600 kmlong **coastline** of Gujarat, Bharuch District accounts for **286 km** in the northwest.

## Chapter 1 INTRODUCTION

There are 2 ports in Bharuch District, i.e. Dahej, a cargo port and Bhadbhut (Bharuch) a fisheries port.

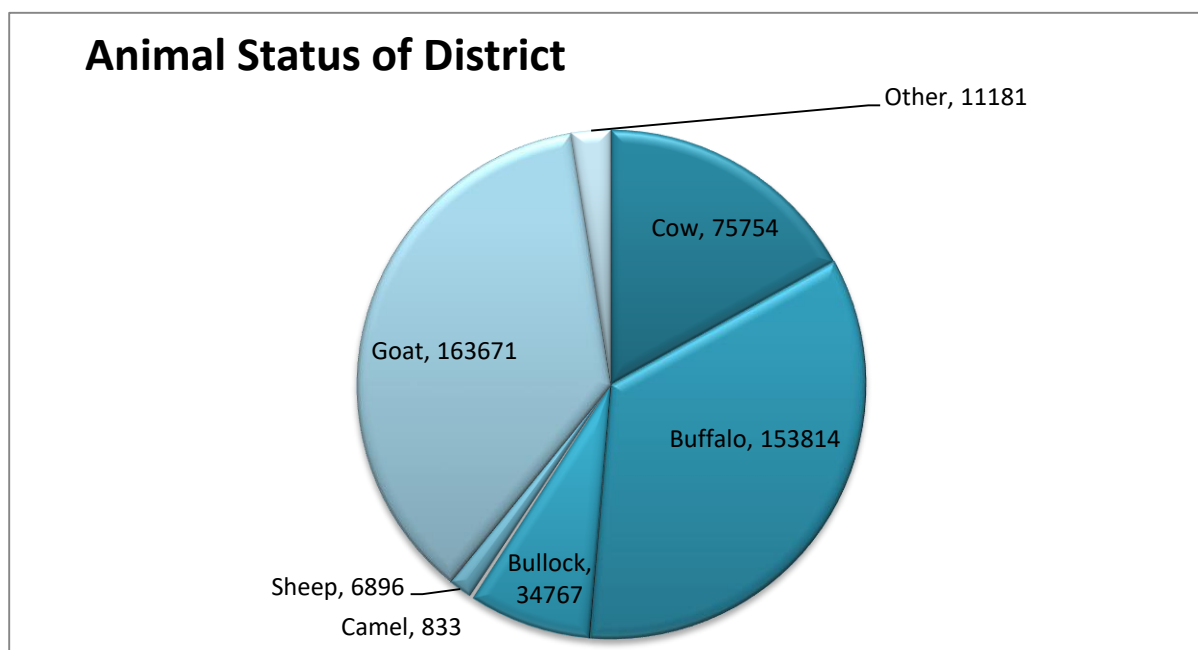
There are **74 fishing villages** in Bharuch District. There are 7723 fishermen out of which **6391 are active fishermen**. 711 mechanical boats of different capacities and 731 non-mechanical boats are available. The entire coastal belt is active in fishing and 7192 million tons of fish per year are caught and marketed. A total of 19 fishing societies have been registered in this district and all are active. ([Annexure – J15,16](#))

### **1.8 Salt works:-**

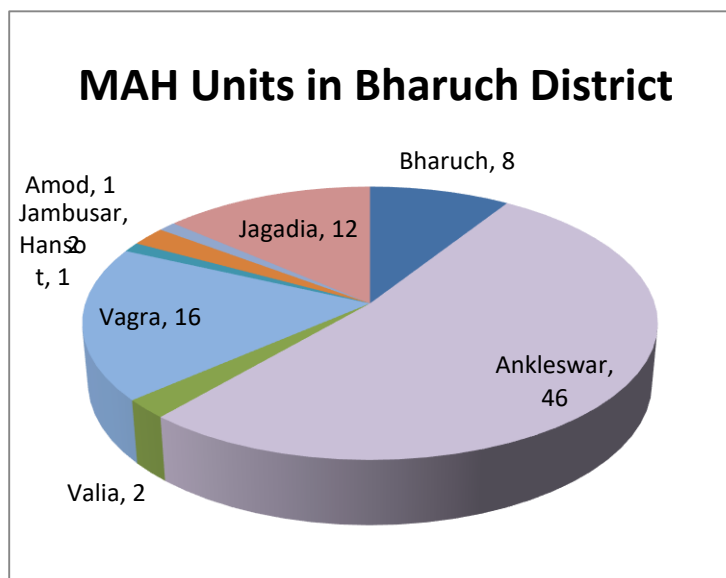
Due to a large area with theseashore in the District, Salt Industries has developed very well. There are **101 Salt factories** in the district occupying 49831 acres of land. The annual production of Industrial and Table Salt is approximately 10.23 lakh tons.

S r . N o	Name of Taluka	Numbers of Salt Industries	Villages of Salt Industries	Number of Salt worker
1	Vagra	47	Dahej, Gandhar, Kaladra, Koliyad, Aladar, Paniyadra. Muler	4500
2	Jambu sar	43	Devala, Aasarsa, Nada, Malpor, Khanpur Deh, Kapuriya, Sarod, Valipur, I smailpur, Doliya	2700
3	Amod	4	Denava, Mangrol	300
4	Hansot	7	Aakalva, Ilav, Vamlesvar, Samni, Pardi	380

### **1.9 Livestock:**



Cattle wealth occupies a pivotal place in the rural economy of the district. Livestock position is shown in the pie diagram alongside.



### **1.10 Industries:-**

Out of 491 Major Accident Hazards (MAH) units in the state, 98 are located in Bharuch District. Of these, GIDC Bharuch has 8, Ankleswar has 46, Valia has 2, Vagra has 16, Hansot has 1, Jambusar has 2, Amod has 1 and Jagadia has 12 MAH Units (Annexure-Q). As is evident from the pie diagram, Ankleswar has the maximum number of MAH units in the district. Total 71 villages fall in Industrial area. With Bharuch Estate, Palej Estate, Panoli Estate, Ankleswar Estate,

Jagadia Estate, Sayakha & Vilayat Estate, PCPIR, Dahej Estate ([Annexure-R](#))

### **1.11 Roads & Railway:-**

The district has 2838 km of pukka roads connecting all villages/towns in the district. Out of the total 665 inhabited villages, all villages are connected by State Road Transport facilities. The total length of Railway Track is 168 km in the District, of which Broad Gauge is 50 km and the remaining is narrow gauge.

### **1.12 Health Facilities.**

#### **Health:**

The district has 14 Hospitals, 37 PHCs and 7 CHCs in the District to cater to the needs of people. The major hospitals are Civil Hospital, GNFC Dispensary, Bombay Patel Welfare Hospital, Sevashram, Govardhan Hospital (all in Bharuch) and Jayaben Modi Hospital in Ankleswar. All PHC & CHC run in direct supervision of BHO (block health officer) & district officer ([Annexure –H8, M](#))

#### **1.1.1 Plan Considerations**

The previous disaster management plans of Bharuch district are mainly disaster-specific contingency plans. A careful and impartial study reveals the following facts:

- i) The 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 adequately
- v) There is no GIS-based database of key vulnerabilities and resources.

Secondly, separate plans for each disaster have produced multiple documents with considerable duplication, which would work against potential users understanding their roles with clarity.

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

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 extent of sufficient 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.(SOPs can be refer in chapter 4)

### 1.1.2 Organization of Plan

The present Multi-hazard Management Plan for Bharuch District is actually a Multi-hazard Contingency Plan. The mitigation, prevention and preparedness plan of the district does not find place in it.

In addition, specific plans for some disasters could also be attached. The present plan document identifies the roles and responsibilities of the organizations in key identified sectors. Taskforces have been constituted for taking response measures in specific sectors. Each task force consists of a lead organization/department supported by other organizations/ departments. Action plan has been prepared for each taskforce which covers their roles and responsibilities in different phases of disaster.

It is expected that **each Department/taskforce shall develop the standard operating procedures for disasters**, which is included in the plan. The Plans/SOPs prepared are tested and subsequently validated/updated through periodic drills, simulation or full scale **exercises**. In addition, district collector to ensure that all the

members acquires knowledge and skills to perform their assigned role through regular refresher trainings.

The present Multi-hazard Plan is divided into eight main sections and twenty fourAnnexure.

The main sections cover:

- Introduction, Concepts and Policies
- Hazard Vulnerability and Risk Analysis
- **Preparedness, Prevention & Mitigation Measures**
- Institutional Arrangement& Multi Hazard Response Measures
- Recovery Measures
- Financial Arrangements
- Maintenance of Plan
- Past Incidents – Experience.

The terms used in this plan are consistent with terms as defined and used in the Gujarat Disaster Management Act of 2003.

### 1.1.3 Authority and Responsibilities

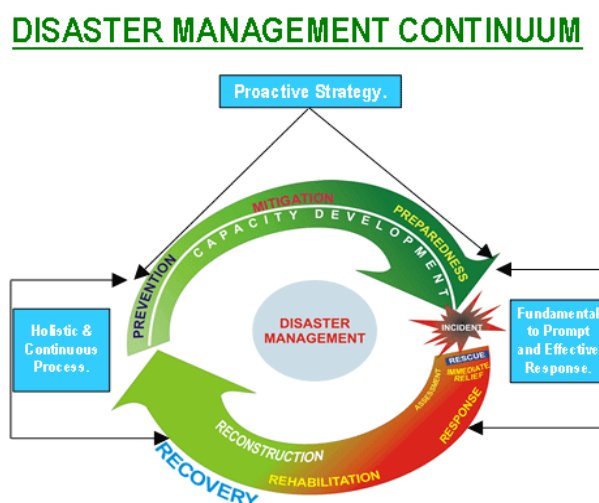
The requirement for district and subsidiary plans is set by the Gujarat State Disaster Management Authority (GSDMA) under the authority of the Gujarat State Disaster Management Act of 2003. The Act authorizes the collector to secure cooperation and assistance from other parties in efforts to avoid or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

The Collector (Specifically) and Government authorities (generally) are responsible for managing hazards and disasters that affect a district, with support from GSDMA, the Relief Commissioner and other public and private parties as may be needed. The roles, responsibilities and obligations of the Collector and other key parties are set out in detail in the Act and are considered as part of this plan.

### 1.1.4 Concept of Disaster Management

Disaster Management is a continuous and integrated process of:

- Planning and implementing measures towards mitigating or reducing the risk of disasters
- Mitigating the severity of consequences of disaster
- Preparedness for emergencies and disasters
- Assessing the effects of disasters
- Providing emergency relief and rescue and post-disaster rehabilitation and reconstruction, and
- Building capacities to these ends.



The district and subsidiary plans seek to reduce vulnerability and reinforce the resilience of communities in the face of

hazards and disasters. Addressing vulnerability aspects generally takes place before a disaster occurs; this is done to reduce the opportunities for the disasters to occur. Reinforcing resilience requires actions to reduce the scale or potential impact of a disaster, and building capacities and systems that facilitate (shorten and make less costly) the recovery process.

### 1.1.5 Approach to Disaster Management

The Government of Gujarat takes a comprehensive approach to disaster management. Disaster impact reduction is divided into two broad areas:

- Warning, Relief and Recovery, focusing on plans and actions necessary to reduce the impact of quick-onset disasters or speed the response to slow-onset disaster, and,
- Mitigation, Preparedness and Prevention, focusing on plans and actions to avoid or eliminate the causes or impacts of hazards or threatened disasters.

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

- Accurate risk and Vulnerability assessment
- Planning and efficient allocation of resources,
- Capacity building and training
- Provision of adequate resources
- The assignment of disaster management roles and responsibilities which correspond to normal roles and responsibilities (if possible) and,
- Use of diverse legal and operational mechanisms to accomplish disaster management objectives.

## **1.2. Policy and Responsibilities**

### **1.2.1 Institutional Framework**

The Institutional framework for operationalisation of the DM plan at the District level is conceived in terms of integration of both rural and urban areas and by recognizing the inter-dependence between line departments, district and state level authorities. The constitution of the District Disaster Management Committee will be as per the Gujarat Disaster Management Act 2003. **Details with Functions of DDMC members of Bharuch District (chapter 4 response measure)**

#### **1.2.1 Warning, Relief and Recovery**

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

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

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

#### **1.2.2 Mitigation, Preparedness and Prevention**

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 risk reduction. The district can avail itself of any or all of four mechanisms to reduce risk and vulnerability:

- Long term planning for mitigation, preparedness and prevention-- investmentsto this effect 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. Based on the interim assessment of risk and vulnerabilities, the District will focus on the following areas for mitigation, preparedness and prevention, which are specific to Bharuch district:

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

### **1.2.3 Finance**

#### **1.3 Preparation and Revision of the Plan**

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.

The plan should be reviewed annually and updated:

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

The revised plan should be submitted to GSDMA and the Relief Commissioner.

#### **1.3.1 Legal Backup**

Preparation of Disaster Management Plan is one of the mandatory provisions under The Gujarat State Disaster Management Act-2003 and The National Disaster Management Act-2005. In respect to above, National Disaster Management Authority has issued guidelines for preparation of State Disaster Management Plan.

- I. As per The GUJARAT STATE DISASTER MANAGEMENT ACT, 2003 under CLAUSE 15. Sub section (1), (2) & (3) Of CHAPTER VI FUNCTIONS OF THE AUTHORITY, the authority shall develop or cause to be developed guidelines for the preparation of disaster management plans and strategies.
- II. Under the provision of the DISASTER MANAGEMENT ACT, 2005,
  - a. Section 18 subsection (1), (2) & (3) subject to provisions of this Act, a State Authority shall have the responsibility for laying down policies and plans for disaster management in the State.

The DDMC will follow the techno-legal regime set up by the SDMA and other government Acts and Policies. It shall periodically review the extent of compliance to some of the key regulative provisions.

### **Trigger mechanism for putting the plan into action**

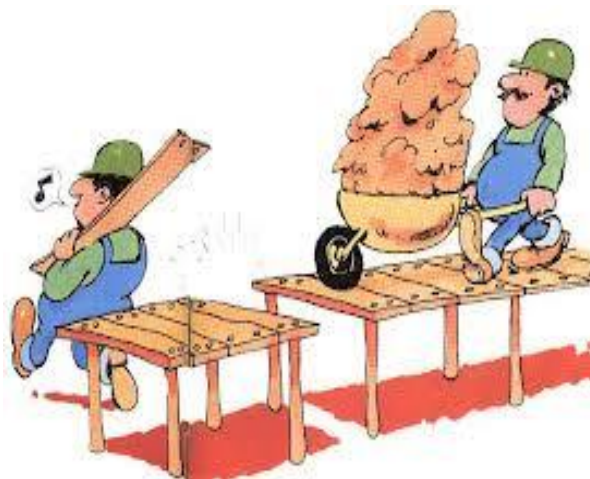
Chapter XIII, Section 32 of Gujarat Disaster Management Act 2003 clearly defines the process of declaring an area as disaster affected or disaster prone, which acts a trigger mechanism for putting relevant DM plan into action. These provisions are:

Where there is threat of an impending disaster or where a disaster has occurred-

- (a) In an area spread over more than one district; the Commissioner, and
- (b) In an area restricted to a district, the Collector –may immediately make a report to that effect to the State Government.

If the State Government is of the opinion that there is a threat of an impending disaster or that a disaster has occurred in an area of the State and that it is expedient, for the purposes of preventing such disaster or of coping with its effects, it may, by notification published in the Official Gazette and in any one or more newspapers having widest circulation in the area, declare such area to be disaster prone area or disaster affected area. The respective authorities (including State authority, Commissioner, Collector, Departments and other agencies) shall perform the duties of Disaster Management in accordance to the act until the time period of declaration. This period can be extended, if required by the competent authority. The Authority, the Commissioner, the Collector and all other agencies, shall cease to perform their functions in the affected area, on the expiry of the period.

**Refere: Detailed DM Act – 2003 Website: [www.gsdma.org](http://www.gsdma.org)**



## Chapter 2

# HAZARD, VULNERABILITY AND RISK ASSESSMENT



## Chapter 2

### HAZARD, VULNERABILITY AND RISK ASSESSMENT

BHARUCH district faces a number of hazards, which pose the threat of disaster. The threat (risk) and possible impact (vulnerability) which can be actualized from these hazards ranges from minor impacts affecting one village to events impacting larger than the state alone.



HRVC analysis includes comprehensive, well-linked risk assessment and vulnerability identification for various hazards. This information is useful to analyze, it gives us information about the aspects and infrastructure at risk, the population at risk and elements that are more capable of withstanding hazards. Vulnerability assessment deals with socio-economic vulnerability, housing vulnerability and environmental vulnerability. HRVC analysis includes resource inventory/capacity analysis, assessment of preparedness measures in terms of communication systems, public distribution systems, storage facilities, transportation facilities, medical facilities, fire stations, hazard resistant shelters with their capacity, presence of NGOs and other volunteers etc. to enable quick and prompt response.

#### 2.1 Multi-Hazard Profile of Bharuch *(Based on discussions with different departments)*

Hazard	Taluka under severe risk	Taluka under moderate risk
Flood	Jhagadia, Bharuch, Ankleshvar	Amod, Vagra, Valia, Hansot, Jambusar, Netrang
Cyclone	Jambusar, Hansot, Vagra	Jambusar, Hansot, Vagra
Earthquake	All taluka in Zone III	
Drought	----	Vagra, Jambusar
Industrial/Chemical	Ankleshvar, Vagra, Jhagadia, Bharuch, Valia, Amod, Hansot, Jambusar	
Tsunami	Jambusar, Hansot, Vagra	

(Annexure –A to G)

## Chapter 2

### HAZARD, VULNERABILITY AND RISK ASSESSMENT

#### Criteria for Classification of Risk by Taluka

Hazard	Taluka are at severe risk	Taluka are at moderate risk
<b>Flood</b>	Talukas which are affected by flood for more than 5 years in last ten years	Talukas which are affected by flood for at least 3 years in last ten years
<b>Cyclone</b>	Talukas that fall between 0 to 7 Km distance from the sea	Talukas that fall between 7 to 15 km distance from the sea
<b>Earthquake</b>	Talukas falling under the Seismic Zone IV and V	Talukas falling under Seismic Zone II and III
<b>Drought</b>	Talukas facing scarcity of drinking water for more than 5 years in last ten years	Taluka facing scarcity of drinking water for at least 3 years in the last ten years
<b>Industrial/Chemical</b>	Talukas lying within vicinity of 5 Km from MAH units and/or vital industrial/ chemical/nuclear installations	Talukas lying within vicinity of 5-15 Km from MAH units and/or vital industrial installations
<b>Tsunami</b>	Talukas that lie between 0 to 7 Km distance from the sea	Talukas that lie between 7 to 15 km distance from the sea

The above table summarizes the results of an analysis of hazard, risk and disaster impact in Bharuch. This analysis indicates that disaster planning at the Bharuch district typical responses to these disaster events can apply to floods, the industrial and chemical hazards, hail storms, dam failure, fire, failure of critical infrastructure and building collapse and Road Accidents.

#### Inference from HRVC

As Bharuch District is in close proximity to the sea and a perennial large river like the Narmada, the area is prone to cyclone and flood risk. There is moderate risk of earthquake and drought too. With increased industrialization and presence of Ankleswar, Dahej, Jagadia and Vilayat Industrial estate, the risks associated with industries and industrial development have also enhanced. Stress on natural resources lead to ground water depletion, reduced land resources and environmental hazards (land, water and air pollution), which ultimately affects livelihoods of communities dependant on agriculture, animal husbandry and natural resources in the region. Moreover, other phenomenon like sea water intrusion and increased ground and water salinity has also adversely affected the lives and livelihood of people here.

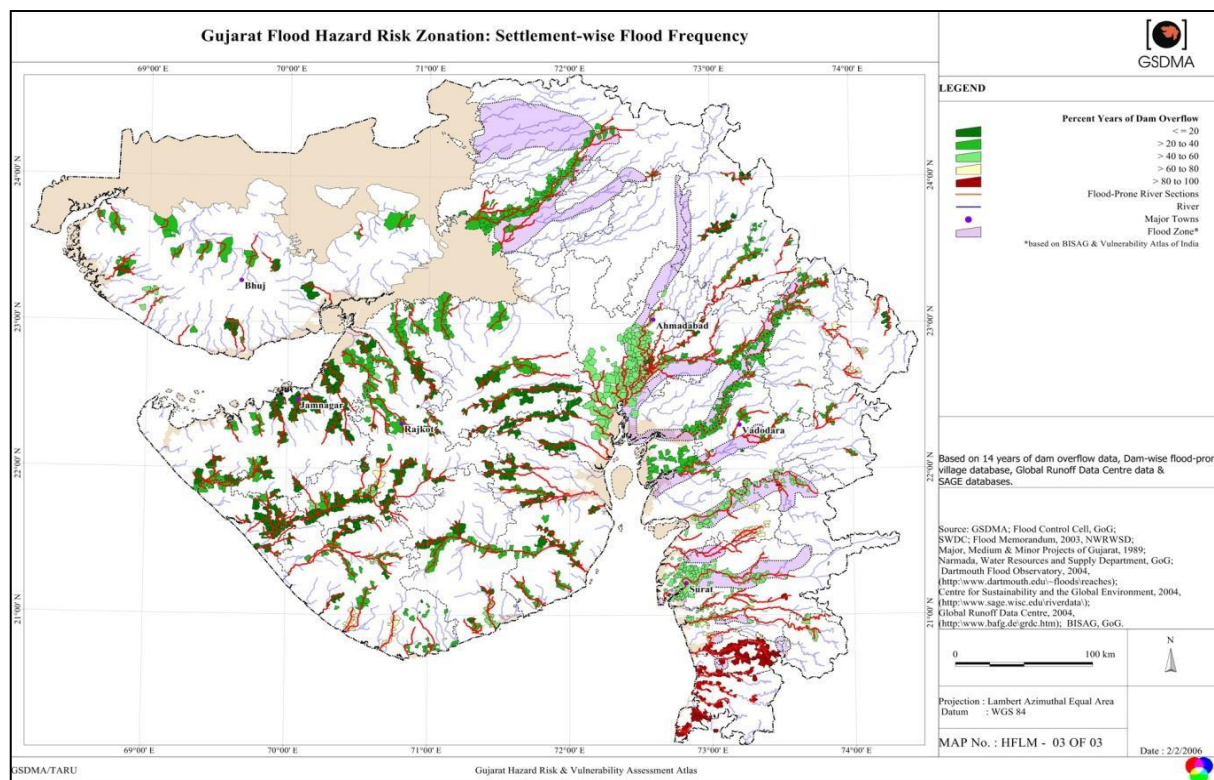
#### Hazchem and Hazmat transportation risk:

Hazmat risk: There is extensive risk of fire during transportation of hazardous chemicals and coal on roads and railways. Moreover, there is risk of spillage of chemicals during transportation through waterways. There is low awareness on the part of general public on hazards and safety during transportation of hazardous chemicals, which travel frequently and in large volumes through the National Highway and the Bharuch - Dahej state highway. Villages on the railway route of Mumbai line and also the Bharuch – Vagra – Dahej line are at risk due to transportation of hazardous material.

## Chapter 2

### HAZARD, VULNERABILITY AND RISK ASSESSMENT

#### 2.2 Flood Hazard Identification and Risk Assessment



Sr. No.	Year	Danger Level Crossed Details
		Foot
1	1970	41.500
2	1973	37.070
3	1979	31.500
4	1984	35.000
5	1990	37.010
6	1994	39.540
7	2006	32.000
8	2013	35.750
9	2015	22.300
10	2020	35.160
11	2021	21.500

Disasters arising out of natural calamities like floods are a real and serious threat in Bharuch district due to the presence of river Narmada, **Dhadhar and Kim** as well as check dams like **Pingot on tokarikhadi** and **Baldewa on kaverikhadi** in **Valia & Netrang taluka** and **Dholi on Madhumatikkhadi** in **Jhagadia taluka**.

The flooding may occur as a result of heavy monsoons or even cyclones. In the past, the areas of Bharuch and Ankleshwartalukas have been regularly

and severely affected by flooding of the Narmada River. In the year 1994, certain low-level areas of even Valia taluka had been affected by Kim River.

The adjoining table cites the past years in which the water level of river Narmada at the Golden Bridge has reached truly catastrophic limits.

Thus, flood can cause damage to human lives and property in Valia, Jhagadia, Bharuch, Ankleshvar, Amod, Vagra, Hansot and Jambusar & Netrang taluka as well as the low-lying areas of Bharuch District. The high water levels can arise due to floods, high rainfall, cyclones, high tides in the sea, etc. and consequent choking of the drainage system can cause serious effects. Possible consequent damages in industrial areas can cause fire, explosion, toxic release and poisoning hazard and harm human lives and property. The shanty houses in the low-level area can be severely affected by flood.



### 2.2.1 Flood Related Information

Flood Related Information

	Golden Bridge	Garudeshvar
Warning Level	22 feet (6.705 meters)	99.68 feet ( 30.378 meters)
Danger Level	24 feet (7.315 meters)	102.00 feet ( 31.089 meters)
Conversion Ratio	1 feet = 0.3048 meter	1 meter = 3.281 feet

Feet	Meter	Instruction											
		Alert				Ready for Evacuation				Immediate Evacuation			
		Taluka				Taluka				Taluka			
		Bharuch	Ankleshwar	Jhagadia	Hansot	Bharuch	Ankleshwar	Jhagadia	Hansot	Bharuch	Ankleshwar	Jhagadia	Hansot
22	6.71	Bharuch City	Khalpiya, Sarfuddin										
23	7.01					Bharuch City	Khalpiya, Sarfuddin						
24	7.32									Bharuch City	Khalpiya, Sarfuddin		
25	7.62		Juna Kansia										
26	7.93	Dasan Bet, Kabirvad Bet	Juna Chapara, Koayai, Dhaturiya, Tariya Bavali				Juna Kansia						
27	8.23					Dasan Bet, Kabirvad Bet	Juna Chapara, Koayai, Dhaturiya, Tariya Bavali				Juna Kasiya		
28	8.54			Ore, Patar, Juni Tarsali, Juna Tothidra, Juna Pora						Dasan Bet, Kabirvad Bet	Juna Chapara, Koayai, Dhaturiya, Tariya Bavali		



Feet	Meter	Instruction											
		Alert				Ready for Evacuation				Immediate Evacuation			
		Taluka				Taluka				Taluka			
		Bharuch	Ankleshwar	Jhagadia	Hansot	Bharuch	Ankleshwar	Jhagadia	Hansot	Bharuch	Ankleshwar	Jhagadia	Hansot
29	8.84	Sukaltirth, Kadod	Juna Haripura					Ore,Patar, Juni Tarsali, Juna Tothidra, Juna Pora					
30	9.15	Tavara Bet	Borbhatha (bet), Juna Borbhatha	Indor,Juni Jarsad, Mota vasasa		Sukaltirth, Kadod	Juna Haripura					Ore,Patar, Juni Tarsali, Juna Tothidra, Juna Pora	
31	9.45					Tavara Bet	Borbhatha (bet), Juna Borbhatha	Indor,Juni Jarsad,Mota vasasa		Sukaltirth, Kadod	Juna Haripura		
32	9.76		Ankleshwar	Nana Vasana						Tavara Bet	Borbhatha (bet), Juna Borbhatha	Indor,Juni Jarsad,Mota vasasa	
33	10.1		Sakkarpora, Pungam, Divi,Divi				Ankleshwar	Nana Vasana					
34	10.4						Sakkarpora, Pungam,Divi, Divi				Ankleshwar	Nana Vasana	
35	10.7			Bhalod, limodra	Hansot						Sakkarpora, Pungam,Divi, Divi		
36	11							Bhalod, limodra	Hansot				
37	11.3	Nikora, Dashan		Vadhvana								Bhalod, limodra	Hansot
38	11.6	Jhanor, Mangeles hvar		Velugam		Nikora, Dashan		Vadhvana					

Feet	Meter	Instruction											
		Alert				Ready for Evacuation				Immediate Evacuation			
		Taluka				Taluka				Taluka			
		Bharuch	Ankleshwar	Jhagadia	Hansot	Bharuch	Anklesvar	Jhagadia	Hansot	Bharuch	Anklesvar	Jhagadia	Hansot
39	11.9	Sindhot				Jhanor, Mangelesh var		Velugam		Nikora, Dashan		Vadhvan a	
40	12.2	Vadva	Sajod	Vanakpor, Panetha, Kakalpor, Sarsad		Sindhot				Jhanor, Mangeles hvar		Velugam	
41	12.5			Uchediya, Krushnapuri		Vadva	Sajod	Vanakpor, Panetha, Kakalpor, Sarsad		Sindhot			
42	12.8							Uchediya, Krushnapu ri		Vadva	Sajod	Vanakpo r, Panetha, Kakalpor , Sarsad	
43	13.1	Karjan										Uchediy a, Krushna puri	
44	13.4	Jhadeshwar				Karjan							
45	13.7					Jhadeshwar				Karjan			
46	14									Jhadeshw ar			

Source: Flood Memorandum, 2021

## Chapter 2

### HAZARD, VULNERABILITY AND RISK ASSESSMENT

#### 2.2.2 Areas Affected By Dhadhar River

<u>Amod Taluka</u>	<u>Jambusar Taluka</u>
<b>Warning Level 99.00 feet</b>	<b>98.00 feet</b>
<b>Danger Level 101 feet</b>	

<b>Amod Taluka Villages</b>	<b>Jambusar Taluka Villages</b>
Vasana, Manjola, Kankaria, Ikhar, Danda, Sarbhan, Nodhana, Dadapur, Kobla, Amod, Pursha	Valia, Asaroi, Kundal, Bojedara, Nada, Devla, Bhadkodra, Sigam, Muradpur, Kavi, Jantran, Medafar-Neja, Tankari, Khanpur, Mahapura, Magnad, Jambusar, Koteshtar, Nobar, Uber, Nondhana, Jafarpura, Kupriya, Malpur, Vad, Kora, Kava, Umara, Ankhi, Vahelam

(Annexure - B)

Source: Flood Warning Arrangement, 2021

#### 2.2.3 Areas Affected By Dam-site

Sr.No	Dam Name	Warning Level (in meters)	Danger Level (In Meters)	Taluka	Affected Villages
1.	Dholi Dam	<b>136.00</b>	<b>137.41</b>	Jhagadia	Dholi, Razalwada, Mota Sorva, Rajpardi, Bilwada, Katol, Sarsa, Kapat, Vanakpor
2.	Pignuts Dam	<b>139.70</b>	<b>141.34</b>	Valia	Gundiya, Kamaliya, Rajpara, Jambujam, Vandariya, Chor-Amala, Umargam, Sodgam, Sinoda,
3.	Baldeva Dam	<b>141.50</b>	<b>143.20</b>	Valia	Seer , Dolatpur , Desad, Kesar Gam , Singala, Pithor
4	Pingut Dam	<b>139.70</b>	<b>141.34</b>	Netrang	Moza , Chikhali , Navapara
5	Baldeva Dam	<b>141.50</b>	<b>143.20</b>	Netrang	Kambodia, Baldeva, Panchsim, Zarna, Borkhadi, Chaswad, ,

(Annexure - D) Source Flood Memorandum 2021

## Chapter 2

### HAZARD, VULNERABILITY AND RISK ASSESSMENT

#### Risk and Vulnerability Assessment (Current Year Projection)

##### Physical Vulnerability

Hazard	No. of Villages	No. of People	No. of Live stock	No. of Kucha Houses	No. of Pucca Houses	Area under Agriculture (Hectare)
Flood	216	584865	115556	59104	44711	129584
Cyclone	43	104296	32272	9934	10979	35754
Industrial and Chemical	71	139156	37366	16586	10763	30125
Tsunami	43	104296	32272	9934	10979	35754

(Annexure – A to G)

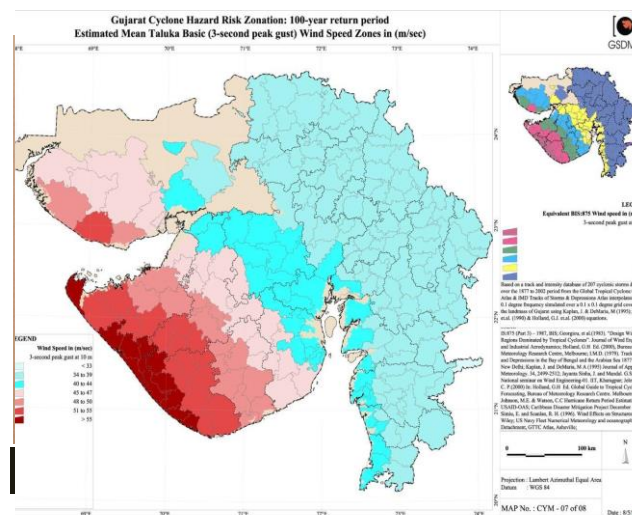
#### Health Infrastructure at risk

Hazard	Sub Centre (no.)	PHC (no.)	CHC (no.)
Flood	24	14	2
Cyclone	35	7	3
Earthquake	200	37	7
Industrial and Chemical	26	8	3
Tsunami	35	7	3

### 2.3. Cyclone Hazard & Risk Assessment

The possibility of a storm cyclone is 62, 68 & 34 % respectively in the month of October, November and December. Bharuch has experienced storm cyclones in October 1975, October 1993 and November 1996. During a cyclone, there is high-velocity wind sometimes accompanied by heavy rainfall.

Looking to the geographical location of the District, Hansot, Vagra, Amod and Jambusar, i.e. west-facing talukas are situated nearer to the seafront of the Arabian Sea where the highest vulnerability of cyclone lies.



## Chapter 2

### HAZARD, VULNERABILITY AND RISK ASSESSMENT

Cyclones can occur due to sudden pressure drop as a result of formation of low-pressure zone over a certain area. The identification of the low-pressure situation as per meteorological department and world meteorological organization are as follows:

Sr. No.	Type of Storm	Rotational Wind Velocit (in degree)
1.	Low pressure area	17 to 27
2.	Deep & sump	28 to 33
3.	Storm cyclone	34 to 47
4.	Dangerous storm cyclone	48 to 67
5.	Dangerous storm cyclone with heavy wind	68 and more

(1 knot = 1.8 km/hr)

The creation of low-pressure zone in atmosphere causes high velocity wind known as cyclone. Cyclone velocity is classified by the Director, Meteorological Dept. Ahmedabad as follows:

Sr. No.	Name	Wind Velocity (in km/hr)
1.	Eye of storm cyclone	30
2.	Eye val. of cyclone	100
3.	Inside wig of cyclone	100 to 150
4.	Outer wig of cyclone	150 to more

**The effect of high velocity wind cyclone is as follows:-**

Sr. No.	Type of Storm	Wind Velocity (in km/hr)	Damage Effect
1.	Cyclone	60 to 90	Tree branches fall
2.	Dangerous cyclone	90 to 120	Small trees fall
3.	Dangerous cyclone with storm wind	120 or more	Big trees fall&houses, structures are damaged.

There are villages and salt manufacturer industries situated at the seafront areas of the Hansot, Vagra, and Amod & Jambusar talukas. Industrial factories are situated nearer to the seafront in the District.

Wind velocity of 120 km/hr or more can cause damage to human beings living in the vicinity of the seafront and workers working in Dahej GIDC factories as well as salt manufacturing industries. There could be situations such as sudden collapse of buildings, houses, structures and/or possibility of fire, explosion, toxic release, poisoning effect from the chemical factories, water flooding in low-lying areas. The details of possible effects on family, population, cattle, kachha houses and building are shown in the table below.

Severe cyclones with extremely high wind velocity & very high rainfall can cause damage to human lives in highly populated Municipalities such as Jambusar, Bharuch and Ankleswar, other villages and GIDC area of Dahej Panoli, Ankleshwar, Jhagadia, Bharuch and Palej and other areas where MAH factories or other chemical factories are situated. Many a time, it becomes difficult to predict the severity of a disaster, even when an early warning of the disaster has been obtained.(Annexure - R)

## Chapter 2

### HAZARD, VULNERABILITY AND RISK ASSESSMENT

#### **2.3.1 Areas affected near the Coastal Belt:**

Name the Taluka likely to be affected	Name and Number of Villages likely to be affected				
	Severe (0-7 Kms)	Population	Moderate (7-15 Kms)	Population	Low (15-30 Kms)
Vagra & GIDCArea Dahej	Dahej Lakhigam Luwara Jageshvar Ambheta Rahiyad Suwa Koliyad Kaladra	6846 3357 1393 1465 1330 1353 1664 535 1383	Vagnai Gandhar Aladra Paniyadra Padariya Narwani Goladra	675 1527 730 330 569 569 939	
Hansot	Samali Kantiyazal Vamleshvar Katpor	734 1177 885 2219	Ambheta Pardi Hansot	1159 544 10739	
Jambusar	Sarod Kamboi Malpour Zamadi Neja Dewala Nada Asrsa Kapuriya Esmilpura Tankari Doliya Khanpur deh	7417 555 2287 913 511 4090 2672 735 480 1146 3660 623	Sardarpura Mahapura Kudhal Bojadra Jafarpura Magnad Karali Vedach.	270 427 355 1492 579 3476 5431 6461	

**(Annexure - F)**

#### **National Cyclone Risk Mitigation Project (NCRMP)**

The Government of India has initiated the National Cyclone Risk Mitigation Project (NCRMP) with a view to address cyclone risks in the country. The overall objective of the project is to undertake suitable structural and non-structural measures to mitigate the effects of cyclones in the coastal states and UTs of India.

National Disaster Management Authority (NDMA) under the aegis of Ministry of Home Affairs (MHA) will implement the Project in coordination with GSDMA in Gujarat state. The Project has identified Bharuch as a cyclone prone district, with varying levels of vulnerability.

5 Multi-Purpose Cyclone Shelters (“MPCS”) are being constructed in the district of Bharuch under this project in different villages.

### **List of MPCS sites in Bharuch:-**

<b>Sr.No.</b>	<b>District</b>	<b>Taluka</b>	<b>Village</b>	<b>Status</b>
1.	Bharuch	Hansot	Katpor	Completed
2.	Bharuch	Vagra	Rahiad	Completed
3.	Bharuch	Vagra	Suva	Completed
4.	Bharuch	Vagra	Kaladara	Completed
5.	Bharuch	Jambusar	Khanpor Deh	Construction is ongoing

### **Project Objective:-**

The Project development objective of the NCRMP is to reduce vulnerability of coastal communities to cyclone and other hydro meteorological hazards through

- 1) Improved early warning dissemination systems
- 2) Enhanced capacity of local communities to respond to disasters
- 3) improved access to emergency shelter, evacuation, and protection against wind storms, flooding, and storm surge in high areas
- 4) strengthening DRM capacity at central, state and local levels in order to enable mainstreaming of risk mitigation measures into the overall development agenda

### **2.4 Earthquake Hazard & Risk Assessment**

Earthquake is a natural phenomenon, which occurs due to uncertain movement of semisolid mass and plate of soil condition below 3000 km in earth. The nature of geological formation of the bedrock in the earth's crust reveals regions characterized by structural features, such as dislocation, distortion, faults, folding, thrusts, and volcanoes with their age of formation. These are directly involved in the earth movement or quake resulting in the above consequences.

Earthquakes cause random motion of ground, which can be resolved in any three mutually perpendicular directions. This motion causes the structure to vibrate. The vibration intensity of ground expected at any location depends upon the magnitude of earthquake, the depth of focus, distance from the epicenter and the strata on which the structure stands. The response of the structure to the ground vibration is a function of the nature of foundation soil, materials, form, size and mode of construction of the structure and the duration and the intensity of ground motion. Attention is particularly drawn to the fact that the intensity of shock due to an earthquake could greatly vary locally at any given place due to variation in the soil conditions.

Earthquakes can cause damage not only on account of the shaking of the ground but also due to related chain effects like landslides, floods, fire, explosion and disruption to communication etc. Himalayan – Nagalushai region, Indo Gangetic Plain, Western India, Kutch and Kathiawar regions are geologically unstable in the country and some devastating earthquakes of the world have occurred here.

Bharuch District is covered as a Zone –III earthquake-prone area. Bharuch city in the District had suffered an earthquake in the year 1970 and recently on 26<sup>th</sup> Jan 2001, Kutch, Rajkot, Surendranagar, Junagadh, Ahmedabad, Vadodara, Surat, Valsad district had experienced an earthquake of intensity 6.9 on the Richter scale. This had caused large damage to human lives, massive property, and affected the entire communication, water, and power networks as well.

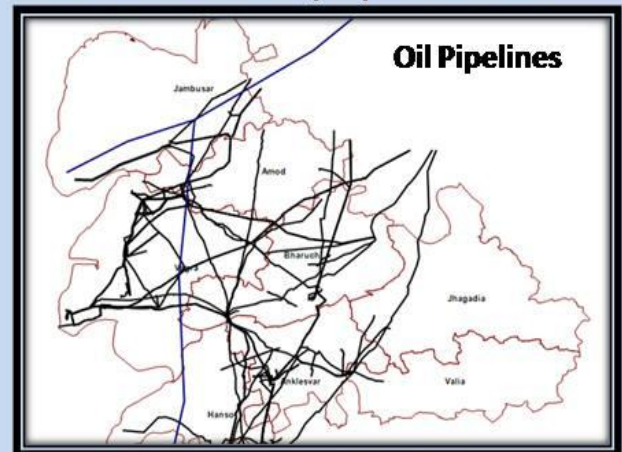
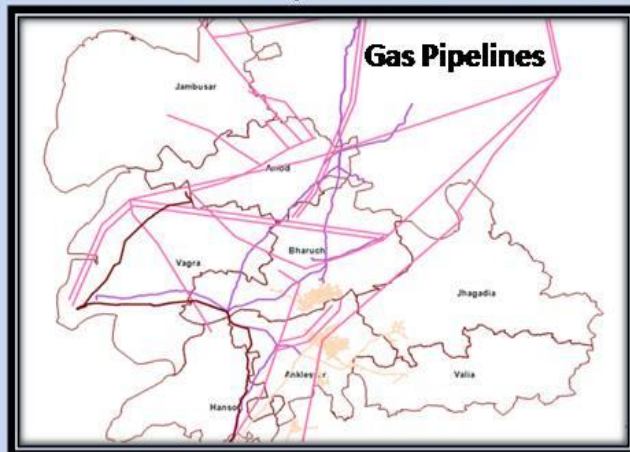
#### 2.4.1 Details of earthquake hazard-prone zone area, reason, effect in the district

Sr.	Hazard Prone Zone	Reason	Effect
1.	Bharuch, Ankleswar, Jambusar and Amod Municipality area in respectively taluka	Highly dense population, Municipality area	Damage to human being & property
2.	Bharuch, Vagra, Amod, Jambusar, Ankleshwar, Hansot, Jhagadia, Valia, Netrang Taluka	Dense population Taluka place of district	----- As above -----
3.	Dahej, Panoli, Ankleswar, Jhagadia, Bharuch and Palej GIDC area	High number of chemical factories, MAH chemical factories, other industries, high number of employees and ancillary business establishment & persons	Producing chemical hazard such as fire, explosion, toxic release, poisoning etc. as a result of rupture of tank & collapse of buildings. This can cause damage to human beings.
4.	Udchaad – Ankhi in Jambusar taluka, Dora, Rozatankaria in Amod taluka, Zanor, Paguthan, Chavaj, Narmadanagar in Bharuch taluka, Gandhar in Vagra taluka, Pungam in Ankleshwar taluka, Kondh in Valia taluka, Kharach in Hansot taluka	MAH Chemical factories, Ankleshwar, Hansot, Vagra taluka and the places of availability of oil and Natural gas	Fire, explosion, toxic release etc. from certain MAH factories as well as fire, explosion in oil well, which can damage to human beings and property
5.	Underground passing pipeline area	Water, oil, chemical to a strong pipeline in district	Fire & explosion, which can cause damage to human beings & property. Interruption in industrial activity.
6.	Three port trust at Dahej	Storing & transferring chemicals & other products.	Fire, explosion & toxic release from respectively port trust interruption in industries activity.
7.	Road, railway and bridge area	National highway, other taluka road, western railway; Narmada & other bridge	Traffic in interruption, shortage occur in essential commodity in district as well as state
8.	Dams, water storage area	Very near to district Narmada dam, three check dams in Valia & Jhagadia taluka, GIDC water storages; industries reservoirs	Low lying areas will be flooded with water. There is shortage of drinking & industrial water. Thus can cause harm to humans & interruption in industrial activity.



It is not possible for mankind to predict earthquakes in early year, month, day, hours & minutes. After occurrence of earthquake; certain rays like peewees came early to the surface of earth. Mankind can measure these peewees. But after only the minute, the intensity of earthquake so increases very highly and cause damage to mankind & property. In a ward, people can get only one minute time by detection peewees, before severe tremendous effect of earthquake occur.

## District profile: Oil & Natural Gas pipelines



Map Source: GSDMA Website

— Gujarat Gas Distribution  
— GSPL  
— GAIL North South  
— Reliance

— INDIANOIL  
— ONGC ANKLESHWAR

- There are total **7 pipeline operators** in the district
- 2 of these operate Oil pipelines (**IOCL and ONGC**)
- 5 operate gas pipelines (**RIL, RGTIL, GSPL, GAIL, Gujarat Gas**) of which Gujarat Gas is a city gas distribution network.

### 2.4.2 Oil & natural Gas Pipeline Details

#### Route Details of Pipelines crossing River Narmada at Bhadbhut Village

Sr.	Company	Pipeline Detail	Oil/Gas
1	GAIL	Dahej – Uran – 30"	Natural Gas
		Hajira-Vijaypur-Jagdishpur – 36"	
2	RIL Ind.	Hazira to Dahej 26"	Gas
		Hazira to Dahej 24"	
3	RIL Gas Transportation Ltd.	Kakinada(A.P.) to Bhadbhut 48"	Natural Gas
4	GSPL	Ankleswar to Dahej 24"	Natural Gas
5	ONGC	Ankleswar to Gandhar 8"	Oil
6	IOCL	Amod to Hazira 12.75"	Oil
7	OPAL		Neptha

## Vulnerable Villages



- **Villages Immediately abutting pipelines:**
  - *Bhadbhut (3835), Dhanturiya (4717).*
- **Downstream Villages in case of oil Leakage:**
  - *Bharuch: Kasava (1336), Mahegam (1235),*
  - *Vagra: Kaladra (1663), Suva (1920), Ambetha (1552), Jageshwar (1571), Rahiad (1694), Lakhigam (4938).*
- **Total vulnerable population: 24,661.**

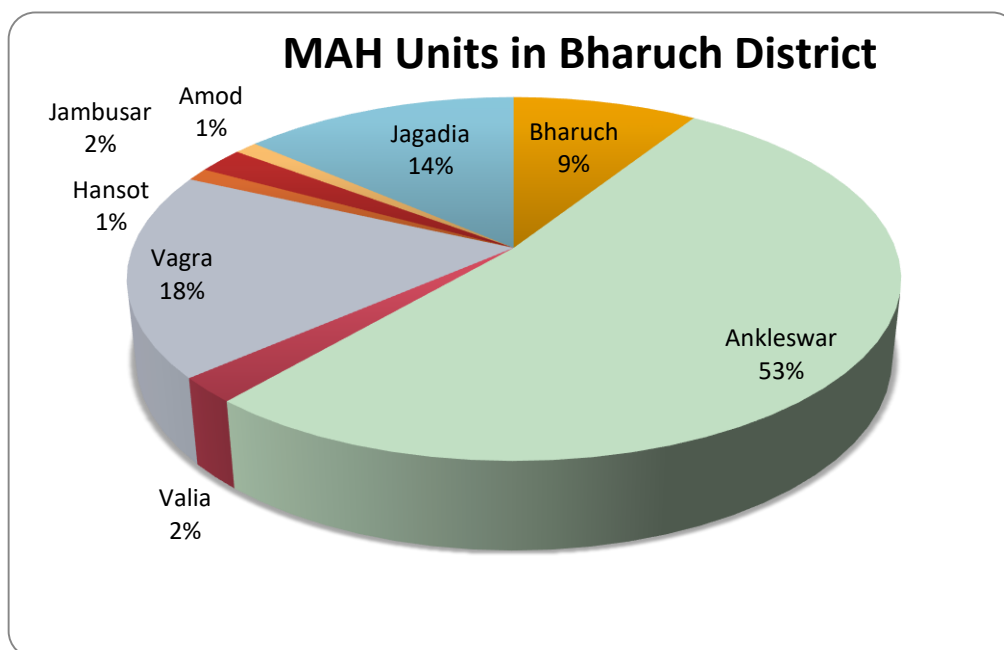
*(Population figures of villages stated in brackets)*

### 2.4.3 Past Incidents Surrounding Pipelines and Measures Undertaken:

- On 25<sup>th</sup> August 2013, there was explosion in the DUPL natural gas pipeline of GAIL and breakage in the 26" gas pipeline of RIL. This was followed by incident of oil leakage in the ONGC pipeline on 28<sup>th</sup> August 2013.
- District Administration issued an order of immediate shutdown of all pipelines in Bharuch District. District Crisis Group (DCG) Meeting was called on 26<sup>th</sup> August 2013; all pipeline operators were asked to verify structural safety of their pipelines and submit safety undertakings.
- On 31<sup>st</sup> August 2013, a show-cause notice was issued to ONGC by the District Administration for non-compliance of safety conditions and failing to give notice of incident. GPCB also issued notices to GAIL, RIL for failing to intimate the concerned authorities about the incident and lapses in safety procedures.
- On 1<sup>st</sup> September 2013, an Independent High-Level Technical team, i.e. M/S CEIL, Mumbai appointed by Energy & Petrochemical Department. Crude oil trapped in river section was displaced by ONGC. ONGC also conducted churning of oil in affected area by boats up to 13<sup>th</sup> Sept 2013

- Review and policy meeting was organized by GSDMA on 22<sup>nd</sup> November 2013 to discuss policy vacuum and multiplicity of laws and agencies granting ROU to pipeline operators.
- On 13-12-2016 about 16:45 a traveling boat having passenger 18 women & 28 men rescued with four private boats from sea.
- On 31-01-2017, Chemical fire destroyed the sterling Auxiliaries Pvt. Ltd. At Ambheta, Dahej, ta: vagra.

## **2.5 Chemical Hazard & Risk Assessment**



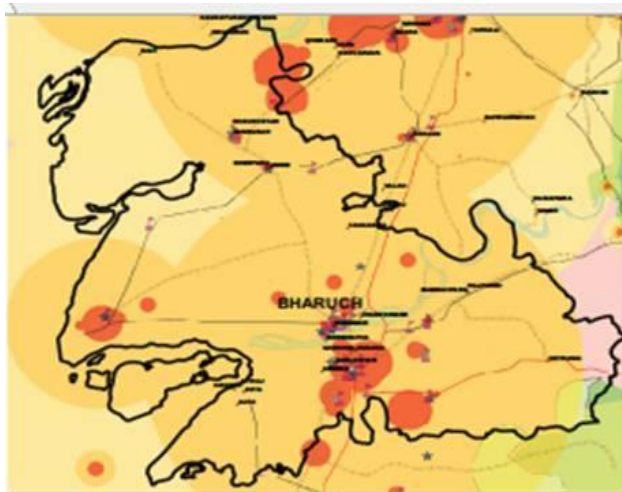
Chemical industries are engaged in storing, handling, manufacturing, transporting and using large and bulk quantities of various hazardous chemicals. Many of these chemicals are toxic, highly reactive, explosive, flammable, or poisonous or have a combination of these

characteristics. Due to these properties and impact of disasters such as nature of natural calamity as well as manmade, they have the potential to cause harm to human beings, other living creatures, plant, property and the environment in general as resulting emergencies of fire, explosion, toxic release, radioactive, poisoning. **(Annexure –R&T)**



Any or a combination of fire, explosion, and toxic release poisoning or radioactive hazard are possible in chemical industries of the district due to following types of disasters / emergencies:

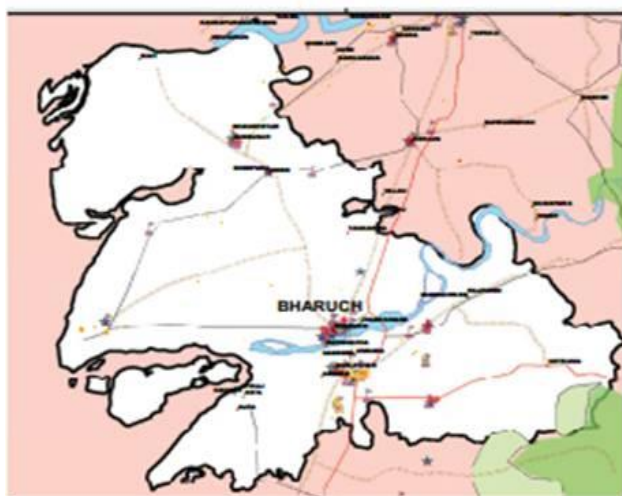
1. Natural calamities: Earthquake, Cyclone or Flood
2. Manmade Disasters: Civil disturbance, War, Riot or Industrial Accidents



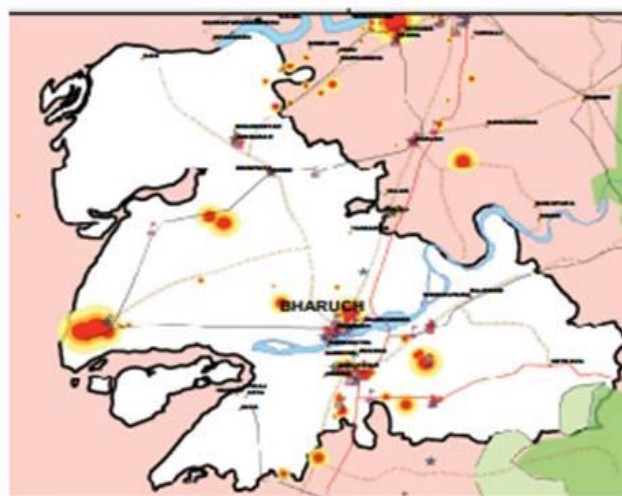
**Vulnerability Areas in Bharuch for a Toxic Leak Scenario**



**Vulnerability Areas in Bharuch for a Flash Fire Scenario**



**Vulnerability Areas in Bharuch for Vapour Cloud**



**Vulnerability Areas in Bharuch for BLEVE Explosion**

## Chapter 2

### HAZARD, VULNERABILITY AND RISK ASSESSMENT

#### 2.5.1 Details of type of risk, sources, resultant emergency and effect at large from the industries/factories:

Sr. No.	Type of Risk	Sources	Resulting Emergencies	Effect
1.	Environmental risk – Due to man-made disaster (Air pollution)	Leakage, spillage, escaping of toxic, flammable, explosive, reactive, poisoning chemical vapor, dust, fume in atmosphere from storage, manufacturing, handling, transportation operation from the factory by the abnormalities in operation, maintenance, startup / shutdown, failure of equipment, use of sub-standard / wrong material, civil commotion and armed conflicts, sabotage, war, riots, civil disturbance	Toxic release in atmosphere or Land poisoning or Water poisoning or Fire or explosion or Combination of them	Injury to humans and other living creatures, or Land poisoning or Water poisoning or Damage to property or Plant poisoning or Combination of them
2.	Environmental Risk – Due to man-made disaster (Water pollution)	Leakage, spillage, penetrate of industrial waste such as solid or liquid on or in the land due to abnormalities in operation, maintenance, failure of equipment, civil commotion and armed conflicts, sabotage, breakage or choking of pipeline	Same as above	Same as above
3.	Environmental risk – Due to natural calamities i.e. earthquake, cyclone, flood (water and air pollution)	Leakage, spillage, penetrate of toxic, flammable, explosive, reactive, poisoning chemical vapors, dust, fume in atmosphere from storage, manufacturing, handling, transportation operation from the factory and leakage, spillage penetrate of industrial waste such as solid or liquid on or in the land due to natural calamity	Same as above	Same as above
4.	Environmental risk – Due to man-made Natural Calamity disaster while transporting of chemical by road, rail & pipeline	Leakage, spillage, escaping, penetrate of toxic, flammable, explosive, radioactive, poisoning chemical liquid, vapors, dust, fume in atmosphere or on or in the land due to rupture of pipeline, on or in the land road transport containers / vessel, railway wagon, equipment failure as a result of natural calamities or manmade or combination of them disaster	Same as above	Same as above

**Refer: Taluka wise Details covered in (Annexure A to G)**

## Chapter 2

### HAZARD, VULNERABILITY AND RISK ASSESSMENT

## 2.6 Capacity Analysis

### Traditional Coping Capacity

It is important to identify and recognize traditional coping capacity of the community to enable them to enhance their capacity to withstand disasters.

Hazard	Early Warning	Preparedness	Early Response
Flood	Monitoring of water courses through community	Identified high elevation places and rescue teams	Evacuation, search and rescue and first aid support
Cyclone	Information through fisher folks	Locate to safe place	Search and rescue and first aid support
Earthquake		Identification of safe places,	search and rescue and first aid support
Drought	Own assessment mechanism	Fodder storage, food storage at individual level	Panjrapol
Industrial/Chemical Hazard	Local Administration	CAMEO/	Local response Teams
Tsunami		Locate to safe place	search and rescue and first aid support

### Summary of Capacity against flood, cyclone and Tsunami

Details	No.
Villages at risk	259
Swimmer and rescuers	1214
Emergency / Rescue Shelters	259
Govt Tanker water suppliers	2
Pvt Tanker water suppliers	8
Govt medical practitioners	32
Nurses	162
Vet Doctors	15
Para vets	8
Cattle shed (Panjrapol)	3
Machine boats	65
Simple Boats	32
Boat Operators	93
Life Jackets	2953
Rings	2478

(Annexure J, K, L& O)

## Chapter 2

### HAZARD, VULNERABILITY AND RISK ASSESSMENT

#### Summary of Capacity against earthquake

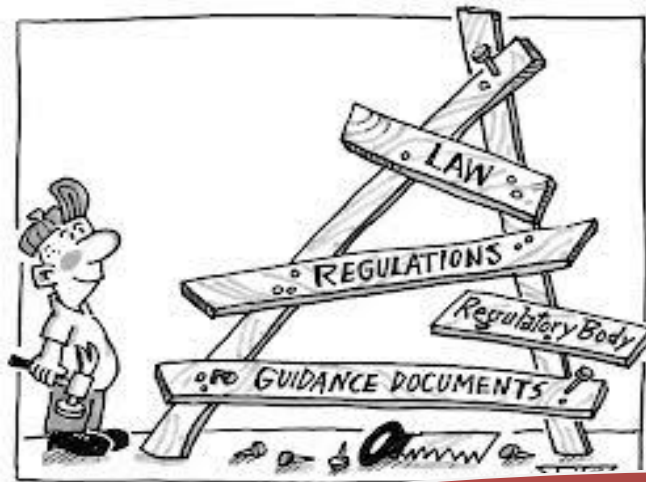
Details	No.
Earthquake prone villages	660
Emergency / Rescue Shelters	660
Govt Tanker water suppliers	2
Pvt Tanker water suppliers	8
Govt Doctors	32
Nurses	162
Earth Movers ( Private)	155
Dumpers ( Private)	57
Gas Cutters ( Private)	38

(Annexure A to G, J, K,M)

#### Capacity against industrial and chemical disaster

Particular		Unit (no.)
Special Response Teams (SRTs) readily available for Industries		Yes
Trained personnel at District level		9
Fire Fighters (Private) & (Govt)		52
Lab Technician		13
Govt doctors		32
Para medical staff		200
Antidotes	1. Yes details covered in Annexure	
	2.	
	3.	

(Annexure R, J11, M, T)



## Chapter 3 Institutionalisation and Multihazard Response Measures





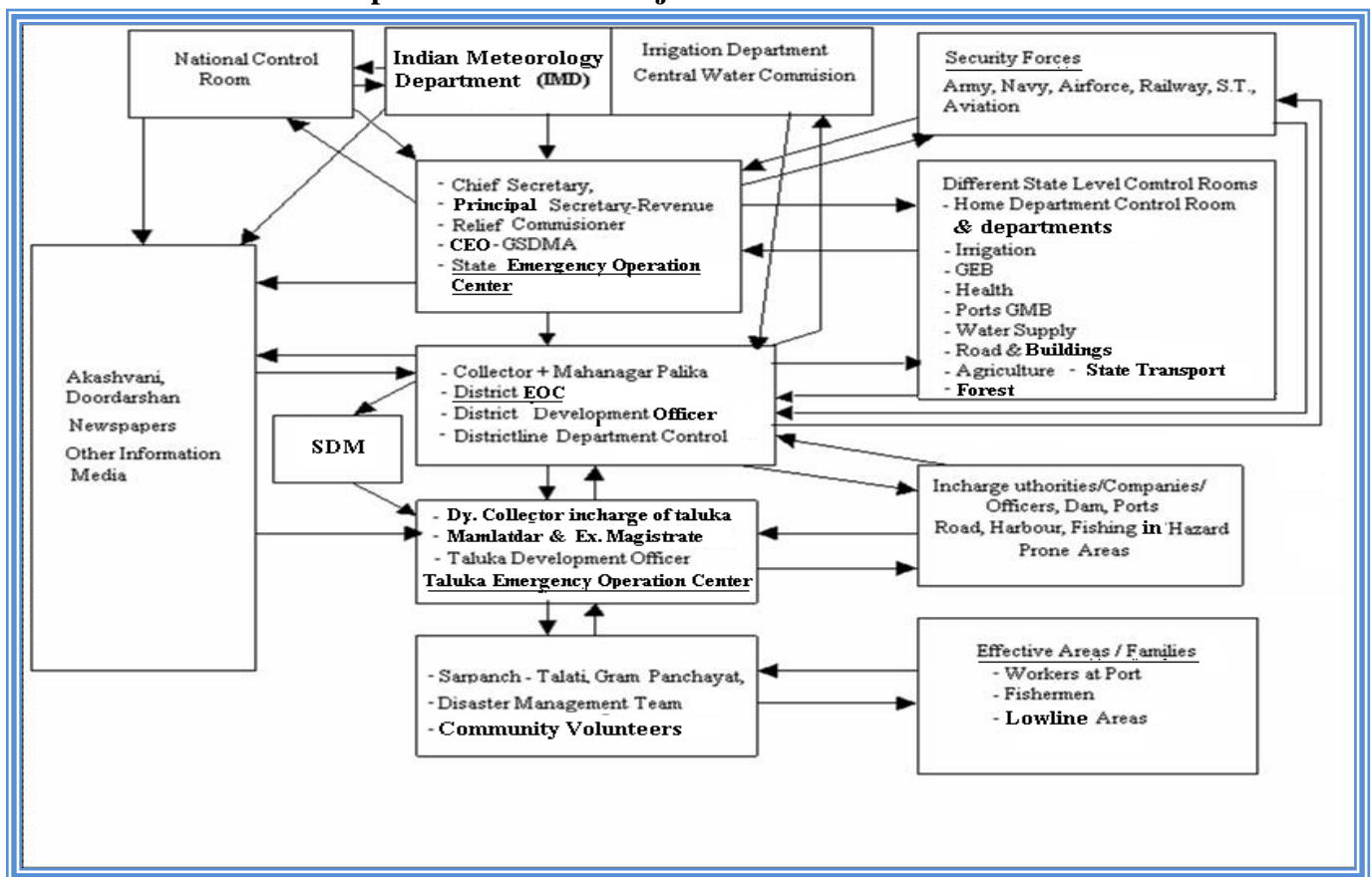
## Chapter 3

### Institutionalisation and Multihazard Response Measures

At the district level, the District Magistrate will be the focal point for coordinating all activities relating to prevention, mitigation and preparedness apart from his existing responsibilities pertaining to response and relief. The District Coordination and Relief Committee is being reconstituted/re-designated into Disaster Management Committees with officers from relevant departments being added as members. Because of its enhanced mandate of mitigation and prevention, the district heads and departments engaged in development will now be added to the Committee so that mitigation and prevention is mainstreamed into the district plan. The existing system of drawing up preparedness and response plans will continue. There will, however, also be a long term mitigation plan. District Disaster Management Committees have already been constituted in Bharuch districts.

The model bye-laws, DM Policy, Act and model health sector plan have also been included. Education and Training includes material for capacity building and upgradation of skills of policy makers, administrators, trainers, engineers etc. in planning for and mitigating against natural disasters. Basic and detailed training modules in disaster preparedness have been incorporated along with training methodologies for trainers, for community preparedness and manuals for training at district, block, panchayat and village levels. For creating a disaster-resistant building environment, the Construction Toolkit addresses the issue of seismic resistant construction and retrofitting of existing buildings. BIS Codes, manuals and guidelines for RCC, Masonry and other construction methodologies as also for repair and retrofitting of masonry and low-rise buildings have been included.

### 3.1 State Disaster Response Structure - Gujarat

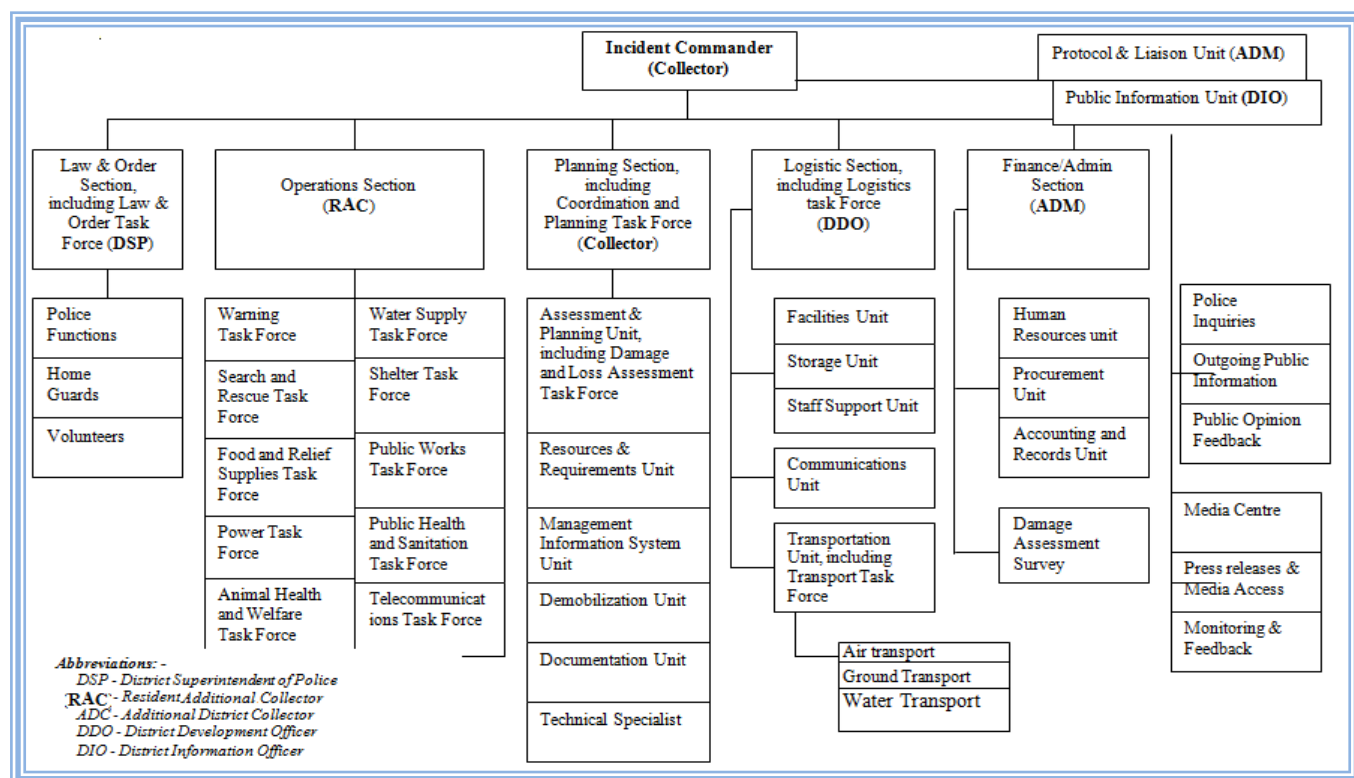


## Chapter 3

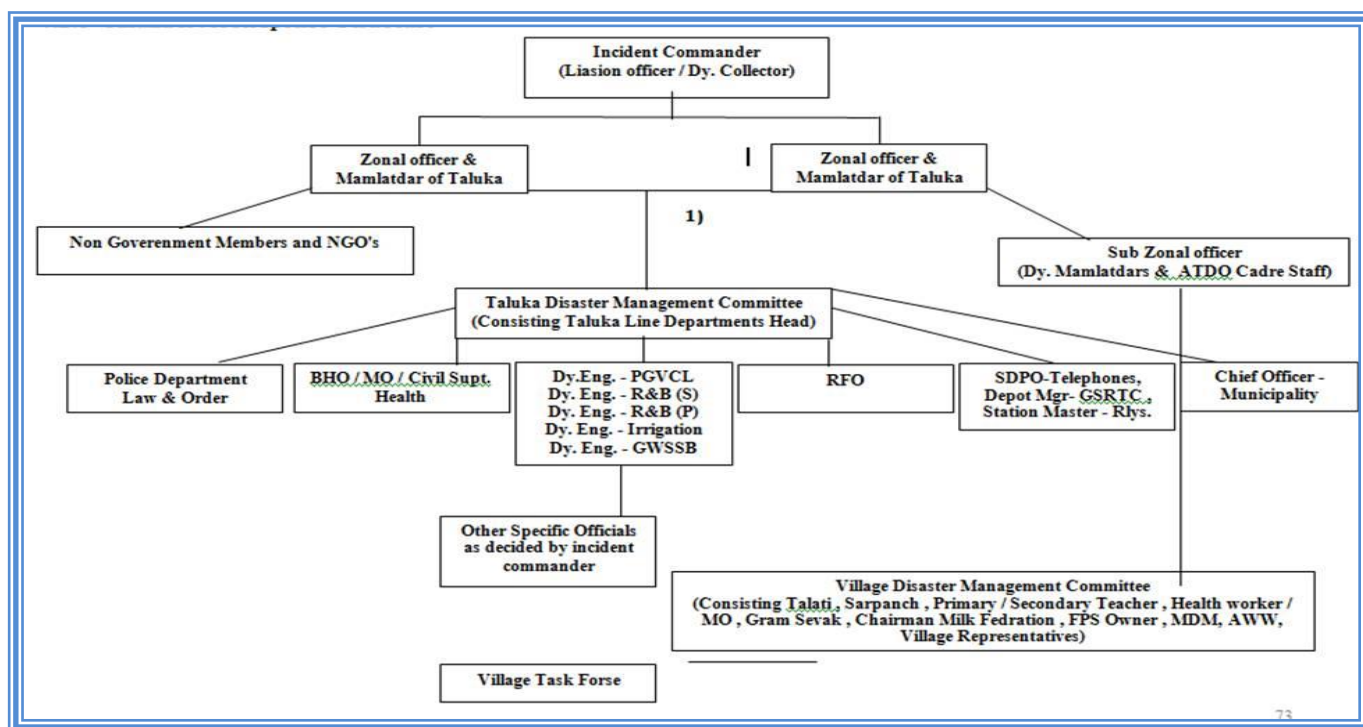
### Institutionalisation and Multihazard Response Measures

For effective response the Incident Command System (ICS), need to be put into place with clear responsibility. The commander for each task force need to be trained on the specific tasks. Incident Commander (IC) at block level instructs head of task forces to carryout emergency functions according to SOPs. Head of each task force reports to IC on progress (and any obstacles faced) until he/she is further instructed by IC.

#### 3.2 District Level Structure



#### 3.3 Taluka Level Structure



### **3.4 SEOC-DEOC-TEOC and Other Control Rooms.**

#### **Emergency Operation Centers/Control Rooms**

- **District Emergency Operation Center(DEOC)**

- The District Emergency Operation Center (DEOC) is located at District Collector's Office. 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 coordination for decision-making process.

- **Facilities at District Control Room**

The District Control Room shall be equipped with but not limited to the following items:

- Hotline directly connected to State EOC/Control room
  - Telephones
  - Satellite Telephone
  - Satellite Iridium
  - One PC with e-mail, Internet and web site facilities
  - Marker board - 2 Nos. with adequate markers
  - Conference table with Chairs
  - A copy of Disaster Management Plan
  - Other relevant documents, if any
  - Wireless set
  - Walki Talki
- **Task Force Control Room (TFCR)**  
Individual Task Force function shall activate & operate their respective control rooms in their office managed 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.
- **Taluka Level Control Room (TLCR)**  
The Taluka Level Control Room shall be 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 TFCR for mobilization of resources and dissemination of instructions received from TFCR/DEOC.
  - **Facilities at Taluka Level Control Rooms (TLCR)**  
The following facilities are maintained inside TFCR:
    - Telephones
    - 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	:	District Collector or any person nominated
TFCR	:	Respective Task Force Leader
TLCR	:	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.

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.

#### 3.5 Early Warning System (EWS) and Post Disaster Advisories

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.

#### 3.6 Information Dissemination

The dissemination of information is the most critical function in order to give early warning to the community. It has to be fast in order to give reasonable amount of time for communities to prepare for any eventuality. Due consideration has to be given to the points mentioned below before sending across the information.

- Information dissemination will be done to all the important stakeholders (as given below in the information dissemination format) at the Panchayat level in rural areas and Nagarpalika level in urban areas for early warning communication.
- Making use of the fastest means to communicate the message in the most lucid manner so as to prevent spread of rumor and panic among the masses.

*Bulk Voice SMS Service is the best means of communication to large masses without any effort and within no time. A voice recorded message from the District Magistrate from official number shall be sent to the database of numbers identified for information dissemination with the help of Mobile service providers & Telephone department.*

#### 3.7 Early Warning Action Plan

The availability of early warning system is a must before early warning message could be disseminate to the people till the last mile. Thus for every type of disaster

## Chapter 3

### Institutionalisation and Multihazard Response Measures

there is an agency designated with the responsibility of keeping track of developments in respect of specific hazards and inform the designated authorities/agencies at the district

level about the impending disaster. Nodal agencies for early warning of different natural hazards are:

Type of Action	Flood	Cyclone	Chemical and industrial accidents	Tsunami
Existing EWS	Irrigation department /dam authority/ IMD ↓ Collector ↓ Mamlatdar/TDO ↓ Villages	IMD ↓ Collector ↓ Mamlatdar/TDO ↓ Villages	Industrial Association/industries ↓ DCG ↓ LCG ↓ Mamlatdar	IMD ↓ Collector ↓ Mamlatdar/TDO ↓ Villages
Responsible Agency for warning dissemination	Mamlatdar office/TDO	Mamlatdar office/TDO	Mamlatdar office/TDO	Mamlatdar office/TDO
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/habitation not covered or difficult to access	Communities in remote locations ( fisher folk, salt pan workers, maldharis etc)			
Measures required to improve timeliness and outreach (For example, voice enabled SMS)	Contact of communities in remote locations (fisherfolk, 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	Revenue & Panchyat offices					
Villages covered	All risk prone villages					
Villages/habitation 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)					

### **3.8VIP involvement and protocol**

It is important to immediately inform VIPs and VVIPs on impending disasters and current situation during and after disasters. Appeals by VIPs can help in controlling rumours 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 & taluka liaison officer will liaise with the government press officer to keep their number to minimum.

### **3.9Media 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.

Bharuch Collectorate office has established an effective system of collaborating with the media 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 Taluka Control room (i.e. Mamlatdar office)



### **3.10 Role of Emergency Organization**

The District Collector shall be the Overall Incident Command Officer of emergency operations as the District Bharuch Emergency Authority and S/he shall provide suitable instruction to the District Crisis Group.

- The Collector shall seek help from Chief Secretary, Chairman, State Crisis Group, Gujarat State depending upon the state of emergency. For this he shall be in touch with State Control Room, Gandhinagar or Chief Secretary, Gujarat State for progress of emergency.

<b>Roles and Responsibilities of Different Key Departments</b>	<b>Before Emergency</b>	<b>During Emergency</b>	<b>After Emergency</b>
<b>Collector &amp; DM</b>	<ul style="list-style-type: none"> <li>• Training and Rehearsals</li> <li>• Develop disaster management plans at all levels down to the village level. (DDMC)</li> <li>• Hold regular meetings on disaster management including government, NGOs and private sectors. (DDMC)</li> <li>• Check warning, communications and other systems (DDMC), is including the use of drills.</li> <li>• Mobilize task forces at all levels (District, Taluka, village depending on disaster) (DDMC, Telecommunications, Media Task Forces).</li> <li>• Assign/guide district departments for preparedness task as &amp; when required.</li> </ul>	<ul style="list-style-type: none"> <li>• Shall provide suitable instruction to the District Crisis Group, Local Crisis Group of Bharuch, Vagra, Ankleshwar and Jhagadia Panoli, Control Room.</li> <li>• Provide reinforcement and support for emergency response from the district resources, Such as technical expert opinion combating fire fighting.</li> <li>• Evacuation of people, rescue operation to save the life of people incase of disaster.</li> <li>• Effective working of communication system, traffic control, evacuated property security, maintain law and order and cordon of area, environment monitoring, disease control, demolition and reconstruction of structure, transport facility for evacuation,</li> <li>• Provide relief &amp; shelter after/ during emergency, damage assessment &amp; funeral process.</li> <li>• Shall asked help from Chief Secretary, Chairman, State Crisis Group, Gujarat State depending upon the status of emergency.</li> <li>• Shall Instruct Superintendent of railway to stop train in case of any emergency.</li> <li>• Establish regular liaison with State Control Room.</li> <li>• Assign/guide district departments for relief &amp; rescue work as &amp; when required.</li> </ul>	<ul style="list-style-type: none"> <li>• Start Rehabilitation activities. (DDMC)</li> <li>• Conduct detailed survey of damage and needs. (DDMC and Damage Assessment Task Force)</li> <li>• Restore all public and private sector services. (DDMC)</li> <li>• Final Report/Case Study (DDMC)</li> <li>• Lessons Learned meeting. (DDMC and others)</li> <li>• Assign/guide district departments for relief &amp; rehabilitation work as &amp; when required.</li> </ul>

Roles and Responsibilities of Different Key Departments	Before Emergency	During Emergency	After Emergency
<b>Resident Additional Collector(RAC)</b>	<ul style="list-style-type: none"> <li>• Training and Rehearsals</li> <li>• Develop disaster management plans at all levels down to the village level. (DDMC)</li> <li>• Hold regular meetings on disaster management including government, NGOs and private sectors. (DDMC)</li> <li>• Check warning, communications and other systems (DDMC), including the use of drills.</li> <li>• Mobilize task forces at all levels (District, Taluka, village depending on disaster) (DDMC, Telecommunications, Media Task Forces).</li> <li>• Assign/guide district departments for preparedness task as &amp; when required.</li> </ul>	<ul style="list-style-type: none"> <li>• Shall provide suitable instruction to the District Crisis Group, Local Crisis Group of Bharuch, Vagra, Ankleshwar and Jhagadia Panoli, Control Room.</li> <li>• Provide reinforcement and support for emergency response from the district resources, Such as technical expert opinion combating fire fighting.</li> <li>• Evacuation of people, rescue operation to save the life of people incase of disaster.</li> <li>• Effective working of communication system, traffic control, evacuated property security, maintain law and order and cordon of area, environment monitoring, disease control, demolition and reconstruction of structure, transport facility for evacuation,</li> <li>• Provide relief &amp; shelter after/ during emergency, damage assessment &amp; funeral process.</li> <li>• Shall asked Superintendent of railway to stop train in case of any emergency.</li> <li>• Establish regular liaison with State Control Room.</li> <li>• Assign/guide district departments for relief &amp; rescue work as &amp; when required.</li> <li>• He will perform general roll during emergency as stated in District.</li> </ul>	<ul style="list-style-type: none"> <li>• Start Rehabilitation activities. (DDMC)</li> <li>• Conduct detailed survey of damage and needs. (DDMC and Damage Assessment Task Force)</li> <li>• Restore all public and private sector services. (DDMC)</li> <li>• Final Report/Case Study (DDMC)</li> <li>• Lessons Learned meeting. (DDMC and others) and reporting to State office.</li> <li>• Assign/guide district departments for relief &amp; rehabilitation work as &amp; when required.</li> <li>• Effective working of communication system, traffic control, evacuated property security, maintain law and order and cordon of area, environment monitoring, disease control, demolition and reconstruction of structure, transport facility for evacuation</li> </ul>



Roles and Responsibilities of Different Key Departments	Before Emergency	During Emergency	After Emergency
<b>Superintendent of Police</b>	<ul style="list-style-type: none"> <li>S/He will keep their wireless set, public address system in working condition to warn public about disaster.</li> <li>As per instruction of district collector or message of possible emergency received from other source to or feel him/her self for possible emergency, He/she will do operation such as Evacuation public warning, traffic control, cordon of area etc. required in possible affected areas of the district.</li> <li>Prepare departmental Disaster Management Plan and submit copy to collector.</li> </ul>	<ul style="list-style-type: none"> <li>S/He will perform general roll during emergency as stated in District.</li> <li>S/He will keep their wireless set, public address system in working condition to inform public.</li> <li>As per instruction of district collector or message received from other source, He will do operation of Evacuation &amp; Rescue, Public warning, Communication Control, Traffic Control, Security law &amp; order, cordon of area, Funeral etc. required in affected area of the district.</li> </ul>	<ul style="list-style-type: none"> <li>S/He will arrange funeral process of human body.</li> <li>S/He will provide security to protect properties in effected area.</li> <li>S/He will perform general roll after emergency as stated in District</li> <li>S/He will assess the human death.</li> <li>S/He will lodging of FIR &amp; doing of the panchanama if required in the affected area.</li> </ul>
<b>District Development Officer</b>	<ul style="list-style-type: none"> <li>Before disaster/emergency, he/she will prepare plan of district for Relief and shelter work &amp; damage assessment</li> <li>With the help of village level worker; he will circulate intimation of the emergency.</li> <li>He/she will keep the panchayat staff ready for possible relief and damage assessment.</li> <li>Prepare departmental Disaster Management Plan and submit copy to the collector.</li> </ul>	<ul style="list-style-type: none"> <li>As per instruction of a District collector or message, DDO will do operation of relief and shelter with their staff, group members &amp; their staff and NGOs with their equipment and facilities.</li> <li>He/she will look after the duty performs by their staff member's i.e TDMC, VDMC as per disaster management plan.</li> <li>He/she will arrange for relief and shelter camps in the rural areas.</li> <li>He/she ensure ground staff at headquarter during disaster.</li> </ul>	<ul style="list-style-type: none"> <li>Starts Rehabilitation operation with staff, group members &amp; NGOs as required with their equipment as facilities under guidance of Collector.</li> <li>He/she will provide cash dolls, shanty house/ building relief, house grocery relief, death relief, food, water, clothes, utensils etc.</li> <li>He/she will assess the damage occurred due to disaster / emergency with staff &amp; Group members.</li> </ul>
<b>SDM &amp; Deputy Collector</b>	<ul style="list-style-type: none"> <li>Liaison Officer will conduct meeting of Taluka flood relief co-ordination committee and will do proper planning for mitigation of effect incase of flood, cyclone, and heavy rain fall.</li> <li>District supply officer will keep at least three month of stock of essential commodity such as grain, sugar, kerosene, petrol, diesel etc.in interior area likely to be effected.</li> <li>Monitor Preparatory work at Taluka level</li> </ul>	<ul style="list-style-type: none"> <li>He will assist the Collector in the relief and rescue operation along with his staff.</li> <li>Take necessary step as per DDMP plan of the district collector</li> <li>District supply officer supply will look after constant watch for providing essential commodity such as grain, sugar, kerosene, petrol, diesel etc. in case of disaster /emergency.</li> </ul>	<ul style="list-style-type: none"> <li>District supply officer will arrange for distribution of essential commodity to the affected areas through Gujarat State civil supply corporation &amp; NGO's.</li> <li>Final Report/Case Study (DDMC)</li> <li>Lessons Learned meeting. (DDMC and others)</li> </ul>

Roles and Responsibilities of Different Key Departments	Before Emergency	During Emergency	After Emergency
<b>Mamlatdar</b>	<ul style="list-style-type: none"> <li>• In case of flood, cyclone, war, earth-quack, Industrial, transport, water &amp; air pollution, pipeline etc. disaster / emergency and for mitigation of effect, he will prepare plan for incident control group of DCG &amp; LCG.</li> <li>• S/He will perform general roll before emergency as stated in district off site emergency plan.</li> <li>• S/He as vice chairman of incident control group of DCG &amp; Chairman of incident control group of LCG will look out overall all the function at incident place through their members and team.</li> <li>• S/He will keep office open with staff as control room in case of disaster / emergency i.e. flood, cyclone etc. will provide to and for information to disaster control room / district authority.</li> </ul>	<ul style="list-style-type: none"> <li>• As per instruction of District Collector or SDM or message received from other source of flood, cyclone, war, earth-quack, industrial, transport, water and Air pollution, pipeline etc. disaster / emergency s/he will send respective member of to combat and to mitigate effect at incident place. He will proceed towards incident place and will look out overall function i.e. <ul style="list-style-type: none"> <li>○ Evacuation and rescue operation</li> <li>○ Fire / Toxic control and toxic monitoring</li> <li>○ Public warning and communication</li> <li>○ Traffic control, security, law &amp; order, cordon of area</li> <li>○ Medical treatment at first aid center, causality center</li> <li>○ Disease control</li> <li>○ Demolition, Reconstruction and rehabilitation</li> <li>○ Transport</li> <li>○ Public relation and mass media communication</li> <li>○ Relief and shelter</li> </ul> </li> <li>• S/he will perform general roll during emergency as stated in IC group of district off site emergency plan and chairman of IC team of LCG plan.</li> <li>• S/He will inform progress report of emergency to SDM of district authority from incident place.</li> </ul>	<ul style="list-style-type: none"> <li>• S/He will look out overall the function of incident place <ul style="list-style-type: none"> <li>○ Rescue</li> <li>○ Health &amp; Medical treatment of victims</li> <li>○ Traffic security law and order</li> <li>○ Toxic and disease control</li> <li>○ Rehabilitation</li> <li>○ Relief and Shelter</li> </ul> </li> <li>• S/He will perform general roll after emergency as stated in IC group of district off site emergency plan and chairman of IC team of LCG plan.</li> <li>• S/He will provide cash dolls, shanty house, building relief, house grocery relief, and death relief.</li> <li>• S/He will asses the damage occurred in city area due to disaster emergency</li> </ul>

Roles and Responsibilities of Different Key Departments	Before Emergency	During Emergency	After Emergency
<b>Taluka Development Officer – TDO</b>	<ul style="list-style-type: none"> <li>• With the village level team warning disseminate to the community</li> <li>• Keep staff ready for relief and damage assessment.</li> <li>• To update VDMP &amp; TDMP in coordination of Mamlatdar and other line department.</li> <li>• To coordinate &amp; collect information of resources &amp; equipments from line departments, stakeholders &amp; village.</li> </ul>	<ul style="list-style-type: none"> <li>• Taluka Development Officer will provide their staff e.g. VDMC team for public information and evacuation operation to DSP/SDM in case of flood, cyclone, heavy rainfall or other disaster/emergency.</li> <li>• To coordinate &amp; support with stakeholders for resources &amp; equipments to avail for relief &amp; rescue teams.</li> </ul>	<ul style="list-style-type: none"> <li>• He will arrange for relief and safe shelter camps in the rural areas based on VDMP</li> <li>• He/she will provide cash dolls, shanty house/ building relief, house grocery relief, death relief, food, water, clothes, utensils etc.</li> <li>• He/she will assess the damage occurred due to disaster/emergency with staff &amp; Group members.</li> </ul>
<b>District officer municipal &amp; CO nagarpalika</b>	<ul style="list-style-type: none"> <li>• Nagarpalika operated hospitals keep ready state with Operation Theatre, equipments and medical facilities in working condition Nagarpalika shall keep approach road of water sources, pumps in working condition, water leakage will be prevented through pipe, pipe joints and valve. Water storage tank will keep clean and will keep water without unwanted impurities</li> <li>• Nagarpalika shall maintain good fire fighting facility and rescue equipments.</li> <li>• Nagarpalika will provide bus, mini bus, trucks, and trigger, earth moving machinery for evacuation and rescue operation and transferring people from nagarpalika area.</li> <li>• Nagarpalika will keep their mobile public address system in working condition to give information to public.</li> <li>• Nagarpalika will keep drainage system in working condition.</li> <li>• Prepare City Disaster Management Plan and submit copy to the collector.</li> </ul>	<ul style="list-style-type: none"> <li>• Nagarpalika shall do rescue operation with well equipped equipment and trained staff.</li> <li>• Nagarpalika shall provide good medical treatment to victims in case of emergency in their hospital.</li> <li>• Nagarpalika shall provide fire tender for firefighting operating.</li> </ul>	<ul style="list-style-type: none"> <li>• Nagarpalika will restore drainage system in affected area.</li> <li>• Nagarpalika will restore pure drinking water in affected area.</li> <li>• Whenever possible, he will arrange for transportation of dead body through special vehicles.</li> <li>• Immediate start Sanitation work and give update work progress report to collector.</li> <li>• Coordinate with mamlatdar and lision officer of the taluka.</li> </ul>

Roles and Responsibilities of Different Key Departments	Before Emergency	During Emergency	After Emergency
<b>Dy. Director Industrial Safety &amp; Health(DISH)</b>	<ul style="list-style-type: none"> <li>Deputy Director Safety &amp; Health will conduct meeting of District Crisis Group / Local Crisis Group and will do proper planning for mitigation of effect in case of chemical accident.</li> <li>He will prepare offsite emergency plan under guidance of collector.</li> <li>He will ensure disaster preparedness in factories and safety aspect in industries during inspection and regular visit.</li> <li>Prepare updated Chemical database from Industries to face any chemical disaster and submit to the collector.</li> </ul>	<ul style="list-style-type: none"> <li>S/He shall reach to the site and will assist &amp; guide for incidence control in case of chemical/ industrial disaster.</li> <li>will ensure the closer of supply lines of harmful chemical immediate in the affected area incase of fire or chemical disaster</li> </ul>	<ul style="list-style-type: none"> <li>S/He will investigate regarding accident of fire, toxic release etc.</li> <li>Submit incident/situation report to collector.</li> <li>Incase of Natural disaster, submit safety assurance report of industrial area to the collector</li> </ul>
<b>Regional Transport Officer ARTO</b>	<ul style="list-style-type: none"> <li>He will keep up to date list of available vehicles i.e. buses, minibus, trucks, earth moving machineries, cranes etc.</li> <li>Prepare departmental disaster management plan and submit copy to the collector.</li> </ul>	<ul style="list-style-type: none"> <li>He will arrange to provide available vehicles i.e. buses, minibus, trucks, earthmoving machineries, cranes etc. to respective authority if needed in case of emergency</li> <li>He will perform duties during emergency as directed by collector.</li> </ul>	<ul style="list-style-type: none"> <li>Arrange and provide Vehicles for relief &amp; rehabilitation work under guidance of collector.</li> </ul>
<b>CDHO And Civil Surgon</b>	<ul style="list-style-type: none"> <li>In case of disaster/ emergency he/she will prepare plan for health &amp; medical treatment and toxicity &amp; disease control monitoring and submit to the collector.</li> <li>He will keep adequate quantity of medicines and maintain Operation Theater, equipments, medical facilities in working condition</li> <li>He will keep list of hospitals, available doctors &amp; paramedical staff, available medical faculties, list of medical stores, list of medical stockiest in the district.</li> </ul>	<ul style="list-style-type: none"> <li>As per instruction of District collector or message received from other sources disaster / emergency he will do operation of Health &amp; Medical treatment &amp; Toxicity &amp; Disease control / monitoring etc. required in affected areas of the district with their staff group members &amp; their staff as requires with available equipment &amp; facilities.</li> <li>He will perform health &amp; medical control as well as toxicity &amp; disease controlling &amp; monitoring.</li> <li>He will arrange providing vaccine, antidotes</li> </ul>	<ul style="list-style-type: none"> <li>He will provide lime, bleaching powder, vaccine to avoid spreading diseases.</li> <li>Will send medical team to the affected areas for treating the victims of the emergency.</li> <li>Will take all possible steps to prevent the spread of disease, toxicity and epidemic.</li> <li>Will arrange to educate the affected population about the health related aspects.</li> </ul>

	<ul style="list-style-type: none"> <li>• He will keep list of all chemical antidotes and about their quick availability in small &amp; large quantities of them in district, country or abroad.</li> <li>• Will keep medical team ready along with the required drugs i.e. chlorine tablets, ORS powder etc. for possible affected areas.</li> <li>• He will maintain Ambulance in working condition with updated location list.</li> <li>• Prepare trained medical team for chemical disaster.</li> </ul>	<ul style="list-style-type: none"> <li>• &amp;medical treatment to victims.</li> <li>• He will ask more help from state, central Govt. through district authority in disaster/emergency.</li> <li>• Will take all possible steps to prevent the spread of disease, toxicity and epidemic.</li> </ul>	
<b>Executive Engineer R &amp; B Panchayat &amp; State</b>	<ul style="list-style-type: none"> <li>• He will prepare plan for operations like Demolition, Reconstruction &amp; Rehabilitation and also arrange the rehearsal of plan for such activities.</li> <li>• He will keep the list of available vehicle in the district as well as outside district i.e. trucks, triggers, crane, dumper, bulldozer, truck, JCB etc as required in case of disaster/ emergency and also ensure that it's in working condition</li> <li>• He will keep the list of available movable diesel generator set in the district as well as outside district.</li> <li>• Based on past Experience prepare list of cut off roads and alternate route.</li> </ul>	<ul style="list-style-type: none"> <li>• As per instruction of district collector or message received from other source for disaster/ emergency he will do operation of Demolition, Reconstruction and Rehabilitation required in affected area, with their equipments and facilities.</li> <li>• He will arrange to provide vehicle for demolition &amp; reconstruction.</li> <li>• He will perform general roll during emergency as stated in district emergency plan</li> <li>• If required more help, he will ask from state &amp; central Govt. through district Authority</li> </ul>	<ul style="list-style-type: none"> <li>• He will assess the damage to govt. property and will submit the report to district authority. He will immediately restore damage road for traffic movement.</li> <li>• He will restore government building for use i.e. hospitals, .</li> <li>• He will work in coordination of line departments for restoring power, drinking water, telephone and communication system, and essential services.</li> </ul>
<b>Executive Engineer GWSSB</b>	<ul style="list-style-type: none"> <li>• Will keep water resources, pumps in good working condition, water leakage will be prevented through pipes, pipe joints and valve. Water storage tank will keep clean and will keep water without unwanted impurities.</li> <li>• Prepare departmental disaster management plan and submit copy to the collector.</li> </ul>	<ul style="list-style-type: none"> <li>• Will keep drainage system in working condition.</li> <li>• Will provide pure drinking water.</li> <li>• Will provide dewatering pump in case of flood emergency.</li> <li>• Coordinate distribution of water and storage and provision of information on safe water use.</li> </ul>	<ul style="list-style-type: none"> <li>• Assess status and damage to water systems.</li> <li>• will restore pure drinking water system in affected areas</li> <li>• Will conduct lessons learned meeting and submit report to the collector.</li> <li>• Prepare &amp; implement long term mitigation project in Bharuch district.</li> </ul>

<b>Roles and Responsibilities of Different Key Departments</b>	<b>Before Emergency</b>	<b>During Emergency</b>	<b>After Emergency</b>
<b>Executive Engineer Electricity Department</b>	<ul style="list-style-type: none"> <li>• All safety arrangements should check.</li> <li>• He will keep surplus stock of equipments and arrangement for testing equipments urgently in case of emergency.</li> <li>• Similarly he will continue system of stopping electricity in flooded area and electricity while area becomes non-flooded.</li> <li>• Prepare departmental disaster management plan and submit copy to the collector.</li> </ul>	<ul style="list-style-type: none"> <li>• Will arrange to provided generator as and when require by District Collector.</li> <li>• Will keep electricity flow continuous and if required, stop electricity for safety purpose.</li> </ul>	<ul style="list-style-type: none"> <li>• Restore power supply in affected area.</li> <li>• Assess damage of Electricity property in case of disaster / emergency.</li> <li>• Coordination with govt. &amp; private Electricity companies for rehabilitation work and report to the collector.</li> </ul>
<b>Executive Engineer Irrigation</b>	<ul style="list-style-type: none"> <li>• Prepare departmental disaster management plan and submit copy to the collector.</li> <li>• Department will keep their wireless set always in working condition to inform govt. department/public in case of emergency.</li> <li>• Irrigation Department will maintain and monitor check dam level at safe limit and give updated details to district disaster control room, Collector &amp; concern officers.</li> </ul>	<ul style="list-style-type: none"> <li>• Constant monitor Progress of dams/check dam level and inform to district collector control room.</li> <li>• Constant monitor water flow of river and upper catchment areas rain and update information for further course of action during disaster.</li> </ul>	<ul style="list-style-type: none"> <li>• Assess the damage of check dams prepare plan for restoration and submit to the collector.</li> <li>• Will conduct lessons learned meeting and submit report to the collector.</li> <li>• Will do detail study if river change its traditional flow route, prepare study report and submit to the collector and state authority.</li> </ul>



<b>Roles and Responsibilities of Different Key Departments</b>	<b>Task to be performed before/during /after disaster or emergencies</b>
<b>GPCB(Gujarat Pollution Control Board)</b>	GPCB will ensure environment monitoring equipment in working condition and also perform the decontamination activity in affected area. GPCB will also solve the emergency due to water pollution.
<b>District Supply Officer</b>	District supply officer will keep at least three month of stock of essential commodity such as grain, sugar, kerosene, petrol; diesel etc. in interior area likely to be effected and during emergency will look after constant stock and proper distribution through NGOs.
<b>District Agriculture Officer</b>	District Agriculture Officer will continuously monitoring food crop & other plant regarding poisoning effect. He will also destroy food crop & other plant incase of poisoning effect. He will assess the damage of agriculture crop & land.
<b>Fisheries Officer</b>	Asst. Fisheries Officer will inform to fishermen / Public in case of probable cyclone emergency as well as keep the updated list of swimmers and availability of boat and provide during emergencies.
<b>Animal Husbandry Officer</b>	The Animal Husbandry Officer will keep adequate quantity of vaccine / medicine in case of decease occurs due to dead animal. The dead animal will be disposed in a scientific way also treat the injured animals.
<b>Divisional controller GSRTC</b>	He will inform public through his control, also he will arrange buses if required for evacuation incase of disaster/emergency. He will prepare alternate route for cut off roads and submit to the collector.
<b>Superintendent of railway</b>	Superintendent of Railways will stop railway as per instruction pass by District Collector or SDM in case any emergency & will provide railway train – goods train for public transfer and emergency work distribution.
<b>Port officer</b>	The Port Officer will inform to fisherman / Public in case of disasters / emergency of cyclone. He will inform and do evacuation of Port workers in case of cyclone or other emergency. He will ensure the safety of ships and ports.
<b>Civil defence</b>	Civil Defence Inspector will conduct meeting and will do proper planning for mitigation of effect in case of war. He will also train the large amount of people to mitigate the effect of war. He will provide staff and trained person for rescue operation.
<b>Home Guard Commandant</b>	The District Home Commander will assist D.S.P. for Public Information and evacuation through their Home guards in case of emergency. He shall make available the required number of home guard as and when inform by the Collector /Superintendent of Police as well as keep the updated list of swimmers for rescue work

ESF No.	ESF Name	Function Lead and Department	Support Departments/Agencies	Functions during Emergency
ESF 01	Communication	EOC / Dept. of Science and Technology	<ul style="list-style-type: none"> <li>• BSNL and other service providers</li> <li>• All India Radio/Television</li> <li>• Satellite</li> <li>• Mobile</li> <li>• Ham Radio</li> <li>• Police Wireless (POLNET)</li> </ul>	<ul style="list-style-type: none"> <li>• To restore communication facilities after disaster.</li> <li>• To provide emergency communication linking for EOCs.</li> <li>• To ensure early warning communication to identified stakeholders at community level.</li> <li>• To ensure communication facilities to support state and district actions</li> <li>• To coordinate the temporary communication requirements</li> </ul>
ESF 02	Search and Rescue	S.P., Police	<ul style="list-style-type: none"> <li>• Fire Officer, Fire Services</li> <li>• Home Guard</li> <li>• Gram Raksha Dal</li> <li>• NSS / NCC / NYKS</li> <li>• SEOC</li> <li>• Paramilitary Forces – CRPF and SRP</li> <li>• NDRF</li> <li>• Air Force / Army</li> </ul>	<ul style="list-style-type: none"> <li>• To check the evacuation tools and equipment</li> <li>• To work out evacuation Plan</li> <li>• To establish linkages and coordination with camp office</li> <li>• To carry drinking water and packed food, emergency medicine etc. for the victims.</li> <li>• To priorities evacuation of children, women, old, disabled etc.</li> <li>• To avoid overloading</li> </ul>
ESF 03	Relief and Shelter	RAC/Additional Collector District Nodal Officer (Disaster Management)	<ul style="list-style-type: none"> <li>• Panchyat</li> <li>• Food and Civil Supply(DSO)</li> <li>• Home Guards</li> <li>• Education</li> <li>• ICDS</li> <li>• R &amp; B</li> <li>• Red Cross Society</li> <li>• Industries / CBOs</li> <li>• NCC/NSS/NYKS</li> </ul>	<ul style="list-style-type: none"> <li>• To carry cooked dry, fast food materials in properly packaged form for immediate distribution.</li> <li>• To organize the supply of drinking water</li> <li>• To setup Shelter camps, Kitchen camps, mobilize volunteers for cooking, serving, washing etc.</li> <li>• To organize Supply of food grains and vegetables</li> <li>• To line up teams of local youths to carry those rescued to relief and shelter camps.</li> <li>• To maintain record of names, villages, Panchyat and Talukas to which the victims belong</li> <li>• To setup latrine and bathrooms</li> <li>• To take special care of children, women, old and disabled, especially those separated from families.</li> <li>• To setup disaster relief centre to receive, collect, sort out and distribute relief materials</li> <li>• To organize proper supply chain to reach the same to victims.</li> </ul>
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ESF along with appointed officials from the primary and secondary agencies with Functions				
ESF No.	ESF Name	Function Lead and Department	Support Departments/Agencies	Functions during Emergency
ESF 04	Health and Sanitation	Civil Surgeon, Health Department	<ul style="list-style-type: none"> <li>Hospitals</li> <li>Nagarpalika/Municipal Corporation</li> <li>Red Cross Society</li> <li>Civil Defence</li> </ul>	<ul style="list-style-type: none"> <li>To check the equipments and stock of medicines</li> <li>To teams formation of medical personnel</li> <li>To organize first aid providing team in larger number</li> <li>Public health advice and warnings to participating agencies and the community</li> <li>To organize mobile medical van to attend to emergency needs</li> <li>To carry medical camp setting facilities</li> <li>To keep an eye on the possibilities of outbreak of epidemics.</li> <li>To include locally available medical staff in health check up exercise.</li> <li>To keep record of patients treated.</li> </ul>
ESF 05	Livestock Shelter and Fodder	Dept. of Animal Husbandry	<ul style="list-style-type: none"> <li>Veterinary Hospitals</li> <li>Fodder Suppliers</li> <li>Panjarapol</li> </ul>	<ul style="list-style-type: none"> <li>To setup feeding camp for animals at some distance from shelter for human beings.</li> <li>To vaccinate the animal if not vaccinated earlier.</li> <li>To organize disposal of garbage.</li> <li>To mobilize veterinary team locally.</li> </ul>
ESF 06	Drinking Water and Supplies	GWSSB, Water Supply	<ul style="list-style-type: none"> <li>Minor Water Resources</li> <li>DRDA</li> <li>Electricity Department</li> <li>Corporate Support</li> <li>NGOs</li> </ul>	<ul style="list-style-type: none"> <li>To identify the sources to provide drinking water and restore supply.</li> <li>Restoration of well.</li> <li>To install hand pumps.</li> <li>To provide Chlorine tablets.</li> <li>To distribute mineral water bottles of available in large stock.</li> </ul>

ESF along with appointed officials from the primary and secondary agencies with Functions				
ESF No.	ESF Name	Function Lead and Department	Support Departments/Agencies	Functions during Emergency
ESF 07	Power	Executive Engineer, MGVCCL/DGVCL	<ul style="list-style-type: none"> <li>Genset Suppliers</li> <li>Other Power generation providers</li> </ul>	<ul style="list-style-type: none"> <li>To carry repair and maintenance kits for generator sets and other devices.</li> <li>To check electricity supply line and restore supply.</li> <li>To organize alternative source to provide electricity.</li> <li>To carry replacement generator set where need be.</li> <li>To organize and ensure power supply to hospitals, shelter camps, kitchen, onsite EOCs and other important institutions.</li> </ul>
ESF 08	Transport	RTO	<ul style="list-style-type: none"> <li>ST(state transport)</li> <li>Private Transport Carriers</li> <li>Private Boat Owners</li> <li>Ambulance Service</li> <li>Railways</li> <li>Air Force</li> </ul>	<ul style="list-style-type: none"> <li>To know loading and unloading point nearest to the incident site.</li> <li>To coordinate the transport requirements of the emergency support forces.</li> <li>To arrange transportation of relief and rescue materials.</li> <li>To coordinate and provide transport facilities to all support agencies.</li> <li>To regulate the movement of traffic onsite</li> </ul>
ESF 09	Public Works	R & B , Nagarpalika	<ul style="list-style-type: none"> <li>Panchyat</li> <li>Health</li> <li>Education</li> <li>ICDS</li> <li>Police</li> <li>Water Supply</li> </ul>	<ul style="list-style-type: none"> <li>To restore the road connectivity.</li> <li>To construct temporary bridges where required</li> <li>To organize repairing of health centre, schools, important buildings</li> <li>To undertake supervision and surveillance of construction works</li> </ul>
ESF 10	Removal and Clearances	R & B , Nagarpalika	<ul style="list-style-type: none"> <li>Revenue</li> <li>Civil Surgeon, Health Department</li> <li>R &amp; B</li> <li>Home Guards</li> <li>Police</li> <li>Community</li> <li>NCC / NSS / NYKS</li> </ul>	<ul style="list-style-type: none"> <li>To organize voluntaries for removal of dead bodies both human and animal.</li> <li>To organize local force for clearing debris of building, bridges, road etc. for reconstruction</li> <li>To organize local for chopping and removing of fallen trees etc.</li> <li>To organize burning or burying of the dead bodies</li> </ul>

ESF along with appointed officials from the primary and secondary agencies with Functions				
ESF No.	ESF Name	Function Lead and Department	Support Departments/Agencies	Functions during Emergency
ESF 11	Information Dissemination and Helpline	Information Dept.	<ul style="list-style-type: none"> <li>• Revenue</li> <li>• Panchayat</li> <li>• Police</li> <li>• Media</li> <li>• Colleges and Universitie</li> <li>• NCC / NSS / NYKS</li> </ul>	<ul style="list-style-type: none"> <li>• To gather correct information from authorities onsite.</li> <li>• To keep the list of persons recued with full details.</li> <li>• To keep the list of persons missing.</li> <li>• To keep the no. of dead bodies and the locations they have been put.</li> <li>• To keep a track of which team is positioned with location.</li> <li>• To make use of the public address system to call any body</li> <li>• To schedule working in short duration Evacuation &amp; Shalter.</li> </ul>
ESF 12	Damage Assessment	DDO	<ul style="list-style-type: none"> <li>• Dept. of Agriculture</li> <li>• DRDA</li> <li>• Nagarpalika</li> <li>• Civil Surgeon, Health Dept.</li> <li>• Animal Husbandry</li> <li>• Water Supply</li> <li>• DGVCL</li> <li>• Line Departments for departmental loss</li> </ul>	<ul style="list-style-type: none"> <li>• To conduct damage assessment using the format during and immediately after the disaster.</li> <li>• Taluka and Panchayats affected, Affected Population Size, Human lives lost, Livestock lost, Resources damaged Infrastructure damaged Roads, Bridges Schools, Hospitals, Anganwadis, Panchayat Bhawan, Houses, Govt. Buildings,Electric Supply, Water Supply, Crops/ Agricultural Land</li> </ul>
ESF 13	Relief Material Management	RAC/Additional Collector ((District Nodal Officer) Disaster Management	<ul style="list-style-type: none"> <li>• District Warehouses</li> <li>• NCC / NSS / NYKS</li> <li>• NGOs / CBOs</li> <li>• Merchant Association</li> <li>• Industrial Association</li> <li>• Hotel Association</li> </ul>	<ul style="list-style-type: none"> <li>• To set up Relief Material management camp onsite to create three centres: Fund, Relief, Services.</li> <li>• To carry receipts Stamps etc. for cash / cheque / draft</li> <li>• To identify storage centre for receiving relief materials for storing, packing and proper distribution of the same.</li> <li>• To keep records of supplies sent, with whom and when.</li> <li>• To depute volunteers required, and take care of their basic needs as well reliever teams i.e. Food and Rest etc.</li> </ul>

ESF along with appointed officials from the primary and secondary agencies with Functions				
ESF No.	ESF Name	Function Lead and Department	Support Departments/Agencies	Functions during Emergency
ESF 14	Media	Information Dept.	<ul style="list-style-type: none"> <li>Disaster Management Dept.</li> </ul>	<ul style="list-style-type: none"> <li>Organize media briefing by senior officer in-charge.</li> <li>Provide graphic and statistical details to the extent possible.</li> <li>Organize visit to shelter, relief and various activity camps.</li> <li>Organize briefing on daily basis preferably in evening.</li> <li>Make the media men interact with other Emergency Functionaries if possible.</li> </ul>
ESF 15	Law and Order	Superintendent of Police, Police Dept.	<ul style="list-style-type: none"> <li>Revenue</li> <li>Home Guards Commandant</li> <li>Para-military (CRPF, SRP)</li> <li>Armed Forces</li> </ul>	<ul style="list-style-type: none"> <li>Posting of Police Home Guard, Civil Defence forces in strategic places.</li> <li>Preservation of peace and good order (Particularly in case of Riots/Accidents/Fire).</li> <li>Prevention of crime.</li> <li>Security of any site as a possible crime scene (Particularly in case of Riots/Accidents/Fire)</li> <li>Investigation of the criminal aspect of any event.</li> <li>Traffic control, including assistance with road closures and maintenance of road blocks.</li> <li>Crowd management/public safety.</li> <li>Coordination of search and rescue.</li> <li>Security of evacuated areas</li> </ul>

## Chapter 3

### Institutionalisation and Multihazard Response Measures

#### **3.2 Hazard Specific Action Plan...**

##### **3.2.1 Flood Hazard Action Plan:**

##### **Before Emergency / Disaster: Relaying Information to Public**

In case of flood and or heavy rainfall, following authorities will inform the District Collector or District Control Room.

Sr. No.	Description	Authorities
1.	Flood	Central Water Commission Bharuch / Surat
2.	Heavy rainfall & cyclone	Gujarat State Control Room, Gandhinagar and teorological Department, Ahmedabad.
3.	For rivers & check dams	Executive Engineer Irrigation Planning Dn.No 5 Rajpipla
4.	Bharuch Golden Bridge	Executive Engineer Tapi Division.
	Garudeshwar Bridge	--Above-- & C.W.C Surat (R.G)
	Dholi Dam,	Executive Engineer Irrigation Planning Dn.No 5 Rajpipla
	Beldeva Dam	Executive Engineer Irrigation Planning Dn.No 5 Rajpipla
	Pingut Dam	Executive Engineer Irrigation Planning Dn.No 5 Rajpipla
5.	Dhhadhhar river (Ajwa (w.s.))	Collector Vadodara and Vadodara Irrigation Control Room.

[\(Annexure – H\)](#)

B. As soon as information is received by the District Collector, Bharuch or District Control Room, the following authorities will be directed to inform the possible affected public through telephone, police wireless, irrigation department wireless, GEB wireless or forest department wireless:-

- Liaison Officer of Taluka (Chairman of Taluka& City flood relief co-ordination committee of flood contingency plan and member of incident control committee of District Disaster Management Plan.)
- Mamlatdar & TDO for Jhagadia, Bharuch, Ankleshwar and Hansot (For Narmada River), Jambusar, Amod and Vagra (For Dhhadhhar river and BhukhiKhadi),Hansot (For Kim river), Jhagadia and Valiataluka for Dholi, Beldeva and Pingut Dam.
- Bharuch, Ankleshvar, Amod and Jambusar Mamlatdar and Chief Officer
- DDO.
- DSP & Taluka PSI.
- District level Concerned Department.

C. After information received from the District Collector or Control Room, the Public will be informed by the Taluka Disaster Management Committee, City Disaster Management Committee, Mamlatdar office staff & Village Disaster Management Committee, where telephone / wireless facilities are available in villages. In particular,

- Taluka Mamlatdar & TDO will inform the public by telephone and also by sending a team through vehicle on pre-decided village routes.
- Nagarpalika will inform their respective area inhabitants by siren or PA system through mobile vehicle.

##### **During Emergency: Evacuation, Search and Rescue Operations**

## Chapter 3

### Institutionalisation and Multihazard Response Measures

The District Collector will be given direction to the Liaison Officers, Dy. Collector and all concerned departments for evacuation & rescue operations based on situation. This will be carried out by the Revenue department, Local police & District Panchayat department.

- In cases where the approach road is clear, people will be evacuated by local tractor/trolley, ST bus & other big vehicles. The people trapped in areas surrounded by water will be rescued by the Mamlatdar, local police & local swimmers through boats.
- Members of the Transport Committee will be directed to arrange a supply vehicle for evacuation & rescue operation.
- Members of the Fire Control Committee will be informed about combating fire, if the need arises.

**After Emergency:** Focus will lie on **Medical Treatment, Disease Control, Poison control, Reconstruction & Rehabilitation, Floodwater Removal, and Providing Relief**—Clothing, Shelter, etc. to affected people, **Damage Assessment, Funeral processes.**

The following Members of Committees will be informed by District Collector or District Control Room:

1. Member of Health / Medical Control Committee.
2. Member of Toxicity & Disease Control Committee.
3. Member of Demolition, Reconstruction & Rehabilitation Committee.
4. Member of Traffic Control, Law & Order, Security Cordon of Area Committee.
5. Member of Damage Assessment Committee.
6. Member of Relief & Shelter Committee.
7. Member of Funeral Committee.

After receiving message from District Collector or District Control Room, Member of above committees will perform their function as per the roles assigned in the District Crisis Emergency Organization.

#### **3.2.2. Cyclone Hazard Action Plan:**

During a cyclone, a high velocity of wind is experienced accompanied sometimes by heavy rainfall. This can, at first instance, affect the villages of Hansot, Vagra, Amod & Jambusar Talukas, salt work industries as well as industries of Dahej GIDC. Sometimes, highly populated Nagarpalikas such as Jambusar, Bharuch and Ankleshwar can also be affected, as can other villages and GIDC area of Panoli, Ankleshwar, Jhagadia, Bharuch & Palej, and areas with MAH units or other chemical factories.

As a result of cyclone, building houses structures may collapse people & animals maybe buried under the debris. In addition, fire, toxic release, explosion, poisoning may also occur in chemical factories, and low-lying areas may be flooded with water & people animals may be severely affected.

Thus, the response mechanism may involve the following plans:

1. District Disaster Management Plan (governed by Disaster Management Cell, Collector Office, and Bharuch).
2. District Crisis Group off Site Emergency Plan or Bharuch District Contingency Plan (governed by District Collector).
3. Local Crisis Group off Site Emergency Plan (governed by SDM & Dy. Collector, Bharuch, Vagadia, Jagadia & Ankleshwar).

## Chapter 3

### Institutionalisation and Multihazard Response Measures

#### **Before Emergency / Disaster: Relay of Information to the Public**

- A. After information of cyclone situation is received; the District Collector, Bharuch or District Control Room, Bharuch will direct the following authorities to inform the public through Fax, telephone, wireless, Way2way SMS System, DARMAT, SMS alert system and automatic weather alert system in emergency Situation by person:
- Taluka Control Room - Taluka Mamlatdar & TDO.
  - Assistant Fisheries Director, Bharuch.
  - Port Officer, Bharuch.
  - Member of Site Main Control Committee.
  - Member of Incident Control Committee.
  - Member of Public Warning & Communication Control Committee.
- B. Upon receipt of information from the District Collector or District Control Room, the following steps will be taken:
- The Taluka Control Room, Assistant Fisheries Director, Bharuch & Port officer, Bharuch will caution fisherman that they not go into the sea.
  - The Talati will publish notice regarding precaution to be taken by public in case of cyclone.
  - The Industries Officer, Salt Commission Office, President of the Salt Manufacturers Association will evacuate workers from salt factories to safe shelters.
  - Other authority will perform their duty as per flood / cyclone contingency plan of Bharuch district (Disaster Management Cell, District Collector Office, and Bharuch).

**After Emergency:** Focus will lie on **Medical Treatment, Disease Control, Poison control, Reconstruction & Rehabilitation, Floodwater Removal and Providing Relief**—Clothing, Shelter, etc. to affected people, **Damage Assessment, Funeral processes.**

The following Members of Committees will be informed by District Collector or District Control Room:

1. Member of Health / Medical Control Committee.
2. Member of Toxicity & Disease Control Committee.
3. Member of Demolition, Reconstruction & Rehabilitation Committee.
4. Member of Traffic Control, Law & Order, Security Cordon of Area Committee.
5. Member of Damage Assessment Committee.
6. Member of Relief & Shelter Committee. After receiving message from District Collector or District Control Room, Member of above committees will perform their function as per the roles assigned in the District Crisis Emergency Organization.
7. Member of Funeral Committee



### **3.2.3 Earthquake Action Plan:**

Earthquakes cause random motion of ground. This motion causes built structures to vibrate as a result of which they may collapse, depending upon the severity of the earthquake and distance from the epicenter. Earthquake can cause damage not only on account of the shaking but also due to other chain effects like landslides, floods, fire, explosion, toxic release, poisoning and disruption to communication, power, water etc.

#### **Before Emergency: Preventive Measures**

It is not possible for mankind to predict earthquake in years, months, days, hours, and minutes. But by installing ‘P’ waves detector, one can predict minutes before the occurrence only. This time is almost negligible to avoid massive damage to mankind and property. So, it is best to take **preventive measures** as shown below:-

1. Buildings, houses, structures, must be constructed as per National Building Code for earthquakes.
2. Old buildings, house, structures must be checked by structural engineer and as per their advice, they should be demolished or properly repaired to withstand earthquakes.
3. Industries must construct essential infrastructure such as chemical storage tanks & their foundations, fire facility buildings, occupational health center, hospital, chemical manufacturing building / structures, power generation plant buildings, transformer rooms, water storage tanks, DG set rooms etc. as per National Building Code for earthquake.
4. Essential national, state, district, taluka buildings such as hospitals, communication buildings, fire service buildings, control rooms, district collector building, bridges, dams, check dams, highway, road, water, reservoir, electricity substation & rooms, schools, colleges etc. must be constructed as per National Building Code of earthquake.
5. Essential equipment for rescue & Trained rescue persons must be kept ready. The list of such organization & their E-mail address should be regularly updated.
6. Public awareness and training activities must be regularly conducted.
7. Rehearsal of DDMP must be carried out periodically.

#### **After Emergency**

As a result of earthquake, the following massive effects may be occurred if proper preventive step will not taken as early stated.

Communication failure, power failure, water failure, building, houses, structures collapsed people buried under them, non-availability of food, drinking water, medicine, cloths, medical treatments, shelters, road, bridges destroyed or damaged, chemical disaster result of fire, explosion, toxic release, poisoning, dams & check dams & water reservoirs damaged result of flood or low level area will be flooded etc.

## Chapter 3

### Institutionalisation and Multihazard Response Measures

#### Actions

1. In case of subsequent effect of chemical disaster in the chemical factories, chemical transfer pipelines, chemical transport vehicle and produce general environmental pollution, then for combating & mitigation effect of fire, explosion, toxic release, poisoning etc. the District Collector and Dy. Collector will immediately activate District & Local Crisis Group Off Site Emergency Plan.
2. Similarly, in case of subsequent effect of flood, to save human life, animal & property. District Collector will immediately activate DDMP.
3. District Disaster Management Committee perform duty as per plan:
  - Informing to public in case of chemical disaster, flood as per guidance of expert committee.
  - Evacuation & rescue operation in case of chemical disaster, flood & earthquake with the help of transport committee.
  - To combat fire.
  - Toxicity controlling in case of chemical disaster.
  - Medical treatment to affected people.
  - Traffic control, maintaining law & order, security to evacuee area, cordon of area.
  - Disease & poisoning control.
  - Reconstruction & rehabilitation of communication system, electricity, water, check dams, repairing, road, bridge, construction & repairing, tents construction, shelter construction etc.
  - Relief work such as food, water, clothes, utensil, cash dolls etc.
  - Funeral process of dead bodies.
  - Informing through mass media communication.
  - District Collector will plan & implement for long cleanup rehabilitation programme.
  - District Collector will ask help from state government, central government, other countries, NGO & independence helping agencies.

#### **3.2.4 INDUSTRIAL DISASTERS, FIRES AND CHEMICAL ACCIDENTS ACTION PLAN**

##### **3.2.4.1 LOCAL RESPONSE TO CHEMICAL EMERGENCY - EMERGENCY ORGANISATION STRUCTURE**

The response to a chemical disaster is always local with resources segmented from district and state levels. Under MSIHC Rules, the LCG is the lowest level of group available at the industrial cluster level the DCG is the next level of response. In the case the LCG is not available; the DCG is the lowest level of response.

As per the DM Act 2005, the local authorities and Panchayati Raj Institutions can plan for preparation and response to emergencies. Therefore, Taluka or block level administration can prepare for and co-ordinate the response to chemical emergencies, provided Taluka level CDMPs are prepared including management of Chemical Disasters, although such plans are not currently available. At the State level, agencies such as the GSDMA, DISH, GPCB, PESO, CEI, SCG, GIDC etc. are responsible for regulation, planning, and management; and agencies and bodies such as the SDRF SEOC, Fire Services, Emergency Medical Services

and Police are entrusted with providing chemical emergency response. Similarly at the district level the DDMA, DCG and LCG are responsible for planning and management and DEOC, Fire services, Emergency medical services and Police are entrusted with chemical emergency response intended coordination in the SCG-DCG-LCG mechanism under the MSIHC rule and the SDMA-DDMA mechanism under the DM Act is automatically achieved at the district level because the district collector is the head of both. It is clear that the SCG, DCG, and LCG are not response agencies themselves but include members that are response agencies. Similarly the GSDMA and DDMA are not response agencies but include member departments that provide a response. However, the NDMA guidelines provide for emergency organizations where different departments, agencies and even private resources (e.g. industries) temporarily align their priorities with the emergency response objective under a unified command. This system is called Incident Response System (IRS) and discussed in detail in the text. It is important to recognize that organization under the IRS and the existing structures of the LCG and DCG are not in conflict although there can be differences in terminologies for some positions in the emergency organization. The IRS gives an emergency organization structure called Incident Response Teams (IRTs) that are pre-designated as per the identified emergency scenarios. While there is a general structure, IRTs are not prescriptive about who must fulfill what position or role instead the decision rests with the local or district level authorities. Therefore the organizations and people that are given

specific roles as per existing LCG and DCG structure can be given similar roles or positions in the IRT structure and a coordination between IRTs as per IRS and those as per existing LCG/DCG structures is achieved. The IRS provides additional advantages of being scalable by including additional and higher levels of response in the same unified command structure being flexible by transferring command and other sections of IRS to qualified people as scale and nature of emergency changes, and with a unified command so that there is one authorized, and accountable (technically qualified) incident commander and the command can be transferred up as the scale of emergency increases. The IRS also requires documentation of decisions, actions, and learning so that not only continuous improvement can be achieved but also accountability is fixed.

The response plan detailed out in this report establishes a concept of operations and assigns specific functional responsibility to departments, agencies, and organizations within Bharuch for chemical and industrial disasters. Chemical disasters can be classified per their scales as: Minor, Moderate, Major and Catastrophic. Verifiable and measurable criteria are developed to define these scales so that available and required resources can be assessed against these scales.

### **3.2.4.2 KEY RESPONSE AGENCIES**

The key agencies required for chemical emergency response have been identified with their roles and responsibilities. It is important that the roles and responsibilities not be thrust on line departments and agencies but discussed in DCG/DDMA meetings and mutually agreed to. The following are the key agencies:

- District Disaster Management Authority
- Police department
- Fire Services
- Department of Revenue/Relief Commissioner /Collector's Office
- Department of Labour and Employment / Director of Industrial Safety and Health (DISH)
- Gujarat Pollution Control Board
- RTO
- Department of Animal Husbandry
- Department of Agriculture
- Public Information Officer
- Public Works Department

### 3.2.4.3 RESPONSE TO HAZCHEM TRANSPORTATION EMERGENCIES

The organization structure for response, concept of emergency operations, and roles and responsibility of key stakeholders remains almost the same in case of emergencies involving the transportation of hazardous chemicals. The special considerations while responding to transportation emergencies are:

**Pipeline Transportation** - In case of pipeline transportation the initial notification may be done by the occupier/owner of the pipeline or by the local community or by the contractor who caused the damage to the pipeline. Therefore, it is important that all pipelines nodes and routes clearly display the emergency contact information in case of any accident with the pipeline. Once the initial notification of an accident is obtained the response operations are similar to other chemical accidents.

**Road Transportation** -In case of an emergency involving a road tanker carrying hazardous chemical, the driver of the tanker is expected to be well-trained to handle emergency situations and have up-to-date contact information. The notification will be done by the driver by calling DEOC(# 1077)and Local Police Station. The consigner and consignee may also make these calls. The tanker must display the emergency information panel and driver should carry the Transport Emergency Card or TREMCARD which has detailed instructions on response actions for fire, spillage or leakage. The driver should take the first protection actions by stopping traffic and general citizens from approaching the accident site until police arrive for help. The driver can try to stop the leak (if any) only if he is adequately trained and equipped to do so. The police officer on site will most likely be the first IC until a morequalified response team arrives. The most important action by the police is to cordon off the site of the accident, divertandregulate traffic, and evacuate/shelter in place citizens in close proximity on a priority basis. The ERG (2012), which has been developed primarily for response to chemical emergencies during road transport, should be followed. It is also important that untrained and unequipped first responders should not try to stop the leak or enter the hot zone and should instead wait for a qualified response.

### 3.3 Responsibility Matrix for response functions (for the disasters where EW is available):

#### 3.3.1 Cyclone Disaster Responsibility

Time Frame	Sr . No	Task	Department/Agency	Activity
Time = 0-72 Hrs	1	Warning receipt and dissemination	IMD, COR, Collector	Report the generation of Cyclone in Arabian Sea/ Indian Ocean after getting information from IMD to following officials: COR/DOR - COR/DOR - Chief Executive Officer, GSDMA - Members of Crisis Management Group - Incharge Minister(Prabhari mantra) - Hon. Minister – Disaster Mangement - All concerned district collectors as well as control rooms of the districts,talukas likely to be affected as per preliminary warning of IMD. - Alert all response teams in the district for deployment. - Remain in constant touch with control rooms at taluka & state level - - Instruct and alert all heads of deparmtnes of the keyline departments to activate their departmental plan and SOPs forresponse.
	2.	Interdepartmental Coordination	Collector, all line department	• Instruct all government officers an employees in the district to report to their respective head for emergency duties(only if the warning is of a level 2 disaster or as per the decieion taken in the meeting of the crisis management group headed by collector

				<ul style="list-style-type: none"> <li>Alert the District Collectors of districts not likely to be affected to be prepared for providing. <ul style="list-style-type: none"> <li><b>Additional manpower</b></li> <li><b>Additional resources</b></li> <li><b>Machinery &amp; Equipment</b></li> <li><b>Relief material to the districts likely to be affected.</b></li> </ul> </li> </ul>
	3	Establishment of lines of communication	COR, Collector	<ul style="list-style-type: none"> <li>Activate alternative communication equipments i.e. satellite phones, HF/VHF sets Hamradio, VSAT in EOC &amp; ERCs, District, City &amp; Taluka control rooms.</li> <li>Establish communication links with ERCs and Search &amp; Rescue Teams in all Nagarpalika, Police department and alert them to be in stage of readiness.</li> <li>Establish communication links with villages likely to be affected as per the contact details available in SDRN.</li> </ul>
<b>Time = 0 – 48 Hrs</b>	1	Review of situation and reporting	Collector	<ul style="list-style-type: none"> <li>Establish contact with IMD, CWC, ACWC, ISRO and the defense ministry of GoI for aerial / satellite imageries of the latest Cyclone threat.</li> <li>Get the latest weather report from IMD/other international Web Sites to know the exact location of Cyclone and the likely area where landfall will take place.</li> <li>After reviewing the weather report and satellite images issue instructions and orders for emergency response to areas likely to be affected.</li> </ul>
	2	Management of EOC, ERCs and Cyclone Response	Revenue Dept., Collector	<ul style="list-style-type: none"> <li>Take over full command of District EOC and ERCs.</li> <li>Instruct line departments to depute representatives at the District &amp; Taluka EOCs.</li> <li>Hold a meeting with leaders of task forces and entrust them their tasks.</li> <li>Ensure that Cyclone information is disseminated to all who are at danger</li> <li>Arrange emergency meeting with District Crisis Management Group to devise a plan of action.</li> </ul>
			Collector	<ul style="list-style-type: none"> <li>Arrange dissemination of information through various means of communication such as Radio, TV, Cable Network, and SMS about Cyclone warning to districts/areas which are likely to be hit by Cyclonic Storm.</li> </ul>
			RTO	<ul style="list-style-type: none"> <li>Impose restriction on all transport activities heading towards coastal areas that are likely to be affected by Cyclone. .</li> </ul>
			Collector	<ul style="list-style-type: none"> <li>Alert following teams to remain in readiness: <ul style="list-style-type: none"> <li>Evacuation</li> <li>Emergency Medical Services</li> <li>Search and Rescue</li> </ul> </li> <li>Alert following emergency response forces to remain in readiness: <ul style="list-style-type: none"> <li>Fire &amp; Emergency Services</li> <li>NDRF</li> <li>Village Disaster Management Teams</li> <li>Police, Home Guards</li> <li>State Reserve Police Force</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>o Army (if required)</li> <li>o Air Force (if required)</li> </ul>
	<b>3</b>	Cyclone response to coastal areas (likely to be affected)	Dist. Collector, Transport Dept. and, Chief Officer	<ul style="list-style-type: none"> <li>• Based on the warning issued by IMD, pinpoint the districts and villages likely to be affected by Cyclone and start the procedure for identifying safe places/shelters for evacuation in those villages.</li> <li>• Village wise data of safe sheltering for evacuation available on SDRN should be referred and the dist. level officers/Taluka level officers/Village level officers should be contacted to know the status of the shelters with the capacity of the shelter and other available facilities at the site.</li> <li>• Make transport arrangement for mobilization of all emergency response teams.</li> </ul>
			Ports & Fisheries Dept., GMB, Revenue Dept.,	<ul style="list-style-type: none"> <li>• Ensure arrangements are in place to evacuate fishermen, Industries workers and salt workers if needed.</li> </ul>
			Tourism Dept.	<ul style="list-style-type: none"> <li>• Ensure safety of tourists visiting beaches along the coastline.</li> </ul>
			Collectors, Police Dept., Dist.	<ul style="list-style-type: none"> <li>• Cordoning off coastal areas for restricting entries of rail or road traffic.</li> <li>• Ensure law and order is maintained in areas likely to be affected.</li> </ul>
			Line Depts	<ul style="list-style-type: none"> <li>• Ensure that all critical activities (mainly industrial production) in areas likely to be affected are shutdown.</li> </ul>
			Education Dept.	<ul style="list-style-type: none"> <li>• Ensure that the schools and colleges are closed in areas likely to be affected by Cyclone and associated hazards.</li> </ul>
			Dist. Collector, Chief officer, Information Dept.	<ul style="list-style-type: none"> <li>• Ensure dissemination of information to remote areas by local means.</li> <li>• Ensure that local help lines are opened and effectively managed for public information, guidance and rumor control.</li> <li>• Ensure that the information to public and media about the progress of Cyclone at periodic intervals is released.</li> </ul>
			Dist. Collector, Chief officer, Line Dept.	<ul style="list-style-type: none"> <li>• Make arrangements for logistic support to all emergency response teams.</li> </ul>
			Health Dept.	<ul style="list-style-type: none"> <li>• Health Department to activate their Departmental Cyclone Disaster Management Plan and Departmental SOPs for Management of casualties.</li> </ul>
<b>Time = 0 - 24 hrs</b>	<b>1</b>	Review of situation and reporting	Collector	<ul style="list-style-type: none"> <li>• Establish contact with IMD, CWC, ISRO and the defense ministry of GoI for aerial /satellites imageries of the latest Cyclone threat.</li> <li>• After reviewing the weather report and satellite images issue instructions and orders for emergency response to areas likely to be affected areas.</li> </ul>
			Collector and Information Department	<ul style="list-style-type: none"> <li>• Review and monitor following activities: <ul style="list-style-type: none"> <li>o Evacuation of people from coastal areas likely to be affected.</li> <li>o Positioning of Search and Rescue Teams</li> <li>o Positioning of mobile communication units</li> <li>o Positioning of quick medical response teams</li> <li>o Mobilization of restoration teams of respective departments</li> <li>o Requirement of armed forces in rescue and relief operations</li> <li>o Dissemination of information to the vulnerable areas</li> <li>o All preparedness measures to be taken by various authorities</li> <li>o Keep in touch with State, District, and Taluka Control Rooms.</li> <li>o Release information at appropriate time to media and public regarding response measures organized by the Government</li> </ul> </li> </ul>



	2	Emergency Response Management	Collector	<ul style="list-style-type: none"> <li>If reports regarding striking of Cyclone are confirmed by IMD and other sources, start the emergency response and relief operations.</li> </ul>
			Collector	<ul style="list-style-type: none"> <li>Divert the emergency services to areas likely to be affected as per the warning issued by IMD.</li> </ul>
			Collector, Chief officer Police Dept.	<ul style="list-style-type: none"> <li>Inform the public residing in areas likely to be affected to evacuate through various means such as SMS, AIR, FM Radio, Doordarshan, etc.</li> <li>Start evacuation from the likely affected areas through Police support, if necessary</li> </ul>
			GMB, DIC	<ul style="list-style-type: none"> <li>To account for the exact number of fishermen in the sea and fishermen that have already reached the shore</li> </ul>
	3	Emergency Relief Management	Collector/DDO	<ul style="list-style-type: none"> <li>Ensure that the Relief Management work planned in the areas likely to be affected by the Cyclone are well organized.</li> </ul>
			Revenue Dept. & Collector, Civil Supply Dept, Chief officer Water supply Dept., GEB, Health Dept	<ul style="list-style-type: none"> <li>Ensure that the arrangement for basic amenities(shown below) at evacuation/relief centres are made by the respective departments:               <ul style="list-style-type: none"> <li>Drinking water</li> <li>Food</li> <li>Clothing</li> <li>Sanitation and hygiene,</li> <li>Lighting</li> <li>Medicines and other Health Care</li> </ul> </li> </ul>
			Collector	<ul style="list-style-type: none"> <li>Inform following agencies to be in a state of readiness for assisting in the Cyclone response measures (if required):               <ul style="list-style-type: none"> <li>Public sector agencies</li> <li>Private sector agencies</li> <li>NGOs</li> <li>CBOs</li> <li>Volunteer Organizations</li> </ul> </li> </ul>
			Collector	<ul style="list-style-type: none"> <li>Request for help (if needed) to State EOC/Gujarat State Disaster Management Authority(GSDMA)</li> </ul>
			Information Department	<ul style="list-style-type: none"> <li>Make necessary arrangements for public information/guidance, public opinion and rumor control.</li> </ul>
			RTO,Collector, Chief officer	<ul style="list-style-type: none"> <li>Restriction may be imposed for transportation in threatened areas.</li> </ul>
<b>Time = 0 Hrs</b>	1	Disaster Declaration	Collector	<ul style="list-style-type: none"> <li>When Cyclone makes a landfall, Cyclone affected Dist. Collectors should send a communication to the State Govt. to declare the area as disaster affected, if necessary, (depending upon the nature and intensity of impact)</li> </ul>
	2	Preliminary assessment, deployment of emergency response teams and information dissemination	Collector, Chief officer, Mamlatdar	<ul style="list-style-type: none"> <li>Collector should send teams to the affected areas to take stalk of the effects of Cyclone and associated rain.</li> <li>District Collector/s should send sector wise situation reports to: State EOC/COR, GSDMA</li> </ul>
			Collector, DDO, Mamlatdar, Chief officer	<ul style="list-style-type: none"> <li>Deployment of following teams to Cyclone affected areas:               <ul style="list-style-type: none"> <li>Emergency Communication Teams</li> <li>Emergency Medical Services Teams</li> <li>Search and Rescue Teams (With Equipments)</li> <li>Preliminary damage Assessment Teams</li> <li>Need Assessment Teams</li> </ul> </li> </ul>
			Collector, Information	<ul style="list-style-type: none"> <li>Establish communication link with affected districts by activating alternate communication equipments such as Satellite</li> </ul>



			Dept.	Phones, HF/VHF Sets, Ham Radio, V Set etc., in District EOC and Taluka Control Rooms. • Arrange dissemination of information about occurrence of Cyclone and areas that are affected by it to Media & Public.
<b>Time = 0 + 24 Hrs</b>	<b>1</b>	Mobilization and Deployment	Collector, Chief officer, Key line Dept	<ul style="list-style-type: none"> <li>• Remain in constant touch with IMD for updates on weather forecast for the coming hours and plan accordingly.</li> <li>• Immediate mobilization of following units/teams to areas affected by Cyclone and associated rains. <ul style="list-style-type: none"> <li>○ S &amp; R Teams of Fire and Emergency Services</li> <li>○ Quick Medical Response Teams</li> <li>○ Quick Damage &amp; Loss Assessment Teams</li> <li>○ Quick Need Assessment Teams</li> <li>○ Road Clearance Teams</li> <li>○ Teams for disposal of dead bodies</li> <li>○ Teams for disposal of carcasses</li> <li>○ Teams for debris clearance (if any)</li> <li>○ Teams for maintaining Law &amp; Order in the affected areas.</li> <li>○ Arrange for S &amp; R teams of Air Force (If required).</li> </ul> </li> </ul>
	<b>2</b>	Measures for quick and organized response	Collector, Chief officer, Key line Dept	• District EOC, ERCs, the Liaison Officers of the affected District, taluka/city/s Should ensure that the following response activities are carried out immediately (a to f)
	<b>A.</b>	Clearance of access roads to reach at the sites of affected areas.	R& B Dept. Transport Dept., Railways,	<ul style="list-style-type: none"> <li>• To survey the access roads/routes leading to the affected areas and manage traffic for mobilization of equipments, machinery and volunteers.</li> <li>• Identify alternate roads/routes for evacuation.</li> <li>• Undertake repairing/restoration of damaged roads leading to the affected areas.</li> <li>• Identify and declare unsafe buildings/structures in Cyclone affected areas.</li> <li>• Evacuate people from unsafe buildings/structures and shift them to relief camps/sites.</li> <li>• Divert/stop transport activities (Rail + Road) heading towards Cyclone affected areas.</li> </ul>
	<b>B.</b>	Necessary Arrangements at evacuation/ relief centres	Revenue Dept., Civil Supply Dept., Collectors, Chief officer, Water Supply Dept., Health Dept., GEB, GWSSB & Local Authorities, Police dept.	<ul style="list-style-type: none"> <li>• To ensure that necessary arrangements at evacuation/relief centers is made with sufficient availability of: <ol style="list-style-type: none"> <li>a. Food,</li> <li>b. Water,</li> <li>c. Blankets/Clothing</li> <li>d. Medicines</li> <li>e. Lighting</li> <li>f. Sanitation and hygiene etc.</li> </ol> </li> <li>• To ensure necessary security arrangements for the personals (Emergency responders/relief teams)</li> <li>• Who are working at Relief Centers and involved in distribution of Relief Materials.</li> <li>• To ensure that law and order is maintained at evacuation/relief centers and in the affected areas as well.</li> </ul>
	<b>C</b>	Safety of Industrial workers, fishermen and salt workers	Collector, Port and Fisheries Dept., Tourism Dept., Industrial Dept., GMB, DIC	<ul style="list-style-type: none"> <li>• Immediate actions to be taken for safety of Industrial workers, fishermen, salt workers and visitors at Cyclone affected coastal areas.</li> <li>• Ensure that all the fishermen and salt workers have returned from the sea or those who are in the sea are rescued and evacuated to safer places.</li> </ul>

	<b>D</b>	Ensure immediate health and minimization of outbreak of disease	Health Dept., Transport Dept.	<ul style="list-style-type: none"> <li>• To establish camp hospitals near the affected areas.</li> <li>• To make transportation arrangements to shift seriously injured persons to nearest Camp Hospitals, Taluka and District Hospitals, Regional and State Hospitals</li> <li>• Ensure that the Hospitals are well prepared to deal with seriously injured persons.</li> <li>• To ensure that the required medical assistance/aid and medicines are provided to the affected people at site as well as at evacuation/relief centers in the affected area and necessary records are maintained.</li> <li>• Take sanitation and epidemic control measures for preventing any water borne disease.</li> <li>• Keep adequate stock of essential medicines, firstaid etc. at taluka/district hospitals</li> <li>• Take steps to purify drinking water sources</li> <li>• If required, take the help of doctors/paramedics from the list of doctors/paramedics available at the taluka/district level for immediate medical assistance.</li> </ul>
			Animal Husbandry Dept	<ul style="list-style-type: none"> <li>• Assess need for fodder if required.</li> <li>• Keep ready teams for carcass disposal (if required).</li> </ul>
	<b>E</b>	Information to public and media	Information Dept., collector	<ul style="list-style-type: none"> <li>• Establish Media/Press Centre for media management and information dissemination</li> <li>• Ensure that the information to media/general public about the response of the State Government is released in an organized manner.</li> <li>• Organize media briefing twice a day at predetermined intervals.</li> </ul>
	<b>F</b>	Other important work related to immediate response	Collector	<ul style="list-style-type: none"> <li>• Prepare quick need assessment report for planning of relief operation.</li> <li>• Additional assistance may be asked for emergency response/relief from State EOC - GSDMA (If needed).</li> </ul>
			Collector	<ul style="list-style-type: none"> <li>• Prepare situation report and circulate it twice a day in the morning and evening to key Government functionaries.</li> <li>• Maintain constant touch with National, District and Taluka EOCs and other control rooms.</li> <li>• Remain in constant touch with IMD for updates on weather forecast for the coming days and plan accordingly.</li> <li>• Conduct Aerial survey of affected areas for taking a stalk of the situation.</li> </ul>
			Revenue Dept. Collector,	<ul style="list-style-type: none"> <li>• Activate evacuation &amp; relief centers according to needs/situation.</li> <li>• Maintain record of persons admitted at evacuation/relief centres.</li> </ul>

## Chapter 3

### Institutionalisation and Multihazard Response Measures

<b>Time = 0 + 24 to 48 Hrs</b>	<b>1</b>	Review of situation and Reporting	Collector	<ul style="list-style-type: none"> <li>Establish contact with IMD, CWC, ISRO and the defense ministry of Gol for aerial / satellites imageries about further weather condition and plan accordingly.</li> </ul>
	<b>2</b>	Restoration of critical infrastructure/essential services	Collector, Line Depts., Chief officer	<ul style="list-style-type: none"> <li>Ensure that the essential services/critical infrastructure of the affected areas have been restored or alternative arrangement is made for ensuring safety of people and smooth management of emergency response.</li> <li>Ensure that key administrative and lifeline buildings are brought back to operation quickly.</li> <li>Designate and deploy senior officers (as per the need) to worst affected area/s to oversee rescue/relief operation.</li> <li>Ensure following primary necessities are restored               <ul style="list-style-type: none"> <li>Power</li> <li>Water</li> <li>Telecommunication</li> <li>Roads</li> <li>Bridges</li> </ul> </li> </ul>
	<b>3</b>	Disposal of Dead bodies	Revenue Dept., Collector, Chief officer, Police Dept., Health Dept., Local Authorities	<ul style="list-style-type: none"> <li>Ensure following procedure is followed before disposal/handing over of dead bodies:               <ul style="list-style-type: none"> <li>Photographs of the dead bodies are taken,</li> <li>Identification of the dead bodies is done,</li> <li>Post Mortem where ever necessary and possible is carried out,</li> <li>Handing over dead bodies of persons known/identified to their relatives,</li> <li>Disposal of unclaimed and unidentified dead bodies.</li> </ul> </li> </ul>
			Animal Husbandry Dept., Local Authorities, health dept.	<ul style="list-style-type: none"> <li>Animal Husbandry Department to ensure medical aid to cattle is injured.</li> <li>Disposal of animal carcasses with the help of local bodies/health dept.</li> </ul>
	<b>4</b>	Public Information and Media Management	Collector Information Dept., Chief officer	<ul style="list-style-type: none"> <li>Ensure that the information about progress of rescue and relief is provided to media/public in an organized manner at least twice a day.</li> <li>Establish help lines for facilitating communication between the victims and their relatives residing outside the affected area/s.</li> <li>Establish Information Centers at strategic locations for providing information about persons evacuated to the relief centres/hospitals.</li> </ul>
	<b>5</b>	Miscellaneous rescue and relief Works	Collector, Chief officer	<ul style="list-style-type: none"> <li>Assess the situation and take appropriate action to accelerate the Search &amp; Rescue Operations.</li> <li>Depute additional officers and supporting staff to Cyclone affected areas from non-affected areas (if required) to accelerate the rescue and relief operations.</li> </ul>
			Collector, Civil Supply Dept.	<ul style="list-style-type: none"> <li>Ensure that the relief assistance received from outside is centrally received, stored and sent for distribution to Cyclone affected areas according to their need and proper accounts are maintained about both receipt and distribution.</li> </ul>
			Revenue Dept, Civil Supply Dept.,	<ul style="list-style-type: none"> <li>District Collector may oversee the functioning of relief centres and ensure adequate supply of relief materials.</li> </ul>

<b>Time = 0 + 48 to 96 Hrs</b>	<b>1</b>		Collectors, Civil Supply Dept.	<ul style="list-style-type: none"> <li>• Remain in constant touch with IMD for updates on weather forecast for the coming days and plan accordingly.</li> <li>• Arrange for procurement of additional relief material required for relief operations (on the basis of need assessment).</li> <li>• Mobilize additional relief material required for relief operations.</li> <li>• Maintain constant touch with State &amp; Districts EOCs.</li> </ul>
	<b>2</b>		Revenue Dept., Health Dept. and Transport Dept	<ul style="list-style-type: none"> <li>• Arrangement for transportation of injured from field hospital to base hospital</li> <li>• Arrangement for transport of dead bodies to their native places.</li> </ul>
	<b>3</b>		Line Depts., Collector,	<ul style="list-style-type: none"> <li>• Ensure maintenance of record, timely reporting and information management.</li> <li>• Ensure maintenance of record and information database.</li> </ul>
<b>Time = 0 + 96 to 168 Hrs</b>	<b>1</b>		Collector	<ul style="list-style-type: none"> <li>• Remain in constant touch with IMD for updates on weather forecast for the coming days and plan accordingly.</li> <li>• Review the restoration of all the public and essential in Cyclone affected areas.</li> <li>• Review and follow-up all necessary arrangements for emergency response &amp; relief in the affected area/s.</li> </ul>
	<b>2</b>		Collector, IMD	<ul style="list-style-type: none"> <li>• On receiving the message from IMD about degradation of Cyclone, inform the concern officers.</li> </ul>
	<b>3</b>		Collectors, Chief officer, R & B Dept	<ul style="list-style-type: none"> <li>• Organize a quick rapid visual survey of the affected areas (through a technical team of engineers) to ascertain the safety of the structures decide on giving the go-ahead to people to move back to their respective houses.</li> </ul>
	<b>4</b>		Collector, DSP	<ul style="list-style-type: none"> <li>• After receiving the message of de-warning, ensure that people are moved back safely to their houses.</li> </ul>
	<b>5</b>		Revenue Dept.	<ul style="list-style-type: none"> <li>• Ensure relief disbursement, allotment of funds and grants to line department and district collectors for organizing emergency response, relief and evacuation arrangements</li> </ul>

## Chapter 3

### Institutionalisation and Multihazard Response Measures

#### 3.3.2 Response to Off-Site emergency (Chemical Plan)

S.No	Time	Task	Responsibility Department/ Agency	Activity
1		Disaster declaration AndPlan Activation	Collector / DCG	<ul style="list-style-type: none"> <li>• Declare an off-site emergency in consultation with DCG and activate an off-site emergency plan.</li> <li>• Activate DCG.</li> <li>• Establish immediate communication with LCG, DCG, DEOC, SEOC, GSDMA</li> </ul>
2		Mobilization & Deployment	Collector, DISH, DCG, Police Dept, Health Dept, Industry/Industrial Association,	<ul style="list-style-type: none"> <li>• Arrange an immediate deployment of various ERTs in affected sector(s). (Police, Fire, S&amp;R, Medical etc.)</li> <li>• Based on the emergency monitoring teams from offsite areas initiate countermeasures (such as sheltering and medical help).</li> <li>• Arrange an evacuation of the affected/likely to beaffected workers andPopulation to safer places.</li> <li>• Activate systems of the District machinery to meet the necessary requirements of the public in the camp till thepeopleare in a position to go back to their homes after the affected areas are Cleared and declared safe. Deploy QRMTs/MFRs consisting of physicians, triage officer, nurses and paramedical staff.</li> </ul>
			Collector , Civil Supply Dept, Chief officer DISH, Water Supply Dept,health Dept, GEB, Power & Energy Dept,GWSSB & Local Authorities, Police Dept.	<ul style="list-style-type: none"> <li>• To ensure that necessary arrangements at evacuation/relief centers ismade with sufficient availability of: <ul style="list-style-type: none"> <li>○ Food,</li> <li>○ Water,</li> <li>○ Blankets/Clothing</li> <li>○ Medicines</li> <li>○ Lighting</li> <li>○ Sanitation and hygiene etc.</li> </ul> </li> <li>• To ensure necessary security arrangements for the personals (Emergencyresponders/relief teams) who are working at Relief Centers and involved in distribution of Relief materials.</li> <li>• To ensure that law and order is maintained atevacuation/ relief centers and in the affected areas as well.</li> </ul>
3		Addressing Health related issues	Health Dept.	<ul style="list-style-type: none"> <li>• Ensure that the required medical assistance/aid and medicines/antidotes are provided to the affected people at site as well as at evacuation/relief centers in the affected area and necessary records are maintained.</li> <li>• Ensure that the Hospitalsare well prepared to dealwith seriously injured persons.</li> <li>• Keep adequate stock of essential medicines,Antidotes, first-aid etc. atTaluka/district hospitals.</li> </ul>

				<ul style="list-style-type: none"> <li>• If required, take the help of doctors/paramedics from the list of doctors/paramedics available at the taluka/district level for immediate medical assistance.</li> </ul>
4		Information to public and media	Collector, DISH, Information Officer, Chief officer	<ul style="list-style-type: none"> <li>• Make an arrangement for providing useful, timely, correct, consistent, and appropriate information to the public and media in the event of a chemical Attack /disaster.</li> <li>• Ensure that the information to media/general public about the coordinated response is released in an organized manner.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Roles and Responsibility of some of the First Responders during chemical attack/emergency;</b></li> </ul>				
1		Police	Police Department	<ul style="list-style-type: none"> <li>• Control and divert the traffic near the affected areas.</li> <li>• Ensure law and order at the incident site during chemical emergency/disaster and at Evacuation centers to Provide security in evacuated areas</li> <li>• <u>As per GSDM Act 2003, Give warning, carry out S &amp; R Operation and carry out relief &amp; rehabilitation operation too. In case of Chemical attack;</u></li> <li>• DCP will direct the participation of police in the emergency response Police will constitute an integrated command.</li> <li>• The DSP will establish contact with the District Police Control Room immediately. He will get a situation estimate and assess the operational requirements for the police.</li> <li>• The DSP will issue an alert to the DIG and the surrounding districts. He will direct all the police officials and forces in adjacent Districts to be deployed if necessary. The DSP will ensure that the police forces required for traffic management, evacuation and law and order are available with the District administration.</li> <li>• The DSP will review the dissemination of warning and the need for evacuation. He will help the Fire &amp; Emergency Services and the Deputy Director, Industrial Safety and Health with Police Wireless sets, so that there is continuous communication among the first responders in the emergency situation.</li> <li>• The DSP will ensure that the police force will not enter the area under disaster without the permission of the Fire &amp; Emergency Services and Health officer.</li> <li>• In case of big explosion and fire, the DSP will assess the situation and suggest a Plan of Action based on his assessment of the immediate causation.</li> <li>• The DSP will order deployment of the police</li> </ul>

				<p>force for evacuation of the people from the zone of the danger.</p> <ul style="list-style-type: none"> <li>• The DSP will send instructions for the cordoning off of the area. People should not be allowed access anywhere close to the site of the disaster.</li> <li>• The DSP will review the traffic management in the area. The primary aim would be to ensure the transport of the injured to the hospital, easy access for emergency responders and safe evacuation of the people from the danger zone.</li> <li>• The DSP will also issue directives that all the Private and Public Transport (trains and buses) be diverted from the disaster area.</li> <li>• The DSP will contact the DIG and ask him to organize the deployment of police force from other Districts, based on the need assessment.</li> <li>• The DSP will also contact the State Industrial Security Forces and other paramilitary forces to seek their deployment, if needed.</li> <li>• The DSP will supervise law and order situation. He will take all the possible precautions to ensure that public order is maintained, and no one takes undue advantage of the situation.</li> </ul>
2		Fire and S & R	Fire And Emergency Services (F&ES), Nagarpalika, DMC DAHEJ/ DPMC ANK GIDC	<ul style="list-style-type: none"> <li>• Reach at the site soonest possible and assess the situation. (information about the chemical leak/spill, the action taken and current status)</li> <li>• In case of fire, start fire fighting with suitable media and also take care of surrounding storages/tanks to be over heated so that reduce the chances of “domino effect”.</li> <li>• In case of chemical leak, try to plugging/stopping of leak with the use of proper PPE</li> <li>• Secretary, Industries will coordinate redeployment of GIDC Fire Tenders from other places, as required.</li> <li>• Secretary, Industries will also coordinate with the Private and Public Sector industries for deployment of their Fire Brigades to the site of the Disaster.</li> <li>• The DCG, in consultation with the District Collector and other local officials will ensure that CFO Fire Services, Dy. Director Industrial Safety and Health, Officer in charge Police and Health Personnel all work closely with full coordination.</li> <li>• Ahmedabad, Vadodara, Valsad, Surat, Rajkot, and Jamnagar are the main Providers of Fire Services in the state. The DCR will decide upon the deployment of Fire Services, based on Distance and Accessibility.</li> <li>• Search and identify the risk and nullify the sources of leak / toxic release. If any unclear or unidentified substance or source is identified or</li> </ul>



				<p>detected, the team should send them immediately to the laboratory for further investigation / analysis</p> <ul style="list-style-type: none"> <li>• To search and evacuate the affected population from the site of the incident.</li> </ul>
3		Medical Services	Dept. of Health and Family Welfare	<ul style="list-style-type: none"> <li>• CDMO / CDHO emergency medicine experts will provide the necessary expertise and specialized services to the DCG.</li> <li>• The DCG will consider the level of exposure on the basis of situation estimate received from the District administration. It will consider the intrinsic toxic potential of the chemical, its concentration, the duration of exposure, and the health status of the people exposed.</li> <li>• Based on the information upon the level and extent of contamination, the DCG will decide on the issue of alert and warning to the people in the affected areas through the All India Radio, Doordarshan, and Cable TV.</li> <li>• The DCG will contact the Civil Surgeon and the District Health Officer of the concerned district and ask them to deploy all the necessary medical facilities including doctors, nurses, medicines, and ambulances.</li> <li>• The DCG will alert major hospitals in the area, and ask them to be in readiness for receiving patients.</li> <li>• In case the nature of contamination requires much greater intervention, the DCG will inform the SCG and ask for the necessary medical assistance of experts, doctors and equipments. The relevant agency for emergency medicine in the Government of Gujarat is the Directorate General of the Health Services (DGHS) in the Ministry of Health and Family Welfare. The DGHS has set up the Emergency Medical Relief cell, for dealing with these contingencies.</li> <li>• The DCG will review the diagnostic support services: Clinical laboratory, blood banks, radiology, pathology, pharmacy, paramedics, Red Cross, NGOs and volunteer personnel. It will seek all the steps to organize the necessary medical help through the deployment of doctors, paramedics, and provision of blood and medicines, as required.</li> <li>• The DCG will review the administrative support required for the situation, which includes communications, transport of the victims and of the personnel, feeding of the personnel and patients, and supplies.</li> <li>• The DCG will collect information on the number of deaths and persons injured; the nature of injuries and the likely long-term consequences.</li> </ul>

				<ul style="list-style-type: none"> <li>The DCG must assess the medical needs of the area on the basis of likely long-term consequences and take steps to equip local medical facilities for treating People on a long-term basis. The DCG must also make financial provision for spending on long-term treatment.</li> </ul>
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### **3.3.3 Earthquake Responsibility**

Time Frame	Sr.No	Task	Responsibility
0 + 15 Minutes	1	Report the occurrence of earthquake to Collector, Resident Additional Collector Heads of all line departments, State EOC.	Mamlatdar / (DEOC)
0 + 30 Minutes	2	Establish communication link by activating alternate communication equipment i.e. satellite phone, HF / VHF set, HAM Radio, VSAT etc. in District EOC / TalukEOCs	DSP, RAC Mamlatdar (DEOC)
	3	Instruct deployment of Mobile Emergency communication Units to affected areas for establishing communication link	Collector
	4	Verify the authenticity of the incident from agencies like IMD, ISR, SSNNL and also from District / Taluka control rooms, Police and Fire Brigade control rooms	RAC, Mamlatdar (DEOC)
	5	In case of L-2 level event, overall management of DEOC shall be taken over by Collector	Collector
	6	Instruct duty officers of line departments to report in DEOC	Collector
	7	Hold first meeting with duty officers	Collector
	8	Contact the Heads of all line departments including the Information Department to reach DEOC	Collector
	9	Alert ERUs and ERCs for quick mobilization to affected areas	Collector
	10	Request for the services of NDRF and Armed forces, if required through designated representative	Collector & COR
	11	Instruct both regular and emergency staff of DEOC to report for duty	Collector
0 + 1 Hour	12	Dispatch of Search & Rescue teams to the affected areas	Collector
	13	Instruct Quick Assessment Task Force to submit preliminary need and loss assessment report of the affected areas	Collector
	14	Alert Quick Medical Response Teams to the affected areas	Collector
	15	Make arrangements for aerial survey of the affected areas	Collector
	16	Instruct local administration to evacuate victims to safer sites	Collector
	17	Contact District In charge Secretary for deciding on time and venue for holding Crisis Management Group (DCG) meeting at the earliest	Collector
	18	Inform all DCG members to attend DCG meeting in designated venue to assess situation and review emergency measures	Collector
	19	Instruct concerned authorities or Agencies to shut down critical operations	Collector
	20	Contact BISAG, NSRA, ISRO and COR for aerial / satellite imageries of the affected areas	Collector

0 + 2 Hours	21	Inform all line department head to report for emergency duties within half an hour	Collector
	22	DCG to assess situation, delegate responsibilities for organizing rescue and relief operations	Chairman, DCG
	23	Senior District level officers to be deputed to the affected areas	Chairman, DCG
	24	Activate Operations Section of ICS for Emergency Response Operation	Collector
	25	Assess the conditions of road, rail and air communication link for quick mobilization of Emergency Teams and resources to affected areas and take follow up actions	Collector & Head of Transport, R & B, Railway Department.
	26	Dy. Director, Information to establish media management / information cell for public information, guidance and rumor control	Collector
	27	Request may be made for assistance from State Government , GSDMA if required	Collector
	28	Request the nearest headquarters of the SRP Force/Nagarpalika/co-operation to render assistance in emergency search, rescue and relief operations	Collector
	29	Contact private / public sector agencies in the District to assist in emergency rescue and relief operations.	Collector
	30	Inform Line Department & COR to provide necessary logistics support to emergency operation task forces.	Collector
	31	If necessary, assistance may be asked from neighboring District and outside agencies	Collector
	32	Set up separate desks for each operation task force and NGO coordination desk in the DEOC for coordinating emergency operations	Collector
	33	Provide security in affected areas and maintain law and order situation	DSP
	34	Mobilize Medical First Response Teams to affected areas	CDHO & Civil Surgeon
	35	Mobilize SAR Teams and search & rescue equipment and machinery to affected areas	DSP,Civil defense, Nagarpalika & R&B Departments,
	36	Instruct district Dy. information officers to establish information centre near affected areas to provide guidance to volunteers and aid agencies	Collector

### Chapter 3

## Institutionalisation and Multihazard Response Measures

0 + 3 Hours	37	Make suitable transportation arrangement for mobilization of quick response teams to the affected areas	Collector , DSP, ARTO
	38	Maintain constant touch with the State / District and Taluka EOCs	Collector / DEOC
	39	Establish Press / Media Centre for media management and information dissemination	Dy. Director Information
	40	Arrange for press / media release for rum our control and public information and guidance	Collector, Dy. Director Information
	41	Alert all major hospitals to make necessary arrangement for treatment of injured	CDHO, Civil Surgeon
0+ 6 Hours	42	Establish relief coordination centre at the airport, railway station, etc. for arrival of Search & Rescue and Medical Teams coming for humanitarian aid	Collector
	43	Establish State relief coordination centre nearer to District Head Quarter	Collector
	44	Instruct to cordon affected areas and setting up of check posts to control entry and exit	DSP
	45	Open access routes and manage traffic for mobilization of equipment, machinery and volunteers to the affected areas	DSP , ARTO Transport and R & B
	46	Conduct aerial survey and also mobilize quick assessment teams to affected areas	Collector / Leader of quickssessment Task Force
	47	Establish information centers at the arrival and departure points especially at the airports, railway stations and interstate bus terminus	R & B Department
0 + 12 Hours	48	Mobilize relief materials i.e. tents, food materials, water, essential medicines, blankets, etc. to the affected taluka, Nagarpalika area and villages	Collector / DDO / Line Departments
	49	Arrange to shift evacuated persons to temporary shelters and ensure provision of food, water facilities, blankets and storage of relief materials	Collector / DDO
	50	Arrange road, rail and air transport at District / Taluka headquarters for dispatch of relief arterials' to the affected areas	ARTO
	51	Set up field hospitals near the affected areas	CDHO,Civil Surgeon
	52	Arrange to shift injured persons to field hospitals	CDHO,Civil Surgeon
	53	Instruct Liaison & DSO to establish relief coordination centre and godowns near affected area and provide full security cover	Collector / DSO / DSP

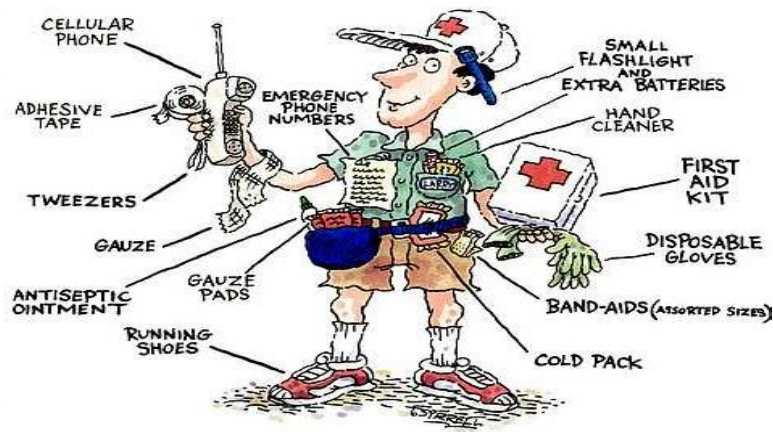
		as well	
	54	Prepare quick need assessment report for planning of relief operation and mobilization of resources to the affected areas	Collector / DDO / RAC
0 + 24 Hours	55	Instruct to set up Coordination Centers at the Taluka / City area in as well	RAC
	56	Hold review meetings with Duty Officers in every 12 hours	Collector
	57	Prepare and circulate the situation report	RAC (DEOC)
	58	Prepare press notes twice a day	RAC & Dy. Director Information
	59	Depute additional officers and supporting staff to affected areas from non-affected areas	Collector / COR
	60	Restore essential services i.e. power, water supply, telecommunication facilities of DEOC, headquarter, AIR, Doordarshan, Concern officers & all line department	DGVCL/GETCO, GWSSB, DOT, Collector
	61	Coordinate with Emergency Operation Task Forces mobilized to the affected areas	Collector / DDO / RAC (DEOC)
0 + 48 Hours	62	Ensure safety and security of personnel deputed in affected areas for emergency response operation	DSP
	63	Earmark storage point for medical supplies at affected sites	CDHO, Civil surgeon
	64	Arrange for identification, photograph, post mortem and maintenance of records for disposal of dead bodies	DSP, CDHO, Civil surgeon
	65	Arrange information centre at shelter site for maintaining records of victims and to provide guidance to relatives, NGOs, etc	Collector, DDO, DSO
	66	Arrange for complaints regarding missing persons and initiate search in shelters, hospitals and police records	Collector, DSP, DDO
	67	Arrange for Executive Magistrate empowerment for waiving off post mortem of dead bodies	Collector
	68	Arrange for additional manpower if necessary for disposal of dead bodies	Collector
	69	Arrange for transportation of dead bodies to their native places if so required	ARTO, CDHO, Civil surgeon
0 + 72 Hours	70	Arrange for disposal of unidentified and unclaimed dead bodies	Collector, DSP
	71	Arrange for transportation of injured from field hospitals to base hospitals	ARTO, CDHO, Civil surgeon
	72	Activate short and interim relief measures	Collector / Line Dept.
	73	Arrange for distribution of cash doles to the victims	Collector, DDO

### 3.3.4 Flood Role & Responsibility

S.No	Response to be Taken	Responsible Department
1	Reporting the occurrence of flood to Collector, GSDMA, Heads of line departments,	Resident Additional Collector
2	Establish communication links by alternate communication equipments like phone, radio etc. in District /Taluka EOC and Village level	District Emergency Operation Center,(DEOC)
3	Deployment of Mobile Emergency Communication Units to affected areas for establishing communication links.	District Collector
4	Verifying authenticity of flood from agencies like IMD, CWC Tapi Division, and SSNL and also from Districts/Taluka control rooms.	District Emergency Operation Center,(DEOC)
5	Hold first meeting with Duty Officers	Collector
6	Contact the Heads of all the line departments to reach Taluka EOC	Collector
7	Dispatch of Search & Rescue teams to the affected areas.	Collector
8	Make arrangements for the aerial survey of affected areas.	Collector
9	Instruct local administration to evacuate victims to safer Sites	Collector
10	Assess the condition of road and rail network for quick Mobilization of Emergency teams and resources to affected areas and take follow up steps.	ARTO, R & B Dept, Collector
11	Maintain constant touch with State /District and Taluka EOCs	Collector

Distribution of activities among various district agencies in District during Relief:-

No.	Response To be Taken	Responsible Department
1	Providing temporary shelters to evacuated persons	District Panchyat, Revenue dept, R &B
2	Providing food materials to the victims	Revenue
3	Providing safe drinking water to the victims	Civil Supplies
4	Provision of hygienic sanitation facilities	Water supply Dept.
5	Provision of health assistance	Health Dept, NGO, Community groups
6	Clothing and utensils	Health Dept.
7	Relief camps	Civil Supplies
8	Providing transport services to shelter sites	R & B, Revenue Dept. District Panchyat
		Revenue Dept, Transport Dept.



## Chapter 4

# Preparedness, Prevention & Mitigation Measures





## Chapter 4

### Preparedness, Prevention & Mitigation Measures

Personal preparedness focuses on preparing equipment and procedures to use when a disaster occurs, i.e., planning. Preparedness measures can take many forms including the construction of shelters, implementation of an emergency communication system, installation of warning devices, creation of back-up life-line services (e.g., power, water, sewage), and rehearsing evacuation plans. Proper Preparation can save time, money and lives. Planning for all different types of events to magnitudes in at utmost importance for disaster. Proper planning is instrumental during times of chaos to make situations less stressful. With proper planning duties will be pre-assigned to different agencies, so that when disaster does occur responders can jump right into action.

Two simple measures can help to prepare the individuals for either sitting out the event or evacuating, as necessary. For evacuation, disaster supplies kit may be prepared and for sheltering purposes a stockpile of supplies may be created...



In Bharuch district, disaster management and risk reduction have become a permanent agenda of District Coordination Meeting. Now the emergency preparedness level of the district has been reviewed by the District Collector while meeting the line departments every month. Similarly, the issue has got the appropriate institutional back up for reinforcement at the district and sub-district level with disaster management becoming a permanent agenda item of Revenue and Panchayat department's monthly review meeting.

**Water logging situation arise during monsoon in Bharuch, to avoid water logging Issue Following Drain should**

**be clean before monsoon:**

(Annexure H)

#### 4.1 Details of Drain in Bharuch District.

Sr .N .	Drain Area/Route	Name of Taluka	Implementing Department
1	Garamiya Drain From Umaraj and Sherpura to manubar, Kanthariya to Vansi approx 7 to 13 km	Bharuch	Dy.Engineer MIP, Anklesvar
2	Shravan Chowkdi Gail colony to Garamiya approx 2 km.	Bharuch	Dy. Engineer MIP, Anklesvar
3	Bhukhi Khadi Netional highway to parkhet Village	Bharuch	Dy. Engineer MIP, Anklesvar
4	Parkhet Bhukhi Khadi	Bharuch	Dy. Engineer MIP, Anklesvar
5	Behind Hotel Nyay mandir's Drain	Bharuch	Dy. Engineer MIP, Anklesvar

6	Linda khadi to Kothi gam to Tralsi village	Bharuch	Dy. Engineer MIP, Anklesvar
7	Sherpura Cricket ground to Garamiya kans	Bharuch	Dy. Engineer MIP, Anklesvar
8	Matariay Talav to Sherpura Kabrastan	Bharuch	Dy. Engineer MIP, Anklesvar
9	Haldarva to Luvara drain	Bharuch	Dy. Engineer MIP, Anklesvar
10	Haldarva to Vaddala drain	Bharuch	Dy. Engineer MIP, Anklesvar
11	Dabhali to Samlod drain	Bharuch	Dy. Engineer MIP, Anklesvar
12	Tham to Derol drain	Bharuch	Dy. Engineer MIP, Anklesvar
13	Haldar to Kuvadar drain	Bharuch	Dy. Engineer MIP, Anklesvar
14	Daredi khadi to Kargat Borikothi	Bharuch	Dy. Engineer MIP, Anklesvar
15	Sukwal –Maljipura-Mitamora to Dharoli Drain	Jhagadia	Dy. Engineer MIP, Anklesvar
16	Panwad –Talodara & Zarpaniya to Talodara	Jhagadia	Dy. Engineer MIP, Anklesvar
17	Kharchi to Bhilwada to National Highway N-8 Mandava	Jhagadia	Dy. Engineer MIP, Anklesvar
18	Vali to Dhabha & valad Drain	Jhagadia	Dy. Engineer MIP, Anklesvar
19	Karena to Vehlam Khadi Drain	Amod	Dy. Engineer MIP, Anklesvar
20	Telod to Suthadara Drain	Amod	Dy. Engineer MIP, Anklesvar
21	Ochen Drain	Amod	Dy. Engineer MIP, Anklesvar
22	Ochan to Karena Drain	Amod	Dy. Engineer MIP, Anklesvar
23	Advala to Dhadhar drain	Amod	Dy. Engineer MIP, Anklesvar
24	Soanama to nahiye drain	Amod	Dy. Engineer MIP, Anklesvar
25	Tanacha to Anor drain	Amod	Dy. Engineer MIP, Anklesvar
26	Anor local drain	Amod	Dy. Engineer MIP, Anklesvar
27	Ranada to Anor drain	Amod	Dy. Engineer MIP, Anklesvar
28	Vahiyal to Ochal drain	Vagra	Dy. Engineer MIP, Anklesvar
29	Ambhel to pakhajan drain	Vagra	Dy. Engineer MIP, Anklesvar
30	Narnavi to kathodara, Ambhel to Pakahajan Pahaj ora to Vicchyad drain Vahiyal local drain	Vagra	Dy. Engineer MIP, Anklesvar
31	Limadi to Pakhajan drain	Vagra	Dy. Engineer MIP, Anklesvar
32	Rahad Kelod drain vagra , Local drain vagra, Pisad drain Rahad Vastikhandali drain	Vagra	Dy. Engineer MIP, Anklesvar
33	Vagra local drain	Vagra	Dy. Engineer MIP, Anklesvar
34	Mosam Local drain	Vagra	Dy. Engineer MIP, Anklesvar
35	Saladara Saykha drain	Vagra	Dy. Engineer MIP, Anklesvar
36	Nahar Rupeshvar temple drain RHS/LHS drain	Jambusar	Dy. Engineer MIP, Anklesvar
37	Nahar Kangam drain	Jambusar	Dy. Engineer MIP, Anklesvar
38	Nahar Kavali drain	Jambusar	Dy. Engineer MIP, Anklesvar
39	Kavi kora Joining Nobar drain	Jambusar	Dy. Engineer MIP, Anklesvar
40	Kora –Panchakada & madafar drain	Jambusar	Dy. Engineer MIP, Anklesvar
41	Panchakada Sambha drain	Jambusar	Dy. Engineer MIP, Anklesvar
42	Panchakada navi nagri drain	Jambusar	Dy. Engineer MIP, Anklesvar
43	Sambha kora drain	Jambusar	Dy. Engineer MIP, Anklesvar
44	Sambha Branch drain	Jambusar	Dy. Engineer MIP, Anklesvar
45	Sigam Galantec & Zamdi drain	Jambusar	Dy. Engineer MIP, Anklesvar
46	Neja Adrakha drain	Jambusar	Dy. Engineer MIP, Anklesvar
47	Chidra Bhadkodarta drain	Jambusar	Dy. Engineer MIP, Anklesvar

48	Nada Kapuriya drain	Jambusar	Dy. Engineer MIP, Anklesvar
49	Widening & Deepening of Vadadala, Rahadpor, Umraj to Garamiya	Bharuch	GNFC
50	Narmada Chowkdi to vishvas colony to Shital circle highway(old NH8)	Bharuchcity	Dy. Engineer R&B (State)
51	Ashray society to Ayodhyanager to Matariay Talav Drain	Bharuchcity	Nagarpalika, Bharuch
52	Back part of Angan Apartments	Bharuchcity	Nagarpalika, Bharuch
53	Fata Talav to Varagi Vad	Bharuchcity	Nagarpalika, Bharuch
54	Id-Gha to Kharudinvava area	Bharuchcity	Nagarpalika, Bharuch
55	Link Road to Ayodhyanager	Bharuchcity	Nagarpalika, Bharuch
56	Dungri Three well to Ankhari manzil	Bharuchcity	Nagarpalika, Bharuch
57	Godi Road, Rajnigandha Society to near Railway	Bharuchcity	Nagarpalika, Bharuch
58	Furja Pahaj to Dattmandir	Bharuchcity	Nagarpalika, Bharuch
59	JB Modi park to ahead Sabugath area	Bharuchcity	Nagarpalika, Bharuch
60	Bahucharaji navinagari to animal hospital way	Amod city	Nagarpalika, Amod
61	Animal hospital to Jalaram nagar area	Amod city	Nagarpalika, Amod
62	Bhimpura road to Mahmadi mosque	Amod city	Nagarpalika, Amod
63	Taluka Panchyat Navi nagari to Malla talavadi	Amod city	Nagarpalika, Amod
64	Vanta Rothodvas to Bharuch Jambusar road	Amod city	Nagarpalika, Amod
65	GEB Sub Station to Big lake area	Amod city	Nagarpalika, Amod
66	GangSahid to Ankhi Bhogal to Manak Temple	Jambusar City	Nagarpalika, Jambusar
67	Nr mamlatdar office	Jambusar City	Nagarpalika, Jambusar
68	Tanakri Bhagol to Swastiknagar Society	Jambusar City	Nagarpalika, Jambusar
69	Parixishit girl hostel to Savgan Society	Jambusar City	Nagarpalika, Jambusar
70	Swaminarayan temple to kava road railway crossing	Jambusar City	Nagarpalika, Jambusar
71	Khanpuri Bhagol rain drain after railway crossing	Jambusar City	Nagarpalika, Jambusar
72	Patel society to local board office	Jambusar City	Nagarpalika, Jambusar
73	Bala Nagar society to Talawdi	Jambusar City	Nagarpalika, Jambusar
74	Referral Hospital Gate 2 to Citizen society after railway crossing.	Jambusar City	Nagarpalika, Jambusar
75	Baroda road to Godoown firdosnagar society	Jambusar City	Nagarpalika, Jambusar
76	Milatnagar Society to Dabha Four way road.	Jambusar City	Nagarpalika, Jambusar
77	Near Red Sahid mosque to National Park railway crossing	Jambusar City	Nagarpalika, Jambusar

78	In front of Gamvadi vaghela to abed beg farm	Jambusar City	Nagarpalika, Jambusar
79	NH-8 to Luvara to Haldarva, Vaddala to Zadeshwar Chokdi Drainage	Bharuch	National Highway Authority
80	NH-8 to Palej to Bhukhikhadi Drainage	Bharuch	National Highway Authority
81	Palej(GEB) To Sansrod Narmada canal to Bhukhi khadi	Bharuch	Exe. Engineer Narmada Yojana & National Highway Authority
82	Palej kolyadroad to National Highway Drainage to Matroj Drain(towards Baroda) NH -8	Bharuch	National Highway Authority

#### **4.2 Capacity Building:**

- **Soft skill(Trainings & Awareness)**
- **Physical Strengthening(Equipments & Buildings)**

**Bharuch district had taken the preparedness measures from village level to District level.**

- Bharuch district administration conduct Pre monsoon meeting which is one of the fundamental function of district and taluka administration for premonsoon activities of each & every department to prepare plan and start work with aspect to preparedness. Such As Nagarpalika prepared city plan according to vulnerability of the area, Mamlatdar office prepared TDMP including the Resource Material. And every line department start work with aspect to preparedness in their respective jurisdiction.
- Village Task forces formed & trained.
- Disaster Management plans like VDMPs, TDMPs, and CDMPs & DDMPs prepared & updated.
- District level officers reviewed village level disaster preparedness & interacted with the Village level Disaster Management team members.
- In Pre-monsoon meeting departmental, and stake holder's SOP were discussed & finalised, for any kind emergencies.
- For capacity building several Search & Rescue and First aid trainings organized in those trainings disaster management teams and committees members trained at village, city, and taluka and district level.
- Bharuch District administration also identified several stake holders from line departments, corporate sectors, NGOs and involved volunteers in disaster risk management activities; Control room Staff training, Students, teachers, home guards, police personnel, NCC and NSS students were also trained and mock drill realized. In most hazards flood prone area like Jhagadia, Ankleshvar, Bharuch and Hansot, Cyclone Prone area like Hansot, Vagra, Amod and Jambusar and other more important is Chemical Disaster in Whole district officers and peoples are more Orientation so that their services can be taken at the time of any emergency.

**4.3DRM (Disaster Risk Management) Programme is implementing by district administration Under the Community based Disaster Management.** DRM (Disaster Risk Management Programme) is one of the major initiatives of Gujarat State Disaster Management Authority to build/strengthen capacity of various stakeholders for an effective response during disasters. The DRM Programme is formulated with a goal of sustainable reduction in disaster risk in most hazard prone districts in Gujarat state. The programme activities are designed in a way which supports capacity building to institutionalise the system, undertake environment building, education, awareness programmes on different facets of disaster management including strengthening of human capacity at all levels in disaster risk management and sustainable recovery.

The DRM Programme is aiming at strengthening of response, preparedness and mitigation measures through a variety of activities at various administrative levels. Considering the impact of DRM Programme activities, GSDMA included DRMP as a new scheme and made financial provision in state budget since 2007-08 considering implementation of exit strategy of UNDP in the year 2008. GSDMA started utilising state government resources and made necessary arrangements to maintain flow of DRM Programme activities across the state.

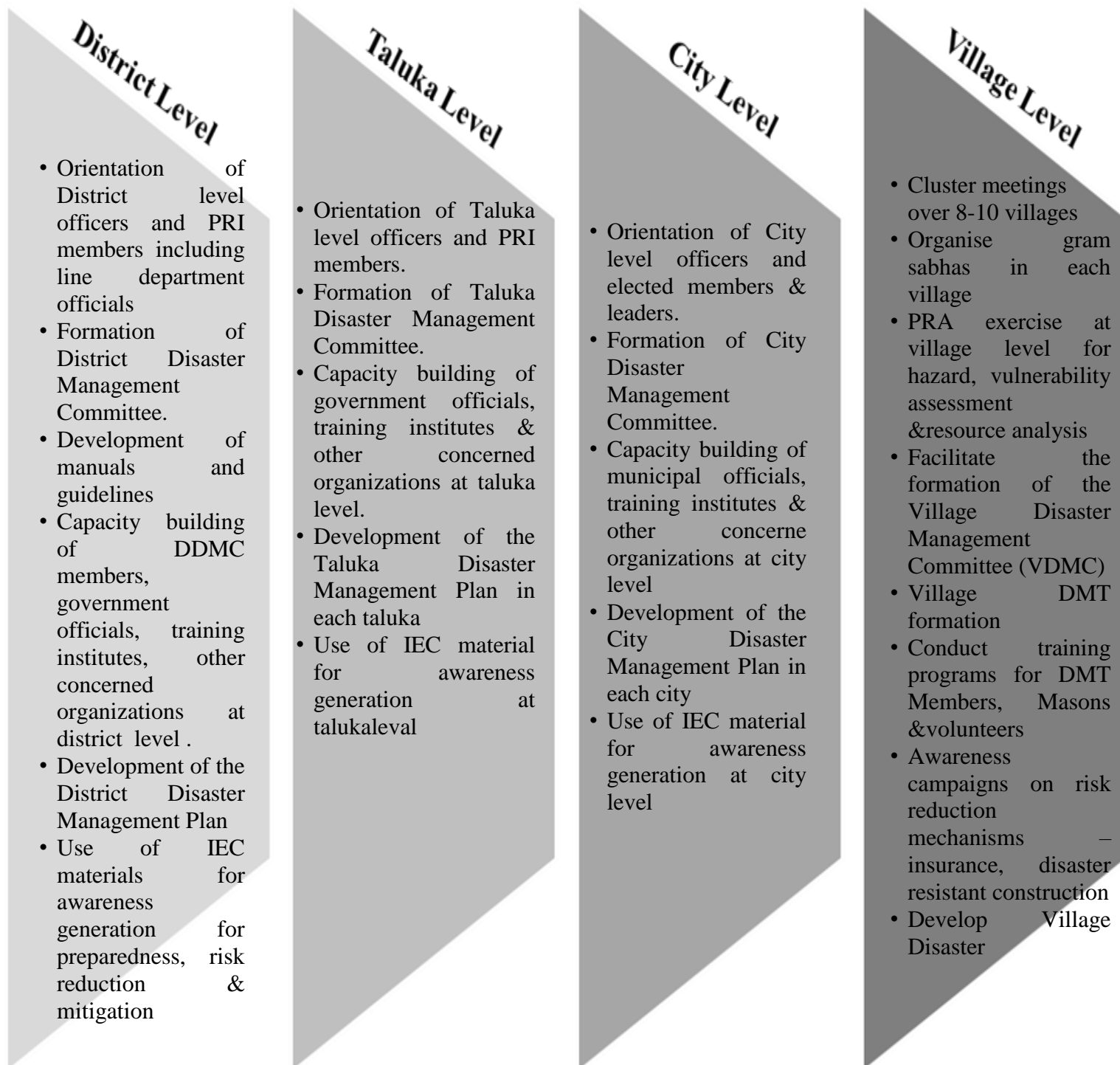
GSDMA focuses on disaster prone districts of the state for strengthening of response, preparedness and mitigation measures. In order to ensure effective implementation of programme activities, GSDMA has appointed District Project Officers (DPOs) at district level who is working under the direct supervision of the respective District Collector. The DRM Programme initiative includes:

1. Development of disaster risk reduction and response plan at each administrative level – Village, Municipality, Taluka and District.
2. Creation of Disaster Management Teams and Committees at various levels and their institutional capacity building through training and hardware resources.
3. Capacity Building for various stakeholders in different subject areas.
4. Updation of national and state level online database i.e. IDRN & State Disaster Resource Network respectively for disaster preparedness and management.
5. IEC materials development for awareness generation programmes as well as training and capacity building.
6. Manual development for trainers and practitioners at different levels.
7. Integration of disaster management plans in to the development plans of local self-governments.

## Chapter 4

### Preparedness, Prevention & Mitigation Measures

#### 4.3.1 Disaster Risk Management (DRM) PROGRAMME Level Specific Process:





## Chapter 4

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The training manuals for **Glimpses of DRM Programme in Bharuch District**

preparation of DM plans, including database formats for all the levels have been prepared in the local language and field tested. In Gujarat, model DDMP, TDMP, CDM, VDMP and WDM have been developed to help with the preparation of plans along with Standard Operation Procedure (SOPs). SOPs and manuals for first aid, Search & Rescue, CPR and first-aid pocket size booklets and handbooks have been developed for distribution to different DM teams. A series of twelve posters have been developed as training aids for S & R and F & A training programmes.



➤ Hazard Manuals for Earthquake, cyclone, flood and industrial accidents have been developed and distributed to all the taluka/village/city officials in the Bharuch district. In addition, leaflets and do's and don'ts along with safety tips addressing fire, tsunami, flood, cyclone, flood, and industrial and chemical hazards have been developed which are extensively used during orientation and training programmes..



## Chapter 4

### Preparedness, Prevention & Mitigation Measures



#### 4.3.2 State Disaster Resource Network: (SDRN)

SDRN is Web base data base system/portal and can be utilised for the DM related resource details/ information of Taluka, City and Village of whole Bharuch district. SDRN consist contacts related as well as resources related both types of details of the Gujarat State. This portal can be utilised from Taluka, District and from state level where GSWAN connectivity and through Internate is there. For utilisation of the same one can use with link.

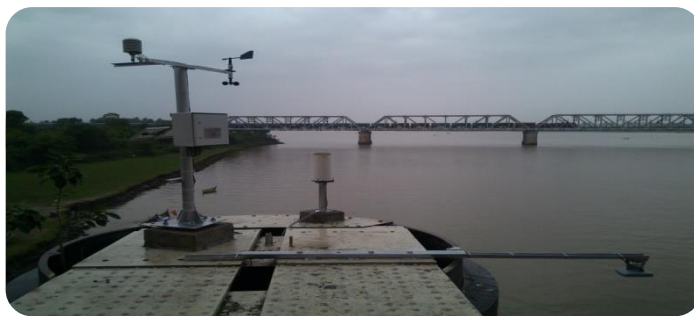
[www.gsdma.org](http://www.gsdma.org)

#### 4.3.3 India Disaster Resource Network : (IDRN)

IDRN is nationwide data base portal and utilised through district and from state and national level .IDRN consist online data base of equipments, skilled men power and critical supplies of whole nation.Thidata base can be utilised at the time of crisis; the hard copy of updated equipment related details is having with DEOC separately.For utilisation of the same one can use with link. Bharuch District stands second rank in India for



[www.idrn.gov.in](http://www.idrn.gov.in)



#### 4.3.4 Automated Weather System

The Automated Weather System is a wireless GSM / GPRS enabled station, and is useful for collection of weather data based on certain parameters. Along with collection of data, it automatically transmits this data to the internet, making real-time information available at your finger tips. This is a lowest energy consumption system, helps it run for days without charging.

##### **The Parameters measured Include:**

1. Temperature(Range- 40 to 123.8 ° C)
2. Relative Humidity(Range 0 to 100% )
3. Wind speed(Range 0 - 250 K mph )
4. Wind Direction(Range 0 to 359 ° )
5. Rainfall(Range -100mm / hour )

One can set trigger levels for these parameters and as soon as these trigger levels are breached, automatic smses can be sent to a pre-decided list of people, informing them about the possibility of a natural disaster. As per pre-defined preparatory roles of these people, preventive measures like evacuation, etc. can be undertaken promptly, to reduce loss of human lives and other damage.

Hence, as a part of comprehensive upgradation of preparedness measures undertaken by the District Administration, Bharuch, process has been started to establish these weather stations in each of the 9 Talukas of the District as well as the river sites of Narmada and Dhadar Rivers. This will go a long way in reducing response time to emergencies that arise.

#### 4.3.5 Disaster Alert and Resource Management by Application of Technology (DARMAT)

The large-scale DDMP updation exercise being carried out in Bharuch is a way to improve its preparedness measures. One of the most important parts of this updation exercise is the building of a GIS-based databank, which reflects the key vulnerabilities and resources of the district in a layered and multi-tiered format, and

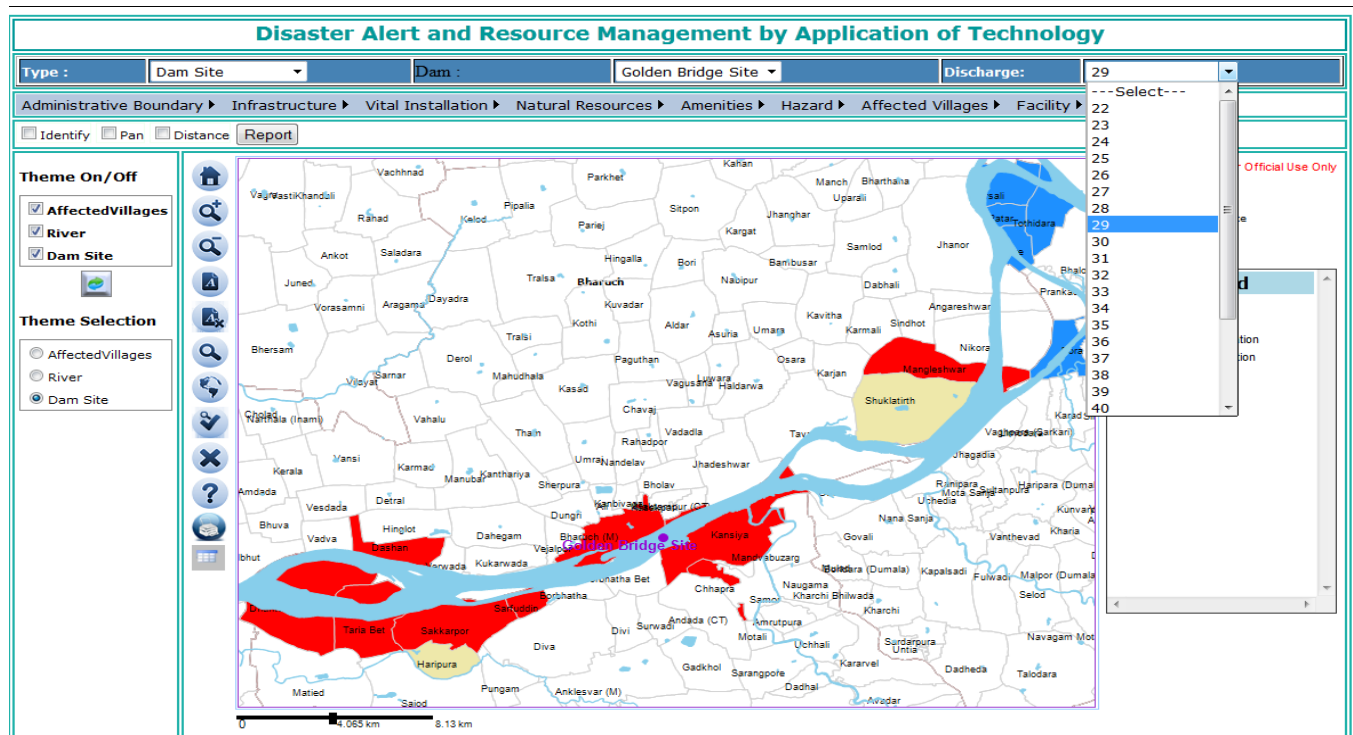


develops an SMS-based early warning system at the same time. Technology partner BISAG (Bhaskaracharya Institute for Space Applications and Geo-informatics) is instrumental in developing a software program called DARMAT (Disaster Alert and Resource Management by Application of Technology) as it has previously done in Rajkot district.

The software is a query-based platform, and one can enter the water level in a drop-down menu, and obtain the areas flooded and vulnerable villages as highlighted on a map. These areas are identified according to proximity with the river and vulnerability to flooding and this allows the District Administration to reduce delays in response and planning. Alongside, additional layers highlight the relief shelters, schools, hospitals, Primary Health Centres and other vital installations falling within these areas or in safe regions, allowing us to formulate strategies for evacuation and relief well in time.

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### Preparedness, Prevention & Mitigation Measures



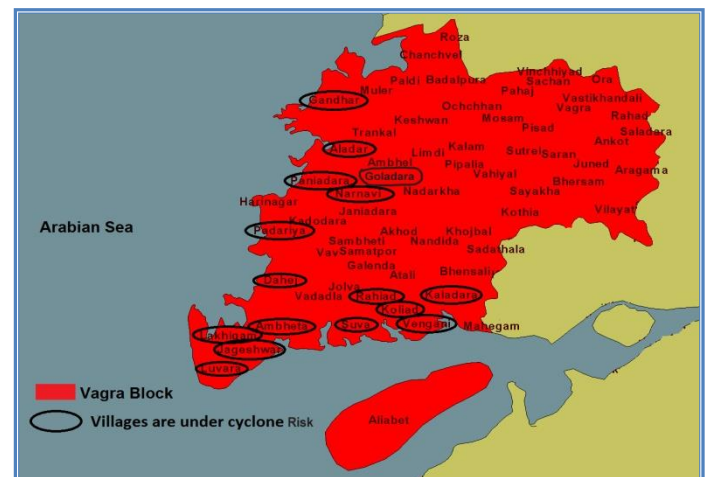
#### 4.3.6 Technological Preparedness Measures for Chemical and Industrial Disasters: CAMEO

Other technological innovations are setting up of a GIS-based system for Chemical and Industrial Disaster Management through open source software called CAMEO, MARPLOT and ALOHA. CAMEO means Computer Aided Management of Emergency Operations. This is computer software used for emergency planning, emergency response and managing chemical inventory at the concerned facility. This software stores all necessary information about chemical industries in a district, their location, category and quantity of stored chemicals, on-site emergency plans, safe routes for evacuation, details of safety officers and nodal people working in different factories, etc. Whereas MARPLOT locates the site where the emergency has arisen, ALOHA estimates the distance and direction of chemical dispersion and its concentration within this area.

#### 4.3.7 National Cyclone Risk Mitigation Project

The National Cyclone Risk Mitigation Project seeks to minimize vulnerability in the cyclone hazard prone states and Union Territories of India and make people and infrastructure disaster resilient, in harmony with conservation of coastal ecosystems.

Gujarat being prone to cyclones, it is the topmost priority of the State Government to reduce the effect of cyclone and minimize the loss of properties and lives in the coastal regions of the State through creation of suitable infrastructure. Gujarat has been included in the NCRMP initiated by the National Disaster Management Authority and funded by the

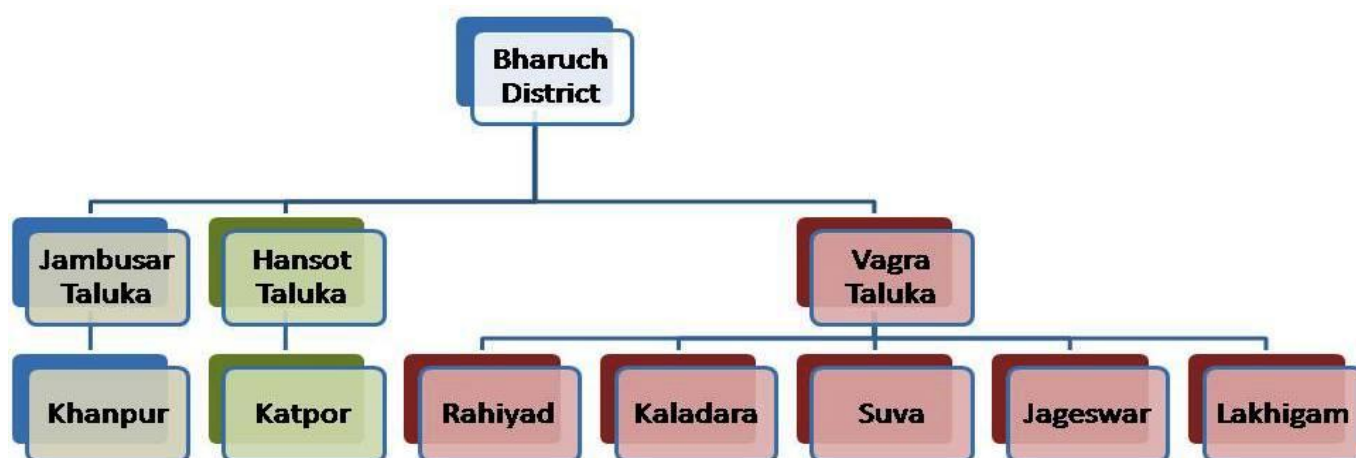




## Chapter 4

### Preparedness, Prevention & Mitigation Measures

- **Two important components**
  - Construction of Multi Purpose Cyclone Shelters (MPCS)
  - Construction and repair of missing roads will be implemented as part of NCRMP.



**In Bharuch District total 7 villages Identified for Cyclone Shelter**

Except Lakhigam all village land has been identified and worked in progress , as Lakhigam has no govt.

#### 4.4 Prevention and Mitigation Plan

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 District 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.

## Chapter 4

### Preparedness, Prevention & Mitigation Measures

#### 4.4.1 Mitigation Measures

**Structural Mitigation Measures for Flood** (Identified works of concerned Departments are indicative)

Probable Mitigation Measures	Identified Locations and Villages	Implementing Departments	Convergence with Scheme/ Program	Time Frame
Desilting and deepening of water chanel (kaans)	1.Dahej Rly crossing to Bhukhikhadi 2.Pakhajan to Kaladara 3.Galenda to Jolva, 4.Ora to Kharkhandali to Vichiyad to Badalpura	Irrigation and Rural Development	Departmental program & MGNREGS	2016-17
Construction of embankments/ protection wall	On coastal belt to reduce land erosion by sea water	Rural Development, Forest	Departmental program & MGNREGS, watershed	2016-17
Repair of embankments/ protection wall	Kaladara, Vengani, Suva, Koliyad, Rahiyad, Ambheta, Jageshwar, Dahej, Luvara	Rural Development, R & B	Departmental program & MGNREGS	Regularly
Repair and maintenance of Flood Channels, canals, natural drainage, storm water lines	Divert water from Bhukhi to Narmada from Karjan to Dabhoi	Irrigation department	Departmental or special plan	2016-17
Construction of Safe Shelters (new construction through Indira Awas, Sardar Awas and Ambedkar Awas)	Respective villages	Rural Development	Housing Scheme	Regularly
Protection wall and mangroves and vegetative cover against sea level intrusion and land erosion	Kaladara, Vengani, Suva, Koliyad, Rahiyad, Ambheta, Dakeshwar, Dahej, Luvara	Forest and Rural development department	Department schemes, MGNREGS, IWMP	2016-17
Desilting of water bodies like river and	Village ponds and Bhukhi river stream	Irrigation TDO Rural Development	MGNREGA and Land Development	2016-17

### Non-Structural Mitigation Measures for Flood

Non-Structural measures	Locations/ coverage area	Implementing Departments	Convergence with agency/program	Time Frame
Safety audit of existing and proposed housing stock in risk prone areas	Flood risk prone villages	TDO, Rural development	IAY, SardarAwaas and other rural housing schemes	Regularly
Promotion of Traditional, local and innovative practices like bamboo/plastic bottle rafts etc	Flood risk prone 17 villages	TDMC, SHGs and youth groups, NGOs	Training and capacity building plan for disaster management	2016-17
Capacity building of volunteers and technicians	Flood risk prone 17 villages	TDMC	Training and capacity building plan for disaster management	2015-16
Awareness generation on health and safety of livestock	Flood risk prone 17villages	Block veterinary officer, rural development	Departmental Scheme	Regularly

### 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	Cyclone prone 43 villages	Forest department, Port Authority, DIC, TDO,Rural development department	Departmental schemes, MGNREGS	2016-17
Identification and repair/ retrofitting of houses and buildings unsafe for cyclone		R&B (ZilaPanchayat)	Departmental Scheme	Regularly

Note: Jageshwar, Rahiyad, Suva, Kaladara, Khanpur&Katopar have been taken up in National Cyclone Risk Mitigation Program. (NCRMP)



### 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	Cyclone prone 43 villages	DDMC, TDMC		Regularly
Training and awareness generation for use of safety jackets/rings/buoys/rope etc for fisher folks		DDMC, TDMC, VDMC	TDMP	2016-17
Enforcing strict compliance to coastal regulation zone		Department of Environment & Forest		2016-17
Registration of fishing boats		Fisheries Department		2016-17
Regulate and issue orders for poor quality hoardings/buildings or any other objects		R&B Department		2016-17

### 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	Whole District	R & B (State and Panchayat), Panchyat, Rural department		2016-17
Retrofitting of unsafe rural houses		DDMC,DDO	Rural housing schemes and departmental programs	2016-17
Identifying and safely dismantling unsafe structures		R & B department		2016-17

### Non-Structural Mitigation Measures for Earthquake

Non-Structural measures	Location/ coverage area	Implementing Departments	Convergence with agency/progra m	Time Frame
Capacity building of architects, engineers and masons on earthquake resistant features	Whole district	R & B (State and Panchayat), DDMC		2016-17
Registration of trained and certified mason		R & B (State and Panchayat), DDMC		2016-17
Strict enforcement of guideline pertaining to seismic safety for government rural housing		DDO	Rural housing schemes	2016-17
Mock-drills for Schools, Hospitals and , Public Buildings and trainings for mason, engineers and architects		DDMC, Schools		2016-17

### 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, TDMC, LCG , GPCB		Regular interval
Safety assessment	Carry out structural safety inspection/audit	DISH, DCG, LCG( Dy. Industrial safety and health)		Regular interval

### Industrial (Chemical) Non-Structural Measures (in coordination with LCG, DCG, district and state level authorities)

Non tructural Measures	Activities	Implementing Departments	Convergence Agencies	Time Frame
Planning	Prepare an onsite and offsiteemergency plan	Occupier, DISH		2016-17
	Conduct mock drills as per the regulations	DCG, DISH and LCG		regular interval
	Update the plan as per the	Occupier, DISH		regular interval

Non structural Measures	Activities	Implementing Departments	Convergence Agencies	Time Frame
	requirement			
	Monitor similar activities in all the factories/ industries	DISH and LCG		regular interval
Capacity Building	Develop IEC material for Publication & Distribution	DDMC,TDMC		2016-17
	Awareness generation to general public and medical professional residing near MAH factories for immediate steps	DDMC,TDMC, LCG		2016-17
	Organize training programmes, seminars and workshops (e.g. for drivers of HAZMAT transport, line departments officers, Mamlatdar etc)	DDMC, TDMC, LCG		2016-17
	List of experts/ resource person/ subject specialist (District emergency Off site plan)	DDMC, TDMC, LCG		2016-17
	Encourage disaster insurance	Labour& employment department		2016-17
Medical	Listing of hazardous chemicals and gases.	Occupier, DCG, LCG, DISH, BHO		2016-17
	Keep check on availability and validity of relevant antidotes for chemical hazards prevalent in District	Occupier,DCG, LCG, DISH, BHO		2016-17
	Workshops and trainings for medical professionals to handle potential chemical and industrial hazard	BHO, DCG, Occupier, LCG, DISH		Regularly
Compliance	Environmental Protection Act, Factory Act, Mutual Aid SOPs	DISH , GPCB		Regular interval
	Any other			

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, Manager DMC Dahej & Ankleswar and to name a few. At Taluka level Local Crisis Management Group (LCG) is formed for coordination of activities and execution of operations.

#### 4.4.2 Mainstreaming Disaster Risk Reduction (DRR) in Development Context

Mainstreaming DRR concerns in development planning can guide the allocation of resources towards the protection of life and assets, restoration of productive systems and livelihoods, regaining market access, rebuilding social and human capital and physical and psychological health. Development plans therefore take on a critical role in disaster risk management. The process of mainstreaming DRR into development planning needs to have appropriate tools and methodologies along with political commitment, public understanding, scientific knowledge and expertise.

National and state level development schemes play a crucial role for the socio-economic development of the community. These schemes target huge population every year with large amount of funds for their implementation. Thus, there is tremendous potential for reducing vulnerability & risks through integration of DRR in national schemes through structured framework and operational measures

Some key measures at policy level and delivery mechanism that can be incorporated in these national and state schemes are tabulated below. *(DDMC should emphasis on these issues in periodic meeting and incorporate relevant activities in the DDMP)*

##### Scope of integrating DRR in development schemes

(Suggested for Departments and schemes to incorporate in their plans)

Sector/National and State Schemes	Action Points (Probable)
<b>Housing and public buildings</b> 1. IAY (Indira Awaas Yojana) 2. Sardar Awaas Yojana 3. Other Housing Programmes	<ul style="list-style-type: none"> <li>• Safety audit of existing housing stock</li> <li>• Establishing Technology Demonstration Units for public education and awareness.</li> <li>• Certification of masons and creating database of master trainers.</li> <li>• Strengthen compliance and enforcement procedures of local building laws in the hazard prone areas</li> <li>• Adding construction elements for special needs groups in design and planning of all public buildings and mass housing projects</li> </ul>
<b>Water and Sanitation</b> 1. National Rural Drinking Water Programme (NRDWP) 2. Swajaldhara and WASMO Projects, 3. Total Sanitation Campaign	<ul style="list-style-type: none"> <li>• Rainwater Harvesting</li> <li>• Water recharge and conservation</li> <li>• Flood mitigation- retaining wall, strengthening embankments etc</li> </ul>
<b>Employment and NRM</b> 1. Pradhan Mantri	<ul style="list-style-type: none"> <li>• Prioritising and taking up works for flood control drought proofing</li> </ul>

## Chapter 4

### Preparedness, Prevention & Mitigation Measures

Sector/National and State Schemes	Action Points (Probable)
GramodayaYojana(PMGY) 2. Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) 3. Integrated Watershed Management Programme (IWMP)	<ul style="list-style-type: none"> <li>Land development including plantation</li> <li>Revival of traditional water harvesting structures including treatment of catchment</li> </ul>
<b>Health</b> 1. NRHM(National Rural Health Mission) 2. Food for Work Programme (FWP) 3. National Food Security Mission (NFSM) 4. GVK EMRI 108 Ambulance Service State AIDS Control Programme	<ul style="list-style-type: none"> <li>Developing emergency plans and conduct mock drills in hospitals</li> <li>Developing projects on community monitoring and reporting in major health and food security schemes.</li> </ul>
<b>Education</b> SarvaSikshaAbhiyan (SSA)	<ul style="list-style-type: none"> <li>Upgradation of infrastructure for DRR,</li> <li>Special needs of vulnerable groups including disabled children in design of school building, amenities and learning processes</li> <li>Development and dissemination of learning material on risk awareness, preparedness and preventive measures in school</li> <li>Curricula and integration of DRR modules in the regular training course of the “Teachers Training Institutes”</li> <li>Training in life saving skills such as first aid, search and rescue, swimming to the school children, teachers and education administrators</li> <li>Preparing disaster preparedness plans and conducts mock drills through School Management Committees (SMC).</li> </ul>

#### 4.4.3 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 RashtriyaSwasthyaBimaYojana, AamAdmiBimaYojana 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)*

#### Institutional Plans

**Each line department and important institutions at Taluka level should have disaster management plan in coordination with DDMC. The plan shall be comprehensive and include aspects of mitigation, preparedness and response.**

The objective of the plan will be to: –

- Identify risks, vulnerabilities and capacities within the school premises
- Identify potential support agencies near the school.
- Prepare an action plan for capacity building- schedule of trainings, mockdrills
- Prepare evacuation plan for emergency,
- Enlists procedures and measures for all round safety: fire, labs etc
- Generate data bank, which will have important contact numbers, contact persons, etc.
- Prepare stock pile of life saving tools, medicines/first aid, clothing material

A Taluka level forum for safe schools should be promoted to enhance peer to peer learning process and share experience and good practices for safe schools.

#### **Departmental Information (linkages with other stakeholders):**

The mitigation strategy of the district plan can be linked to the Indira AwasYogna to ensuring that all new houses that are built contain seismic safe features and the mason's building these houses are trained in seismic safe construction. This is one example, other examples are: flood and cyclone shelter to be constructed from the existing developmental Programme, rising of the platform of school building etc. some of them are listed:

1. Raising platform for new building in low lying or flood prone areas.
  2. Alternate income generation activities to the risk group through District Panchayat's Sakhi Bachat Mandal and Self help Groups.
  3. Raising the platform of tube well in flood and cyclone areas.
  4. Strengthening and abiding the local coping mechanism.
  5. Construction of high raised platforms from Forest for animal resources.
  6. Road & bridges to be constructed and repair based on to reduce the vulnerability.
  7. Provision of communication facility to the vulnerable areas.
  9. Developing the skill and capacity of various DMTs to meet the disasters.
- Linking of the departmental plans with long term developmental activity in the district as well as regular updating and mock drills can ensure long term sustainability.



## Chapter 5

# Recovery Measures





Disaster recovery is viewed by some people as a fight against nature to restore order in a community. However, the disaster recovery process is not a set of orderly actions triggered by the impact of a disaster upon a community. Rather, disaster recovery is a set of loosely related activities that occur *before, during and after* a disastrous event. These activities can include:

- Warning and Public Information
- Evacuation and Shelter
- Search and Rescue
- Damage Assessment
- Debris Clearance, Removal and Disposal
- Utilities and Communications Restoration
- Re-establishment of major transport linkages
- Temporary housing
- Financial management
- Economic impact analysis
- Detailed building inspections
- Re-development planning
- Environmental Impact Assessment
- Demolition
- Reconstruction
- Hazard mitigation; and
- Preparation for the next disaster.

Recovery has two phases i.e. Short term and Long term Recovery. Class I officers from various line departments are deputed as Liaison Officers for each Taluka, and they are responsible for monitoring and working with the local administration in both phases of recovery operations under the guidance of the District Collector.

Search and Rescue, Damage Assessment, Public Information, Temporary Housing, Utility Restoration and Debris Clearance are essential elements of short-term recovery. The efficacy of their implementation affects long-term decisions.

Long-term recovery begins when a community starts to repair or replace roads, bridges, homes, and stores. It is also the period where improvement and changes for the better such as strengthening building codes, changing land use and zoning designations, improving transportation corridors and replacing “affordable housing” stock are considered. Whether they are considered during pre-disaster planning or short-term post-disaster recovery, it is during the long-term recovery period that most changes in pre-existing conditions can and do occur. Changes that include sustained efforts to reduce loss of life and property from the next disaster, such as changes to building codes and land use designations are examples of mitigation.

#### **5.1. Immediate and Short Term Recovery**

**Detailed damage & loss assessment**  
While a preliminary damage assessment is carried out during disaster phase, a detailed assessment must be conducted before commencing reconstruction and rehabilitation activities. The relevant Government departments and local authorities shall initiate detailed assessment at their respective level for damages sustained in housing, industry/services, and infrastructure, agriculture, health / education assets in the affected regions. Immediate recovery can continue from a day to two months, depending upon the extent of damage.

#### **5.1.1) Restoration of Basic Infrastructure**

The restoration of basic infrastructure is to put the most essential infrastructure back in place after the disaster.

##### **a) Roads and Bridges**

This covers construction of all critical roads and bridges necessary to provide connectivity with immediate effect. It can be National Highway or village roads to link with main roads and health centers, or construction/restoration of bridges that can be the only point of accessing Talukas & villages.

Responsible Department: R & B (State & Panchayat)

##### **b) Drinking Water Supply**

Restoration of Drinking Water supply has to be done by setting up of new hand pumps, tube wells or setting up of piped water supply in areas with no access to potable water. In case of floods, setting up of raised hand pumps is required.

Responsible Department: Electricity Department & Water supply Department

**c) Electricity:** Restoration of power supply is also critical to immediate recovery.

Responsible Department: Electricity Department

**d) Communication Network:** In times of disasters, communication networks may be disrupted. The networks of mobile services providers have to be put back in operation at the earliest to make search and rescue easier, as well as to expedite coordinated response measures.

Responsible Department: BSNL & Mobile Service Provider, Electricity Department

##### **e) Reconstruction & Repair of Lifeline Buildings**

Lifeline buildings are those necessary to keep the administrative machinery functioning despite the damage by disaster. The following buildings have to be repaired on priority:

- Collectorate
- Line Department Buildings
- Block Offices
- Hospitals

##### **f) Rehabilitation**

In case there is a major damage from earthquake or flooding, a large segment of the population may have to be rehabilitated to new locations on a temporary basis. There may be a need of permanent relocation in case of the change of river course. Communities will have to be supported with relief shelter.

#### **g) Mass Care/Sheltering and Housing**

The management of relief shelters is continued from the response phase to the immediate recovery phase and done through Incident Command System. The Incident Commander oversees the operations while the Relief Camp Manager manages the shelter. During this period, the number of victims must be identified for whom construction of houses under Indira Aawas Yojna & Sardar Aawas Yojna shall be sanctioned.

#### **h) Food**

Supply of food in relief phase is more important. It becomes important to elicit support from various NGOs, Grain merchants and volunteers.

#### **i) Debris Removal and Disposal of Dead Bodies**

We should remove debris or trees from transportation routes for effective rescue and relief measures. Dead bodies of humans and animals may be found in the debris and hence the Health & Animal Husbandry Department works in tandem with debris removal agencies.

#### **j) Drainage and Sewage**

Drainage and sewage systems will have to be quickly re-established to decrease inundation from floods, spread of diseases and epidemics and maintaining hygiene.

#### **k) Health Care**

First Aid and Emergency Health care has to be provided at the earliest. In case the health care centers are affected by the disaster, temporary medical relief camps need to be installed while the building is retrofitted or reconstructed. Reconstruction of buildings has to begin in this phase. Mobile Medical Units (MMUs) have to be pushed into action for immediately health care close to the community.

#### **l) Livelihood Recovery**

Livelihood interventions will happen over to three different overlapping phases, i.e. Livelihood Provisioning, Livelihood Protection and Livelihood Promotion. The first two phases shall form part of the Immediate & Short Term recovery, while the third shall form a part of Long Term Recovery.

**1. Livelihood Provisioning:** Providing critical food and non-food items in the form of relief is necessary for survival. This will focus on disbursement of food and health services for chronically vulnerable people during the emergency.

**2. Livelihood Protection:** Protect, replace and rebuild the productive assets needed to sustain a pre-existing or new livelihood.

i) Cash doles: Some amount of cash assistance should be given for self-directed delivery by the victims. Individual loans and community block grants shall be extended to build local earning assets

ii) Material Assistance: In case where replacement of crucial assets or fresh requirement of some resources is crucial and not easily available in local markets, material assistance shall be provided. For instance, distribution of seeds to farmers can be done.

#### Mitigation Activities

As a part of conducting a detailed damage and loss assessment, an assessment of prospective risks and vulnerabilities will also have to be done. For example, refurbishing of embankments or retrofitting of houses and other buildings...recently Bharuch District has been covered in the NCRMP project.

#### B. Long Term Recovery

Long-term recovery must be complete in 2 months to 24 months time.

##### i) Housing

Development of permanent housing solution for victims will happen during this period. The construction of houses for victims identified under Indira Aawas Yojana and Sardar Awas Yojna shall be undertaken during this time.

### **5.1.2 Reconstruction and Repair**

#### a) Infrastructure

Restoration of social infrastructure has to be done to reinstate the normal functioning of district infrastructure. Schools & Hospitals will have to reconstructed and repaired in this recovery phase.

Re-establishment of disrupted health care services will have to be done at the earliest.

Responsible Department for Hospitals: Health Department & R & B

Responsible Department for Schools: Education Department & R & B

#### b) Economic Infrastructure

Restoration of economic infrastructure (Banks) is essential for accessibility of money and the smooth functioning of the economy of the district. Unless addressed, it severely affects the livelihood and employment potential of the district. Thus, bank buildings shall be quickly instated.

#### c) Livelihood Recovery

Final phase for livelihood recovery is a part of long-term recovery initiatives.

i) Livelihood Promotion: To initiate and strengthen livelihoods to be more economically and environmentally sustainable as well as more resilient to future disasters.

In this long term recovery effort, focus is on **livelihoods diversification**, creation of alternate income generating activities, providing financial services such as loans and insurance, and strengthening forward linkages with markets for existing and new livelihoods.

- i) Microfinance Services: Micro-credit (small loans) shall be provided to repair or replace critical livelihood assets, finance existing debts or for developing new livelihoods.

ii) Micro-insurance: Providing small-scale insurance at low premium for providing payouts on the occasions of emergencies. Insurance of livestock shall also be facilitated.

### 5.1.3 Restoration of Essential Services and Infrastructure

**The following tables are to be filled after an event of disaster:**

#### **Power**

Item/Services	No. of unit damaged	No of villages affected	Population affected	Recovery measures	Implementing agency	Tentative Duration (Months)
Feeder						
Transformers						
HT Lines						
LT Lines						
Electric Poles						

To be planned after initial damage assessment by departments

#### **Health**

	PHC (village name)	CHC	Sub Centre	Drug Store	Recovery Measures	Implementing agency	Tentative Duration (Months)
No of buildings damaged							
No of health centres inaccessible							
Refrigeration and other vital equipment for storage							
Drugs and medicines perished	(Location and qty)						
No of Ambulance damaged							

To be planned after initial damage assessment by departments

## 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)

## Water Supply

Type	Village	No. of unit affected	Faliya/ Population affected	Recovery Measures	Implementing agency	Tentative Duration (Months)
Well						
Borewells						
Pond						
Water Supply Disrupted						
Contamination						
ESR damaged						
GLR Damaged						
Sump damaged						
Pipe lines damaged						
Standpost damaged						
Cattle trough damaged						
Handpump						

## Road and Transport

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

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

### Communication

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

### 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)
Civil Supply							
APMC							
Other							

### Housing

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



## Chapter 5 Recovery Measures

### Public Utilities

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

### 5.1.4 Restoration of Livelihood Provisioning of Employment

Occupational category	No. of workers	Implementing Agency	Tentative Duration (Months)
Skilled labours			
Unskilled and , Agricultural labours			
Small and marginal farmers			
Construction workers			
Salt pan workers			
Fisher folk			
Weavers			
Other artisans			

### Land Improvement

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

### Agricultural

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

## Chapter 5

### Recovery Measures

#### Non-farm livelihood

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

#### Shops and establishment

Extent of damage/disruption			Recovery Measures	Implementing Agency	Tentative Duration (Months)
Building (No. and location)	Tools and equipments (Specify no. and type)	Goods and materials (Specify type and qty)			



## Chapter 6

# Financial Arrangement



## **6.1 Sources of Funds**

### **Funds available at the National and State Level**

1. **The Ministry of Finance** has allocated funds for strengthening Disaster Management Institutions, capacity building and response mechanisms, as per the recommendation of 13<sup>th</sup> Finance Commission.

#### **2. Prime Minister's Relief Fund:**

At the National level, Prime Minister's Relief Fund was created shortly after Independence with public contribution to provide immediate relief to people in distress for:

- a. Immediate financial assistance to victims and next of kin.
- b. Assist search and rescue.
- c. Provide Health care to the victims.
- d. Provide Shelter, food, drinking water and sanitation.
- e. Temporary restoration of roads, bridges, communication facility and transportation.
- f. Immediate restoration of education and health facilities.

#### **3. Chief Minister Relief Fund:**

At the state level, provisions have been made to provide immediate support to the distressed people affected by natural calamities and road, air and railways accidents under the Chief Minister's Relief Fund.

#### **4. Calamity Relief Fund**

To provide for relief for famine, drought, floods and other natural calamities, funds are provided in the state budget under the head “**2245-Relief on account of Natural Calamities**”. Besides establishment charges, funds are provided for the grant of gratuitous relief in the shape of concessional supply of food, cash payment to indigent persons, cash doles to disabled supply of seed, fodder, medicines, prevention of epidemics, provision for drinking water, transport facilities for goods and test relief works. Funds are also provided to meet unforeseen expenditure in connection with the natural calamities and other allied purposes.

## **6. Finance and Budgeting**

Budget planning is a comprehensive exercise for annual financial planning. For Disaster Management, there can be two categories of budget heads—

- a) Line Department's own fund through various schemes and programmes;
- b) Additional budget required particularly for DM activities.

## Chapter 6

### Financial Arrangement

The following are the sources available (or to be tapped) for different components of disaster management:

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	TrainingAwareness GenerationIEC material Mock drills	Revenue Department
State Fund	Capacity Building	100% State	TrainingAwareness Generation IEC materialMock drills	GSDMA
Line Department funds	Preparedness and mitigation	Line department budgetary allocation	Activities falling in purview of departmentsfor DRR, Preparedness and mitigation	Line Departments
District Planning Fund	Any public works	MP and MLA aid and grants	Preparedness, Mitigation capacity building, recovery	LocalBodies, Line departments
External Institutional Funding	Projects on DRR, Recovery, Mitigation and Preparedness	Total external or bilateral or multilateral arrangements	Infrastructure upgradation Technological interventions and technical studies DRR projects	Revenue Department
Donor	Any	Total donation in cash and kind	Any	DDMA/TDMA
CSR	Corporate	2 % of profit	Any	Charity Commissioner and Corporate
Appeal	Immediate relief	Fully or partially external funds	Immediate relief, reconstruction	DDMA/TDMA

At the Taluka level, the budgeting for various activities should be planned and incorporated in the TDMP or the Taluka Disaster Management Plan after aligning itself with respective activities of line departments and other agencies. The activities proposed in various sections of this plan (mitigation, capacity building, recovery, etc.) need to be budgeted and reflected in the following format. The Budget source column indicates tentative source of funding (it may be line department funds or additional funds from above mentioned sources)

#### Budgetary requirement of Human resource and materials (tools, equipments and plants)

Requirement resource	Human	Specification	Remarks
1. Taluka level Staff (Manpower)		Full time person responsible for facilitating for Relief & Response work	Salary as per govt. norms
1.		As per Requirement	



## Chapter 7

# Maintenance Plan





#### 7.1 Introduction

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 lessons learnt thereof. This is a method of identifying the gaps and putting in place a system to fill the same. Regular updating of stakeholder details, contact numbers and resource inventory is another inherent and essential function of plan maintenance.

The District Administration, Bharuch constituted a special committee under the Supernumerary Assistant Collector, with designated nodal officers for the same in 2013 to undertake an overall updation exercise of the DDMP. Vulnerabilities newly brought to the attention of the district administration as a result of the disasters in Bharuch in the last year and lessons learnt have been incorporated. Detailed meetings with Line Departments and Nodal officers have also brought forth important lessons for Disaster Risk Mitigation and Reduction. These will be incorporated in this plan, and put up for discussion for dovetailing with development plans in the district. This will ensure that the element of Disaster Mitigation achieves due attention in all important aspects of administration.

#### 7.2 Plan Testing

The Commissioner of Relief and the Collector shall prepare, review and update the District level Disaster Management plan as provided for in the GSDMA Act (Section 22 (1) (C)). He/She shall also ensure that disaster management drills and rehearsals are carried out periodically.

While updating the plan the following aspects need to be considered by the Collector every year:

- i) Critical analysis of the outcome of exercises & mock drills as part of plan testing.
- ii) Incorporation of lessons learnt in the updated plan as a result of recommendations received from different stakeholders and as a result of mock drill exercises conducted.
- iii) Regular updation of the resource inventory and key infrastructure available in the district, and their updation on the SDRN.

The plan must be thoroughly tested and evaluated on a regular basis, at least twice a year. The plan testing should preferably be organized on the first Monday in the months of April and October every year.

After plan testing and incorporation of lessons learnt, the Collector should send a copy of the revised and updated plan to the following officials:

- (a) Chief Secretary, Government of Gujarat
- (b) Chief Executive Officer, Gujarat State Disaster Management Authority
- (c) Principal Secretary, Revenue Department
- (d) Head of all Line Departments
- (e) State Emergency Operation Center
- (f) District Emergency Operation Center
- (g) Taluka Officers

- (h) ERCs
- (i) IMD
- (j) CWC/ACWC

The main objectives of plan testing are to:

- (i) Determine the feasibility and compatibility of back up facilities and procedures.
- (ii) Identify areas in the plan that need modification.
- (iii) Identify training needs of key stakeholders.
- (iv) Assess the ability of the organization/department to respond to disaster threats.

All departments that have specific roles and responsibilities in the DDMP must have a system to ensure that all Officers of their departments who have a specific role to play are fully conversant with their responsibilities/tasks.

### ***7.3 Debrief and Evaluation-Mock Drills***

- After the mock exercise, debriefing and evaluation is very important. It is of critical importance that insights are collected from participants and use them to modify the plan.
- Debriefing is very effective as it is carried out immediately after the exercise. It also includes documentation in terms of recommendations and improvements of the plan.
- The lessons learned from the mock exercise are likely to be similar to those from real events. The only major difference is that exercises are controlled events, specifically designed to test procedures and they can be repeated again and again until sound/workable arrangements are in place.

### ***7.4 Review / Updation of Plan***

The Disaster Preparedness and Response Plan should be reviewed and updated regularly, based on inputs as under:

- (a) Drills and Rehearsals
- (b) Recommendations from all Depts. in their Annual DM Report
- (c) Lessons learnt from Disasters in other Districts, States and countries
- (d) Directions from GSDMA, Ministry of Home Affairs, NDMA, Government etc...

GSDMA and all other concerned Depts. should encourage formal and informal interaction with various stakeholders at different levels to learn and document their experiences, so that such experiences can contribute constructively towards updation of the DDMP for further improving the capacity and capability to deal with future Disasters.

### **Yearly Updation:**

The Collector can, once a year, before the onset of the monsoon season, review in the monthly RO and Coordination Committee meetings, the level of disaster preparedness of different agencies and Line Departments. The Collector can direct Line Departments to submit plans of works executed during that year and add the relevant ones to their documentation of works undertaken under Disaster Risk Reduction.



## Chapter 8

### Past Incidents - Experience



### **8.1 Flood Situation (23/8/2013 to 28/8/2013)**

Heavy rain took place in catchment area of Narmada River from the mid august and as a counter effect water released from Sardar Sarovar Narmada Dam at Kevadiya colony so heavy flood raised in low lying areas of old Bharuch and Ankleshwar city and villages near shore area in Bharuch District from 23/8/2013 to 28/8/2013 .Narmada river was flowing between 7 to 10 feet above the danger level from 23<sup>rd</sup> August to 26<sup>th</sup> of August.

#### **Past Incidents Surrounding Pipelines and Measures Undertaken:**

- On 25<sup>th</sup> August 2013, there was explosion in the DUPL natural gas pipeline of GAIL and breakage in the 26" gas pipeline of RIL. This was followed by incident of oil leakage in the ONGC pipeline on 28<sup>th</sup> August 2013.
- District Administration issued an order of immediate shutdown of all pipelines in Bharuch District. District Crisis Group (DCG) Meeting was called on 26<sup>th</sup> August 2013; all pipeline operators were asked to verify structural safety of their pipelines and submit safety undertakings.
- On 31<sup>st</sup> August 2013, a show-cause notice was issued to ONGC by the District Administration for non-compliance of safety conditions and failing to give notice of incident. GPCB also issued notices to GAIL, RIL for failing to intimate the concerned authorities about the incident and lapses in safety procedures.
- On 1<sup>st</sup> September 2013, an Independent High-Level Technical team, i.e. M/S CEIL, Mumbai appointed by Energy & Petrochemical Department. Crude oil trapped in river section was displaced by ONGC. ONGC also conducted churning of oil in affected area by boats up to 13<sup>th</sup> Sept 2013
- Review and policy meeting was organized by GSDMA on 22<sup>nd</sup> November 2013 to discuss policy vacuum and multiplicity of laws and agencies granting ROU to pipeline operators.

As soon as the flood forecasting received from CWC, TAPI Division Surat prompt necessary action for evacuation of people from nearby villages and low lying area in Bharuch city started. 4 Quick responses Team each at Bharuch and Ankleshwar kept in standby to cope with any emergency flood situation. Two team of fire fighters from Surat Municipal Corporation also deployed in each city. More relief team called as per situational demand. 2 teams of NDRF, 4 Fire fighters team from AMC and 2 companies of SRP was called. Nearly 17000 people evacuated and relocated to relief camps at the same time around 5600 livestock also evacuated. Food packets, pure drinking water provided in relief camps, quality of food was also checked by the team of food & drugs authority.

As far as situation improves Medical & paramedical teams were given task to quick & prompt action required to take preventive measures for health and sanitation in affected areas. Team of Sweepers had also been called from SMS and VMC for quick cleaning of villages and societies affected due to flood water. Total 9 human casualties registered.

Necessary instruction was given to respective officers for requirements of equipments for cleanliness and dewatering of affected area. Chlorine tablets for purification of water and medical paramedical team formed by CDHO to cope with after flood situation. Vaccination has also been done to the livestock as per requirements.

Survey for cash dolls assistance to be provide to affected people started by forming teams. And payment to the affected also started and around 200 relief kits distributed by leading industries of Bharuch district.

22 Teams formed by District Agriculture Officer to do quick survey of crop loss due to flood and as per primary report minor to major crop loss observed in around 14900 hectors of land. Team also formed by Gujarat Land Development Corporation for soil erosion survey and around 155 hectors of soil erosion found.

## **8.2 Experience Sharing: Flood Situation (22/9/2013 to 26/9/2013)**

Due to heavy rainfall across Bharuch district as well as the catchment area of Narmada River since 22<sup>nd</sup> September 2013, a serious flood situation had arisen in Bharuch. Narmada river was flowing 9.5 feet above the danger level as measured at the Golden Bridge on 24<sup>th</sup> September and on an average, 458.75 mm of rainfall was registered during 22<sup>nd</sup> to 25<sup>th</sup> December. A natural way of this rainwater being diverted to the river was hence not possible.

A total of 10 human casualties were registered during this disaster situation in Bharuch district. Water ingress was recorded in 77 housing societies of Bharuch city and outskirts. 46 different roads under the Panchayat department, of the length of 307 km were found damaged; and at the same time, 82 km of State highways were also damaged at seven different locations. In all, 35139 people were evacuated and accommodated in temporary shelters and 74 relief camps. 6502 Live stock were also relocated.

For rescue operations, 4 Teams from NDRF were called. 6 fire-fighter teams from Ahmadabad Municipal Corporation, 2 teams from Rajkot Municipal Corporation were also called with their rescue equipments for timely rescue operations. All teams were promptly deployed wherever required in the district. The road between Aamod and Jambusar had been cut off by floodwater, necessitating our seeking the Army's help; their heavy vehicle was deployed for rescue work in Jambusar and Aamod Taluka.

In total, 163 Medical & paramedical teams were directed to take quick & prompt action for preventive measures for health and sanitation in affected areas. At the same time, the distribution of cash dole assistance was also undertaken by deploying 34 teams. A total of 37 buildings found dangerous during inspection by the teams of R & B Engineers were also evicted as a precautionary measure.

Representatives of Oil/Gas pipeline operators like ONGC, IOCL, GSPC, GAIL and Reliance were called by District Administration and instructions were issued to them for safe operation of their respective lines. Instructions were also issued to DPMC Ankleshwar, DMC Dahej and various Industries' Associations to take proper measures and precautions for safety. Parts of the National Highway passing through Bharuch district was found damaged at various locations, resulting in heavy traffic jam on the National Highway. Hence, from 25<sup>th</sup> September 2013, the toll collection at Narmada Bridge was withdrawn till further communication.

Moreover, during the course of this disaster, storm water accumulated near 220 KV substation of GETCO near Haldarava village, and due to absence of any way to drain off this water, power supply to Bharuch city was cut off. On 25<sup>th</sup> September 2013, rainwater was manually drained off with the help of JCB machines. A similar situation occurred in the 66 KV Substation in Palej causing shutdown of operations there. For this purpose, a heavy-capacity dewatering pump was provided and operation was restored immediately.

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# **Chapter 9**

## **Mass Rescue Operation (MRO) at Sea**



A mass rescue operation (MRO) is one that involves the need for immediate assistance to large numbers of persons in distress such that capabilities normally available to search and rescue (SAR) authorities are inadequate.

Fortunately, MROs are relatively rare compared to normal SAR operations, but major incidents leading to the need for MROs have not been infrequent on a world-wide basis, and can occur anywhere at any time. Since the nature of such operations may be poorly understood due to limited chances to gain experience with major incidents involving MROs, this Guidance begins with a general discussion of MROs and related matters.

Flooding, earthquakes, terrorism, casualties in the offshore oil industry, accidents involving releases of hazardous materials and major aircraft or ship incidents are examples which, because of their magnitude, may need to use the same resources as would be needed to carry out mass maritime or aeronautical rescue operations.

The sequence of priority in major multi-mission incidents must be lifesaving first, generally followed by environmental protection, and then protection of property.

Moral and legal obligations, as well as public and political expectations, drive the need to be prepared to carry out MROs safely and effectively should they become necessary. Since the need for MROs is relatively rare, it is difficult to gain practical experience to help deal with them. While the types of potential MRO scenarios, as well as the organizations, emergency response structures and circumstances vary from place to place, there are certain general principles, common actions and examples that can be followed based on lessons of history, which this Guidance is intended to convey.

MROs are relatively low-probability high-consequence events. Effective response to such major incidents typically require immediate, well-planned and closely co-ordinated large-scale actions and use of resources from multiple organizations. Intense and sustained high priority lifesaving efforts may need to be carried out at the same time and place as major efforts to save the environment and property. Huge amounts of selected information will need to be readily available at the right times and the right places not only to support the response efforts, but to meet the needs of the media, public and families of the persons in distress, which may number in the hundreds or thousands. Many means of communications will need to be available and interlinked amongst organizations at various levels to handle huge amounts of information reliably for the duration of the response. A surge in the numbers of competent staffing in all key organizations must be available immediately and be sustainable for up to weeks at a time. Equipment and logistics demands will jump to unprecedented levels. Successful MROs depend on the advance provision of flexible and all-level contingency plans. Intense integrated planning and operational efforts must also be carried out in real time throughout actual rescue efforts.

All who will be involved in the overall multi-agency, multi-jurisdiction, multi-mission and possibly international response to a major incidents will need clearly understand who is in charge, how to work with who is in charge, the respective roles of all involved, and how to interact with each other. SAR authorities may be responsible for all, or part, of the MRO responsibilities of the major incident response, and will be able to co-ordinate their efforts seamlessly with other incident responders under overall direction of another authority within or outside their agency. The broader response environment may involve hazards mitigation, damage control and salvage operations, pollution control, complex traffic management, large-scale logistics efforts, medical and coroner functions, accident-incident investigation, intense public and political attention, etc. MRO plans need to be part of and compatible with overall response plans for major incidents. Plans must typically allow for command, control and communications structures that can accommodate simultaneous air, sea and land operations.

Potential disastrous consequences of poor preparations for MROs in terms of loss of life and other adverse results are enormous. Major incidents may involve hundreds or thousands of persons in distress in remote and hostile environments. A large passenger ship collision, a downed aircraft, or a terrorist incident could, for example, call for the immediate rescue of large numbers of passengers and crew in poor environmental conditions, with many of the survivors having little ability to help themselves, and the dire results of failure are evident.

Preparedness to mount an extraordinarily large and rapid response is critical to preventing large-scale loss of lives. Such preparedness often depends on strong and visionary leadership and unusual levels of co-operation to achieve. There will often be strong resistance to paying the inherently high price in terms of time, effort and funding that preparedness for major incidents entails, particularly as they are rare events. The required levels of co-operation, co-ordination, planning, resources and exercises, required for preparedness are challenging and do not happen without the requisite commitment of SAR authorities, regulatory authorities, transportation companies, sources of military and commercial assistance and others.

SAR authorities should co-ordinate MRO plans with companies that operate ships and aircraft designed to carry large numbers of persons. Such companies should share in preparations to minimize the chances that MROs will be needed, and to ensure success if they are.

MRO planning, preparations and exercises are essential since opportunities to handle actual incidents involving mass rescues are rare. Therefore the exercising of MRO plans is particularly important. Appendix 1 provides guidance on planning and conducting such exercises.

The provisions of this document are intended to provide general guidance to authorities and organizations responsible for ensuring that MROs, should they be necessary, are successful.

## **General guidance**

For a situation involving large numbers or persons in distress, on scene responsibilities for the safety of passengers and crew will be shared by the OSC and the aircraft pilot in command or ship master, with the pilot or master assuming as much of this responsibility as possible before or after the aircraft or ship is abandoned.

Pilots and masters are responsible for maneuvering the aircraft or ship as feasible and appropriate. They also have overall responsibility for safety, medical care, communications, fire and damage control, maintaining order and providing general direction.

Unless a ship appears to be in imminent danger of sinking, it is usually advisable for passengers and crew to remain on board as long as it is safe to do so.

In the case of a downed aircraft, whether passengers would be safer on board should be assessed for each situation. Usually they should promptly evacuate the aircraft at sea. On land this decision must account for the conditions of the aircraft and the environment, expected time to rescue or aircraft repair, and whether required passenger care can be best provided inside the aircraft.

The OSC will normally be designated by an SMC. An OSC may be able to handle certain communications on scene and with appropriate remote authorities to help free the pilot or master to retain the integrity of his or her craft. However, these persons are themselves in need of assistance, and anything the OSC can do to help them should be considered, bearing in mind that the OSC's main duty is co-ordinating SAR facilities and rescue efforts under the SMC's general direction.

It is important to minimize unnecessary communications with the master of a ship or pilot in command of an aircraft in distress, and this should be taken into account in advance planning. Exchanges of information during joint planning by use of SAR Plans of Co-operation (see MSC/Circ.1000 or its superseding circulars) and other means will reduce the need to ask the pilot or master for this information one or more times during a crisis. Persons or organizations that want this information should be directed to a source ashore or on the ground that is prepared to handle what could be many requests.

High priority should be given to tracking and accounting for all persons on board and all lifeboats and rafts, and efforts to keep them together will help in this regard. Availability of accurate manifests and accounting is critical. The need to relocate survival craft and check for persons in them can waste valuable resources. One option is to sink survival craft once the persons in them have been rescued; however, the potential that other survivors may find and need the craft should be considered.

Navy ships are often better equipped than commercial vessels for retrieving people who have abandoned a ship or aircraft, and use of any such ships should be considered.

Helicopter capabilities should be employed if available, especially for retrieval of weak or immobile survivors. Lifeboat crews should be trained in helicopter hoist operations. Lowering a rescue person from the helicopter to assist survivors may be viable.

Ship companies should be encouraged to equip large passenger ships and possibly other types of vessels with helicopter landing areas, clearly marked hoist-winch areas, and onboard helicopters to facilitate more direct transfers of numerous persons.

If a ship with a large freeboard cannot safely retrieve survivors from the water or survival craft, it may be possible to first retrieve them onto small vessels, and then transfer them to progressively larger ones.

Depending on the circumstances, it may be safer to tow survival craft to shore without removing the occupants at sea. Lifeboats could be designed to support passengers for longer periods of time, and to be able to reach shore on their own from longer distances offshore.

To the extent practicable, MROs should be co-ordinated by an SMC in an RCC. However, depending on the magnitude, nature and complexity of a mass rescue incident, the rescue efforts may be better co-ordinated by an appropriate operations centre higher within the SAR agency or a government. Considerations in this decision might include, among others:

- extensive rescue support by organizations other than those commonly used for SAR;
- need for heavy international diplomatic support; and
- serious problems in addition to potential loss of lives, such as environmental threats, terrorist actions, or national security issues.

The following factors should be considered in MRO planning:

- use the Incident Command System (ICS) or other effective means of handling multi-agency, multi-jurisdiction, multi-mission scenarios;
- identify situations within the SRR that could potentially lead to the need for MROs, including scenarios that might involve cascading casualties or outages;
- mobilisation and co-ordination of necessary SAR facilities, including those not normally available for SAR services;
- ability to activate plans immediately;
- call up procedures for needed personnel;
- need for supplemental communications capabilities, possibly including the need for interpreters;
- dispatching of liaison officers;
- activation of additional staff to augment, replace or sustain needed staffing levels;
- recovery and transport of large numbers of survivors (and bodies, if necessary), accounting for survivors potentially having injuries and lack of training, age limitation, hypothermia, etc.;
- a means of reliably accounting for everyone involved, including responders, survivors, crew, etc.;
- care, assistance and further transfer of survivors once delivered to a place of safety, and further transfer of bodies beyond their initial delivery point;

- activation of plans for notifying, managing and assisting the media and families in large numbers;
- control of access to the RCC and other sensitive facilities and locations;
- RCC backup and relocation plans, as appropriate; and
- ready availability to all potential users of plans, checklists and flowcharts.

At some point the ability of an RCC to continue to effectively co-ordinate the MRO and still handle its other SAR responsibilities might be overwhelmed, and another RCC or a higher authority may need to assume responsibility for the MRO.

With these possibilities in mind, MRO plans may provide for various degrees of response, along with criteria for determining which amount of response will be implemented. For example, as local SAR resources are exhausted, or from the outset, SAR resources may need to be obtained from distant national or international sources.

Experiences in responding to major incidents have resulted in other practical advice such as the following:

- plan and exercise how any agency receiving notification of an actual or potential mass rescue event can immediately alert and conference call other authorities that will potentially be involved, brief them, and enable immediate actions to be taken by all concerned (this will require identification of contacts in each agency that can be contacted on a 24-hour basis, and that have authority to immediately initiate actions and commit resources);
- co-ordinate all rescue operations effectively from the very beginning;
- begin quickly with a high level of effort stand down as appropriate rather than begin too late with too little effort;
- use more capable resources like cruise ships for taking large numbers of survivors on board;
- ensure that MRO emergency plans address communications interoperability or inter-linking;
- retrieve and protect debris as evidence for follow on investigation;
- put security plans in place to limit access to the RCC;
- arrange in advance to involve the Red Cross, chaplains, critical incident stress experts and other such support for human needs;
- identify senior agency spokespersons to protect the time of workers directly involved in the response and designate a senior official to provide information to families;

- clearly identify the point at which the SAR response (lifesaving) has ended, and the focus shifts to investigation and recovery;
- be prepared to use an ICS when appropriate;
- ensure that air traffic and air space can be and is controlled on scene;
- the SMC can often benefit from assigning additional liaison personnel on scene;
- anticipate development and needs and act early;
- ensure that the scopes of SAR plans and other emergency or disaster response plans are co-ordinated to reduce gaps, overlaps and confusion about who is in charge and what procedures will be followed at various times and places;
- control access to the scene, including access by the media;
- work out in advance how private resources can be appropriately used to supplement other SAR resources;
- ensure that SAR plans provide for logistics support for large numbers of rescuers and survivors, including pre-arranged accommodations, if possible, and availability of food, medical care and transportation;
- consider requesting assistance from airlines and shipping companies other than the one whose aircraft or ship is involved in the incident, and know the types of assistance that such organizations might provide;
- bar coded bracelets can be an effective means of identifying children before, during and after the emergency;
- attempt to reduce the burden on a pilot or master and crews;
- if safe and appropriate to do so, place a marine casualty officer on board to assist the master and SAR personnel;
- share capabilities, expertise and assets among government and industry to take maximum advantage of the strengths of each.

## **Communications**

Communication plans must provide for a heavy volume of communication use, as a major incident will normally involve many responding organizations that need to communicate effectively with each other from the beginning. As necessary, advance arrangements should be made to link means of interagency communications that are not inherently interoperable. Interagency communications must be based on terminology that all involved understand.

Regardless of the magnitude and priority of the lifesaving efforts involved in responding to a major incident, if any other functions are being carried out concurrently on scene by other than SAR personnel, the overall response involving SAR and the other functions, e.g., firefighting, should be well co-ordinated.

If certain basic concepts and terms are recognized and understood by all emergency responders, they will be much better prepared to co-ordinate joint efforts.

Standard SAR procedures should typically be followed for the SAR part of the response, but these procedures will be largely independent of other efforts. Companies or authorities handling other aspects of the response will follow command, control and communication procedures developed for their respective organizations and duties.

The SAR system can function in its normal manner or use modified SAR procedures established to account for special demands of mass rescues, but it should be appropriately linked and subjected to a scheme for management of the overall incident response.

For major incidents, crisis management for the overall response may also be needed. The **Incident Command System (ICS)** is one simple and effective means of meeting this need. The ICS works best with some advance familiarization and exercising. Since SAR and transportation authorities are likely to encounter use of the ICS within emergency response communities, Appendix 3 provides general information for familiarization with the ICS. The ICS is an example of an effective system used for emergency management, and is a tool that can be used where no equivalent means of overall incident management is in place.

### **Industry planning and response**

SAR authorities should co-ordinate MRO plans with companies that operate aircraft and ships designed to carry large numbers of persons. Such companies should share in preparations to minimize the chances that MROs will be needed and to ensure success if they are. Appendix 2 provides guidance on industry roles and discusses how companies could arrange for use of company field teams and emergency response centres as possible means of carrying out their MRO responsibilities. For passenger ships, SAR Plans of Co-operation are part of MRO plans.

### **Public and media relations**

What the media reports may matter more than what SAR services do for shaping of public opinion about MROs. Importantly, the role of the media may be critical in shaping the actions of the public and those directly involved in the distress situation in a way that contributes to safety, success and panic control. There should be no unwarranted delays in providing information to the media. Information should be readily available, clear, accurate, consistent and freely exchanged among emergency responders and others concerned, such as the public and families of persons on board.

Identify spokespersons and outline what they will say, staying factual. If SAR services do not provide a public spokesperson for a major incident, the media will. Spokespersons should be cautious about speculating on causes of accidents and should inform the media that current operations are focused on saving lives.



Ensure that the media knows who is in charge of co-ordinating rescue operations.

A single spokesperson not directly involved in the incident can be valuable in relieving the IC and SMC of this duty.

Many entities are involved in a major incident, including ships, aircraft, companies and SAR services. Co-ordination is required to ensure that there is one message with many messengers. Interviews should be live if possible.

Prompt establishment of a joint information centre away from the SMC will help to achieve this goal. The centre can establish proper procedures for establishing what messages will be released to the public and how those messages will be released. Since the messages may be sensitive, it is critical that everyone communicates the same information. The centre can be responsible for co-ordinating information made available via the internet and perhaps establishing and maintaining a public web site.

The media is a 24-hour global market, with news broadcast worldwide around the clock. The media will find a way to get to the scene for first hand information, pictures and video. By providing transportation to the scene and controlling media access, safety and what is reported can be improved and better controlled.

Media outlets may have more resources to mobilize on scene than do SAR authorities, and RCC operating plans should account for how to deal with such situations.

Information should be provided to the public on what SAR facilities are being used and, if possible, a web address or list of contact phone numbers should be provided for families, media and others to contact for more information.

Preparations should be made so that large numbers of callers can be accommodated without saturating the phone system or crashing the computer server.

Advance preparation of standby web pages by transportation companies and SAR authorities can help in responding to floods of requests for information. These pages can be quickly posted to provide general information the media can use. Web information should be timely and accurate. Once posted, these pages can be easily updated with the status of the incident and could also include:

- contact information;
- basic government or industry facts;
- industry and SAR definitions;
- photographs and statistics of aircraft, ships and SAR facilities;
- answers to frequently asked questions;
- links to other key sites;

- information on passenger capacity, crew size, vessel plans and firefighting capabilities; and
- library footage of a vessel inspection or of the crew performing lifesaving drills.

Besides the media, families and other organizations will also want this information.

### **Follow up actions**

It is very important to develop and share lessons learned from actual MRO operations and exercises. However, concerns (often excessive) about legal liability may discourage highlighting matters that could have been done better.

Since lessons learned can help prevent recurring serious mistakes, agreement should be reached among principal participants on how lessons learned can be depersonalized and made widely available. Lessons learned from MROs should be shared not just locally, but internationally.

Careful accounting for survivors after they have been delivered to a place of safety remains important. They need to be kept informed about plans for them and about the ongoing response operations. With large numbers of persons often staying in different places, keeping track of and working with them can be difficult.

Transportation companies are often best suited to handle and assist survivors during this time. Crewmembers may be placed at various locations to record passenger names and locations. Another possibility is for airlines or passenger ships to attach plastic cards to life vests to give passengers phone numbers for contacting the company. Some companies use bar coded bracelets to track children who are passengers.

Communicating with passengers is more difficult in remote areas, where phone service may be inadequate or lacking. If phones do exist, calling the airline or shipping company may be the best way to check in and find out information. In more populated areas, local agencies may have an emergency evacuation or other useful plan that can be implemented.

To protect passengers from harassment by interviewers and cameras, survivors might be placed in hotels or other places of refuge. However, triage and landing locations must be established and publicized to all rescue personnel and good Samaritans. **(Appendix 1-3)**



# Annexures



## Flood affected villages by Narmada River

### Annex.-A1 Ankleshwar Taluka

Sr. No.	Village Name	Population	Live Stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House Holds	Drinking Water Facility	Electricity
1	JunaChhapra	1335	110	Primary School	Talati cum Mantri	7046912100	256	287	Yes	Yes
2	JunaHaripura	1470	284	Nava HariPura Primary School	Talati cum Mantri	9537395199	652	338	Yes	Yes
3	Mandwa	3851	50	Primary School/Community hall Mandwa	Talati cum Mantri	7285041822	250	851	Yes	Yes
4	Taria/ Tariya bavli	3474	295	Primary School Vadava	Talati cum Mantri	7802930751	125	708	Yes	Yes
5	Juna Borbhatha Bet	4680	2000	Primary School	Talati cum Mantri	9924024368	235	996	Yes	Yes
6	Juna Diva	5584	1300	Bhathiji Satsang Hall	Talati cum Mantri	9924024368	252	1192	Yes	Yes
7	Divi	125	250	Primary School	Talati cum Mantri	8980012612	258	581	Yes	Yes
8	Juna Bor Bhatha Gam	1176	300	Jalaram Temple	Talati cum Mantri	9428674402	254	252	Yes	Yes
9	Sarfuddin	416	350	Jalaram Temple	Talati cum Mantri	9428674402	125	82	Yes	Yes
10	JunaPungam	2017	205	Primary School Nava Pungam	Talati cum Mantri	8320281860	125	448	Yes	Yes
11	Juna Sakkarpor / Khalapiya	2935	1600	Jonwala Highschool Ankleshwar	Talati cum Mantri	8320281860	425	580	Yes	Yes
12	Juna Kasiya	3686	989	Nava Kaiya & Primary School	Talati cum Mantri	9662086457	253	755	Yes	Yes
13	Dhaturiya / Koyali	4717	1882	Primary School /Nava Dhanturiya	Talati cum Mantri	8140546867	258	993	Yes	Yes

Annex.-A2 Bharuch Taluka

Sr. No.	Village Name	Population	Live Stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House Hold	Drinking Water Facility	Electr icity
1	Dasan Dasan Bet	963	339	Primary School	Talati cum Mantri	9662015378	440	193	Yes	Yes
2	Mangleshwar Kabirwad bet	1938	202	Community hall, primary school.	Talati cum Mantri	7096286775	800	393	Yes	Yes
3	Jhanor	7251	1825	Primary School (boys & Girls)	Talati cum Mantri	7567373522 7359203518	500	1622	Yes	Yes
4	Nava Tavera	6588	3622	Primary School High school	Talati cum Mantri	7041161939 8140421762	500	1366	Yes	Yes
5	Angareswar	1846	666	Primary School Community hall	Talati cum Mantri	8000666424	520	398	Yes	Yes
6	Nikora	4563	1772	Primary School High school	Talati cum Mantri	9638894804 7096286775	630	955	Yes	Yes
7	Sukaltirth	7502	2500	Primary School	Talati cum Mantri	7600462947 9909919694	900	1582	Yes	Yes
8	kelod	465	335	Nava Sukaltirth Sukaltirth	Talati cum Mantri	9723826219	600	80	Yes	Yes
9	Mangleshvar	1938	202	Community Hall Primary School	Talati cum Mantri	7096286775	250	393	Yes	Yes
10	Sindhot	963	154	Primary School	Talati cum Mantri	7046767999		208	Yes	Yes
11	Vadava	610	6360	Primary School	Talati cum Mantri	9925635085	350	114	Yes	Yes
12	Karjan	1350	580	Primary School	Talati cum Mantri	7211132226 7046115445	200	287	Yes	Yes

Annex.-A3 Jhagadia Taluka

Sr. No.	Village Name	Population	Live Stock	Safe Shelter	Name Of Contact Person	Contact Number	Shelter Capacity	Details of House hold	Drinking Water Facility	Electricity
1	Patar	56	54	Bhalodhighschool	Talati cum Mantri	7574814134	300	13	Yes	Yes
2	Juni Tarsali	2691	497	Bhalod village highschool.	Talati cum Mantri	9909269369	300	438	Yes	Yes
3	Juna Tothidra	510	270	Bhalod village highschool	Sarpanch	9727175823	350	108	Yes	Yes
4	Bhalod	3476	171	Bhalodhighschool.	Talati cum Mantri	8155961291	300	789	Yes	Yes
5	Kakalpor	613	10	High area.	Sarpanch	9913827908	200	129	Yes	No
6	Sarsad	1024	10	High area	Sarpanch	8160006854	200	216	Yes	No
7	Krushnapuri	625	10	High area	Talati cum Mantri	6351731354	200	141	Yes	No
8	Limodra	2314	55	Hanumanji temple, jhagadia.	Talati cum Mantri	7575894118	500	470	Yes	Yes
9	Uchadia	2438	48	Gumandevtemple.	Sarpanch	9979046295	400	538	Yes	Yes
10	Govali bet	4389	490	Own villages.	Talati cum Mantri	8140724690	50	994	No	No
11	jhagadia	34	0	Hanumanji temple, jhagadia.	Talati cum Mantri	9924037196	250	NA	Yes	Yes
12	Mota vasana	599	250	High area	Talati cum Mantri	9723826980	300	130	No	No
13	Nana vasana	770	300	Primary school	Talati cum Mantri	9409392712	250	156	Yes	Yes
14	Ore	626	449	Bhalod village highschool	Talati cum Mantri	8153822695	200	137	Yes	Yes
15	Juna pora	209	80	Nava pora village	Talati cum Mantri	8347421757	500	41	Yes	Yes

16	Indor	2647	25	Primary school	Talati cum Mantri	9723826980	256	551	Yes	Yes
17	jarsad	681	25	Primary school	Talati cum Mantri	7567966378	350	145	Yes	Yes
18	Vadhvana	431	329	Primary school	Sarpanch	9510265115	300	91	Yes	Yes
19	Velugam	1936	325	Primary school	Talati cum Mantri	9409392712	256	407	Yes	Yes
20	Panetha	3951	125	Primary school	Talati cum Mantri	9106510317	215	912	Yes	Yes
21	Vanakpor	2153	325	Primary school	Talati cum Mantri	7567966389	236	427	Yes	Yes

#### Ann.B Dhadhar Rivera Affected Villages:-Jambusar Taluka

S.No	Village Name	Population	Live Stock	Safe Shelter	Name of Contact Number	Contact Number	Shelter Capacity	Details of House hold	Drinking Water Facility	Electricity
1	Asarol	841	167	Primary school	Sarpanch	--	300	149	Yes	Yes
2	Kundhal	477	184	Primary school	Talati cum Mantri	8128356054	100	114	Yes	Yes
3	Bojadra	1621	1707	Primary School	Talati cum Mantri	9726119196	300	350	Yes	Yes
4	Nada	2697	796	Primary School	Talati cum Mantri	9427917529	500	612	Yes	Yes
5	Devla	4435	1378	Primary School	Talati cum Mantri	9726573573	450	897	Yes	Yes
6	Bhadkodaro	3612	504	High school	Talati cum Mantri	9924073481	350	623	Yes	Yes
7	Sigam	2551	1433	Primary School	Talati cum Mantri	8734806141	200	565	Yes	Yes
8	Muradpor Neja	560	150	Primary School	Talati cum Mantri	9978786881	175	141	Yes	Yes
9	Kavi	10428	2745	Primary School	Talati	9099261262	5000	2182	Yes	Yes
10	Jantran	2535	711	Primary School	Talati	9978933482	300	547	Yes	Yes



11	Madafar	1582	646	Primary School	Talati cum Mantri	7359900903	200	295	Yes	Yes
12	Tankari	1624	315	High school	Talati cum Mantri	9727750225	620	315	Yes	Yes
13	Khanpor Deh	4031	2156	Primary School	Talati cum Mantri	8905256047	250	748	Yes	Yes
14	Mahapara	519	303	Primary School	Talati cum Mantri	8128356054	120	108	Yes	Yes
15	Magnad	3613	1212	Primary School	Talati cum Mantri	9714314217	400	781	Yes	Yes
16	Jambusar(M)	43344	-	High school	-	-	600	8343	Yes	Yes
17	Koteshvar	813	200	Primary School	Talati cum Mantri	9712634290	200	172	Yes	Yes
18	Nobar	1819	256	Primary School	Talati cum Mantri	9426287737	125	389	Yes	Yes
19	Uber	3702	1418	Primary School	Talati cum Mantri	9978567547	250	830	Yes	Yes
20	Nondhana	1546	2561	Primary School	Talati cum Mantri	9512237320	254	370	Yes	Yes
21	Jafarpura	672	459	Primary School	Talati cum Mantri	9099955690	120	141	Yes	Yes
22	Kapuria	413	256	Primary School	Talati cum Mantri	9913826443	156	90	Yes	Yes
23	Malpur	1076	1055	Primary School	Talati cum Mantri	9099807095	500	182	Yes	Yes
24	Vad	468	586	Primary School	Talati cum Mantri	9537618982	258	100	Yes	Yes
25	Kora	1376	1017	Primary School	Talati cum Mantri	8758782266	250	299	Yes	Yes
26	Kava	1725	586	Primary School	Talati cum Mantri	7069304170	156	370	Yes	Yes
27	Umra	527	253	Primary School	Talati cum Mantri	9426287737	250	121	Yes	Yes
28	Anakhi	2783	908	Primary School	Talati cum Mantri	9638127689	20	619	Yes	Yes
29	Vahelam	809	256	Primary School	Talati cum Mantri	9978568283	210	183	Yes	Yes

Ann. B2 Amod Taluka

Sr. No.	Village Name	Population	Live stock	Safe Shelter	Name of Contact Number	Contact Number	Shelter Capacity	Details of House Hold	Drinking Water Facility	Electricity
1	Vasana	993	315	Primary School	Talati cum Mantri	9427130912	220	239	Yes	Yes
2	Manjola	972	535	Primary School	Talati cum Mantri	9898925656	240	206	Yes	Yes
3	Pursha (Kakariya)	2148	650	Primary School	Talati cum Mantri	9737160523	256	471	Yes	Yes
4	Ikhar	6380	1840	Primary School	Talati cum Mantri	9974442722	251	1217	Yes	Yes
5	Danda	2156	580	Primary School	Talati cum Mantri	6351057707	241	458	Yes	Yes
6	Sarbhan	4296	260	Primary School	Talati cum Mantri	9824734548	200	998	Yes	Yes
7	Dadapor	826	462	Primary School	Talati cum Mantri	9824016805	201	197	Yes	Yes
8	Kobla	1152	3062	Primary School	Talati cum Mantri	8160273911	251	243	Yes	Yes
9	Amod(M)	785	974	Primary School		02641245837	125	16232	Yes	Yes

Ann. C1 Bhukhi Khadi Affected Villages Bharuch Taluka

Sr. No.	Village name	Population	Live Stock	Safe Shelter	Name of Contact Number	Contact Number	Shelter Capacity	Details of Household	Drinking Water Facility	Electricity
1	Segava	2780	1001	Highs School	Talati cum Mantri	9106400421	200	505	Yes	Yes
2	Varedia	2368	963	Primary School	Talati cum Mantri	8747391053	200	477	Yes	Yes
3	Manch	992	347	Primary School	Talati cum Mantri	9265212144	200	180	Yes	Yes
4	Kargat	698	436	Primary School	Talati cum Mantri	9723738248	100	145	Yes	Yes
5	Sitpon	4162	1123	Primary School	Talati cum Mantri	9723240361	200	794	Yes	Yes
6	Pariej	3998	1343	Primary School	Talati cum Mantri	9714864140	200	715	Yes	Yes
7	Pipalia	909	105	Swami Narayan Primary School	Talati cum Mantri	9723826219	250	309	Yes	Yes
8	Dayadra	4175	1262	Primary School	Talati cum Mantri	9099028489	200	755	Yes	Yes
9	Tralsi	680	378	Primary School	Talati cum Mantri	9925951342	50	151	Yes	Yes
10	Tralsa	2654	674	Primary School	Talati cum Mantri	9824179068 8153062920	200	591	Yes	Yes
11	Kothi	2406	578	Primary School	Talati cum Mantri	7623986089	250	472	Yes	Yes
12	Kelod	1783	375	Primary School	Talati cum Mantri	8849501314	150	391	Yes	Yes
13	Derol	3065	540	Primary School	Talati cum Mantri	9825062242	265	619	Yes	Yes
14	Kahan	1809	570	Primary School	Talati cum Mantri	8747391053	325	324	Yes	Yes

Ann.-C2 Vagra Taluka

Sr. No.	Village Name	Population	Live Stock	Safe Shelter	Name of Contact Number	Contact Number	Shelter Capacity	Details of House hold	Drinking Water Facility	Electricity
1	Vilayat	2203	1290	community hall, Primary School	Talati cum Mantri	9879504903	450	444	Yes	Yes
2	Kothia	555	247	community hall Primary School	Talati cum Mantri	9726015704	125	111	Yes	Yes
3	Sadathala	277	107	community hall Primary School	Talati cum Mantri	7574810309	95	58	Yes	Yes
4	Bhenshli	1123	170	community hall Primary School	Talati cum Mantri	9879762313	210	228	Yes	Yes
5	Khojbal	1513	140	community hall Primary School	Talati cum Mantri	9879762313	350	287	Yes	Yes
6	Aargama	1188	1026	Primary School	Talati cum Mantri	8238659795	400	223	Yes	Yes
7	Sayakha	1072	192	Primary School / Community Hall	Talati cum Mantri	9586748259	150	231	Yes	Yes

Ann. D Dam Affected Villages: D1 Baldeva Dam Netrang Taluka

Sr.No.	Village Name	Population	Live stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House Hold	Drinking Water Facility	Electricity
1	Zarna	759	832	Primary School	Sarpanch	9408562046	200	150	Yes	Yes
2	Baladava	1455	439	Primary School	Sarpanch	9427984172	500	301	Yes	Yes
3	Kambodiya	1815	1020	Community Hall Primary School	Sarpanch	9328523828	150	408	Yes	Yes
4	Borkhadi	401	495	Primary School	Sarpanch	9879604658	140	98	Yes	Yes
5	Panchasim	837	289	Primary School	Sarpanch	9265611288	150	168	Yes	Yes
6	Chaswad	1431	830	Primary School	Sarpanch	9909445199	150	286	Yes	Yes

Ann.2D2 Baldeva Da Valia Taluka

Sr.No.	Village Name	Population	Live stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House Hold	Drinking Water Facility	Electricity
1	Singla	428	591	Primary School	Talati	7574806513	125	91	Yes	Yes
2	shir	1068	225	Primary school	Talati	7567378444	150	232	Yes	Yes
3	Dolatpur	1479	885	Primary School	Sarpanch	9664856050	150	317	Yes	Yes
4	Kesargam	423	469	Primary School	Sarpanch	9537174244	125	99	Yes	No
5	Pathar	1159	800	Primary school	Sarpanch	8469844224	175	270	Yes	Yes
6	Deshad	2113	1715	Primary School	Talati	9979193759	215	481	Yes	Yes

**Ann-D3 Pignuts Dam Valia Taluka**

	<b>VillName</b>	<b>Population</b>	<b>Live stock</b>	<b>Safe Shelter</b>	<b>Name Person</b>	<b>Contact Number</b>	<b>Shelter Capa</b>	<b>Details of F</b>	<b>Drinking V</b>	<b>Electricity</b>
1	Gundia	3270	990	Primary School	Talati cum Mantri	7574806505	250	650	Yes	Yes
2	Kamliya	1491	313	Primary School	Talati cum Mantri	9712596263	200	339	Yes	Yes
3	Rajpara	1475	876	Primary school	Talati cum Mantri	7567807329	150	308	Yes	Yes
4	Jabugam	3378	3090	Primary School	Talati cum Mantri	7574821191	250	751	Yes	Yes
5	Choramala	459	295	Primary School	Talati cum Mantri	9727541610	75	123	Yes	Yes
6	Vandariya	702	310	Primary School	Talati cum Mantri	9727541610	100	166	Yes	Yes
7	Umargam	921	250	Primary School	Talati cum Mantri	9638291622	125	200	Yes	Yes
8	Sodgam	1863	1230	Primary school	Talati cum Mantri	7600426938	150	425	Yes	Yes
9	Sinada	712	130	Primary school	Talati cum Mantri	7574806537	75	158	Yes	Yes

**Ann. D4 Pignuts Dam Netrang Taluka**

Sr. No.	Village Name	Population	Live stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House Hold	Drinking Water Facility	Electricity
1	Mauza	6570	2007	Primary School	Sarpanch	9913434489	250	1434	Yes	Yes
2	Chikhli	539	330	Primary School	Sarpanch	9979514917	125	154	Yes	Yes
3	Navapara	168	150	Primary School	Sarpanch	9426441546	75	30	Yes	Yes

**Ann. D5 Dholi Dam Jhagadia Taluka**

Sr.No.	Village Name	Population	Live Stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House Hold	Drinking Facility	Electricity
1	Bhilwada	463	154	Primary School	Sarpanch	7567525213	250	109	Yes	Yes
2	Dholi	649	193	Primary School	Talati	6351731354	652	126	Yes	Yes
3	Kapat	770	485	Primary School	Sarpanch	7874681894	125	151	Yes	Yes
4	Kantol	654	381	Primary School High school	Sarpanch	9879883898	845	140	Yes	Yes
5	Mota Sorva	1394	245	Primary School	Sarpanch	9913026487	251	289	Yes	Yes
6	Rajpardi	9303	4400	Primary School High school	Sarpanch	9979483312	2562	2002	Yes	Yes
7	Razalwada	1102	420	Primary School	Sarpanch	7567525213	1250	252	Yes	Yes
8	Sarsa	1721	1271	Primary School	Sarpanch	9913048312	258	401	Yes	Yes
9	Vanakpor	2153	2590	Primary School	Sarpanch	9624606450	125	427	Yes	Yes



Ann. E Villages Affected in Low Lying areas :E1 Low Lying affected villages in Amod Taluka

Sr. No.	Village Name	Population	Live Stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House Hold	Drinking Water Facility	Electricity
1	Buva	1740	460	Primary School	Talati cum Mantri	9558866744	200	345	Yes	Yes
2	Ghamnad	1168	798	Primary School	Talati cum Mantri	9586591285	150	274	Yes	Yes
3	Kurchan	2357	348	Primary School	Talati cum Mantri	9712869523	250	455	Yes	Yes
4	Ninam	771	204	Primary School	Talati cum Mantri	7435095795	250	184	Yes	Yes
5	Shri Kothi	805	34	Community Hall	Talati cum Mantri	9429411306	240	175	Yes	Yes
6	Suthodra	548	140	Community Hall	Talati cum Mantri		250	97	Yes	Yes
7	Tegva	752	380	Primary School	Talati cum Mantri	7435095795	190	158	Yes	Yes
8	Rodh	797	275	Primary School	Talati cum Mantri	9429411306	225	177	Yes	Yes
9	Karena	1082	692	Primary School	Talati cum Mantri	9427130911	200	242	Yes	Yes
10	Mangrol	1139	922	Primary School	Talati cum Mantri	9924947210	552	215	Yes	Yes
11	Achhod	6328	1114	Primary School	Talati cum Mantri	9624013289	100	1150	Yes	Yes
12	Samani	2112	745	Primary School	Talati cum Mantri	9624268689	256	467	Yes	Yes
13	Samiala	495	215	Primary School	Talati cum Mantri	9662347586	250	98	Yes	Yes
14	Valipor	397	429	Primary School	Talati cum Mantri	9724853358	256	98	Yes	Yes

15	Intola	790	213	Primary School	Talati cum Mantri	6351770858	255	138	Yes	Yes
16	Ochhan	1578	553	Primary School	Talati cum Mantri	8238445596	400	348	Yes	Yes
17	Sudi	1012	610	Primary School	Talati cum Mantri	9879465199	251	226	Yes	Yes
18	Machhasara	2116	1538	Primary School	Talati cum Mantri	9428636376	256	383	Yes	Yes
19	Vantarsa	894	806	Primary School	Talati cum Mantri	9624013289	152	175	Yes	Yes
20	Tanchha	1154	581	Primary School	Talati cum Mantri	9825009024	265	264	Yes	Yes
21	Anor	2268	1905	Primary School	Talati cum Mantri	7600766868	321	446	Yes	Yes
22	Telod	1118	506	Primary School	Talati cum Mantri	8980512269	152	251	Yes	Yes
23	Denva	1097	262	Primary School	Talati cum Mantri	9724853358	542	232	Yes	Yes
24	Asenra	573	300	Primary School	Talati cum Mantri	9879465199	152	131	Yes	Yes
25	Sonama	366	461	Primary School	Talati cum Mantri	9586513126	281	81	Yes	Yes
26	Vedcha	792	234	Primary School	Talati cum Mantri	9924369766	145	193	Yes	Yes
27	Nahiyer	982	219	Primary School	Talati cum Mantri	9586513126	215	211	Yes	Yes

**Ann. E2 Low lying affected villages in Bharuch Taluka**

Sr. No.	Village Name	Population	Live Stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House Holds	Drinking water Facility	Electricity
1	Nandelav	13583	654	Primary School	Talati cum Mantri	9898457143	255	3185	Yes	Yes
2	Umaraj	6330	716	Primary School	Talati cum Mantri	9723383665	526	1473	Yes	Yes
3	Maktampur	10704	816	Primary School	Talati cum Mantri	9662015378	251	2432	Yes	Yes
4	Navetha	974	199	Primary School	Talati cum Mantri	8866186904	1000	196	Yes	Yes
5	Bhuva	689	290	Primary School High school	Talati cum Mantri	9157427697	700	147	Yes	Yes
6	Sankhwad	742	248	Primary School	Talati cum Mantri	8866186904	60	155	Yes	Yes
7	Vanshi	1522	744	Primary School	Talati cum Mantri	9714819792	250	270	Yes	Yes
8	Asuriya	330	147	Primary School	Talati cum Mantri	9924437976	100	64	Yes	Yes
9	Sarnar	1198	254	Primary School	Talati cum Mantri	9825817238	350	223	Yes	Yes
10	Serpura	5748	1236	Primary School	Talati cum Mantri	9428324725	350	1079	Yes	Yes
11	Cholad	530	337	Primary School	Talati cum Mantri	9998411782	100	112	Yes	Yes
12	Amleshvar	2392	1650	Primary School	Sarpanch	9925224533	250	494	Yes	Yes
13	Bholav	24605	1258	Primary School Dud.Dairy	Talati cum Mantri	9662212633	200	5786	Yes	Yes
14	Hingalla	1933	683	Primary School	Talati cum Mantri	7043191170	150	368	Yes	Yes

15	Palej	12334	1983	Primary School	Talati cum Mantri	8866114472	250	2438	Yes	Yes
16	Jhanghar	2730	539	Primary School	Talati cum Mantri	9429072464	150	512	Yes	Yes
17	Luvara	1663	787	Primary School	Talati cum Mantri	9898677010	150	385	Yes	Yes
18	Parkhet	3062	2355	Primary School	Talati cum Mantri	9586609900	300	547	Yes	Yes
19	Kamboli	2216	199	Primary School	Talati cum Mantri	9638192241	250	425	Yes	Yes
20	Umara	527	453	Primary School	Talati cum Mantri	9924437976	100	121	Yes	Yes
21	Vadadla	1064	529	MajurMahajan hall	Talati cum Mantri	8128121314	250	246	Yes	Yes
22	Vagusana	638	118	Primary School	Talati cum Mantri	9898677010	100	123	Yes	Yes
23	Kavitha	2310	1224	Primary School	Talati cum Mantri	9574126412	150	495	Yes	Yes
24	Bambusar	777	605	Primary School	Talati cum Mantri	9723738248	100	146	Yes	Yes
25	Kuwadar	911	298	Primary School	Talati cum Mantri	9898109774	100	197	Yes	Yes
26	Bori	838	328	Primary School	Talati cum Mantri	9898108774	100	168	Yes	Yes
27	Eksal	938	468	Primary School	Talati cum Mantri	9687087588	50	194	Yes	Yes
28	Kesrol	818	764	Primary School	Talati cum Mantri	9687087588	250	165	Yes	Yes

**Ann E3 Low lying affected villages in Vagra Taluka**

<b>Sr. No.</b>	<b>Village Name</b>	<b>Population</b>	<b>Live Stock</b>	<b>Safe Shelter</b>	<b>Name of Contact Person</b>	<b>Contact Number</b>	<b>Shelter Capacity</b>	<b>Details of House Holds</b>	<b>Drinking Water Facility</b>	<b>Electricity</b>
1	Vasti Khandali	2091	340	community hall Primary School	Talati cum Mantri	9825833694	300	390	Yes	Yes
2	Saladra	994	300	community hall Primary School	Talati cum Mantri	7600056724	250	205	Yes	Yes
3	Aliabet	411	1744	School Ambheta Bhadbhoot	Talati cum Mantri	9624454660	55	92	Yes	Yes
4	Rahad	931	262	Primary School	Talati cum Mantri	7600056724	200	185	Yes	Yes
5	Nadarkha	447	248	Primary School	Talati cum Mantri	9586986380	150	92	Yes	Yes
6	Pahaj	2437	637	Primary School	Talati cum Mantri	7096317735	200	520	Yes	Yes
7	Ankot	739	297	Primary School	Talati cum Mantri	9173630505	150	162	Yes	Yes
8	Vachnad	763	350	Primary School	Talati cum Mantri	9909755587	200	151	Yes	Yes
9	Paldi	832	352	Primary School	Talati cum Mantri	8469248715	100	183	Yes	Yes
10	Ochan	1578	143	Primary School	Talati cum Mantri	9099022636	100	348	Yes	Yes
11	Sachan	691	261	Primary School	Talati cum Mantri	9512172188	100	152	Yes	Yes
12	Galenda	611	483	Primary School	Talati cum Mantri	9099380871	350	120	Yes	Yes
13	Vichyad	638	335	Primary School	Talati cum Mantri	9712469971	150	125	Yes	Yes
14	Mosam	798	479	Primary School	Talati cum Mantri	7874794361	150	159	Yes	Yes

Ann. E4 Low lying affected Villages in Hansot Taluka

Sr.	Village Name	Population	Live Stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House holds	Drinking water facility	Electricity
1	Shera	1229	450	Primary School, Community Hall	Talati cum Mantri	9913947493	300	275	Yes	Yes
2	Mothiya	918	285	Primary School Community Hall	Talati cum Mantri	9510476293	400	195	Yes	Yes
3	Obha	1689	922	Community Hall Primary School	Talati cum Mantri	9428586267	750	375	Yes	Yes
4	Ashrama	1159	1111	Community Hall Primary School	Talati cum Mantri	9879555808	900	267	Yes	Yes
5	Panjaroli	1874	728	Community Hall Primary School	Talati cum Mantri	8238630900	575	410	Yes	Yes
6	Balota	1205	288	Primary School	Talati cum Mantri	9727988150	200	281	Yes	Yes
7	Kudadara	530	285	Primary School	Talati cum Mantri	9574280310	250	91	Yes	Yes
8	Valner	1584	5625	Primary School	Talati cum Mantri	8128161181	214	343	Yes	Yes

Ann. F: Cyclone Affected villages detail

AnnF1 Cyclone affected villages in Vagra Taluka :- (0-7 KM) villages

Sr. No.	Village name	Population	Live Stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House hold	Drinking Water Facility	Electricity
1	Dahej	13495	250	Primary School Community hall	Talati cum Mantri	9913456548	1000	3426	Yes	Yes
2	Lakhigam	4938	800	Primary School	Talati cum Mantri	9423131231	400	1217	Yes	Yes
3	Luwara	1663	438	Primary School, Community Hall	Talati cum Mantri	8128605548	250	385	Yes	Yes
4	Jageshvar	1571	138	Primary School Community hall	Talati cum Mantri	8141717001	600	383	Yes	Yes
5	Ambheta	1552	148	Community hall Primary School	Talati cum Mantri	9998979139	245	347	Yes	Yes
6	Rahiyad	1694	1202	Primary School	Talati cum Mantri	9586748258	250	355	Yes	Yes
7	Suva	1920	562	Primary School	Talati cum Mantri	9586748258	200	413	Yes	Yes
8	Koliyad	676	296	Primary School	Talati cum Mantri	9924336356	70	152	Yes	Yes
9	Kaladara	1663	285	Primary School	Talati cum Mantri	9624454660	229	393	Yes	Yes
10	Vengani	908	307	Primary School	Talati cum Mantri	9624454660	300	70	Yes	Yes
11	Paniyadara	2563	535	PrimarySchool & Community Hall	Talati cum Mantri	7990206733	600	110	Yes	Yes
12	padariya	647	278	Primary School	Talati cum Mantri	9638943068	100	35	Yes	Yes
13	Gandhar	2121	592	PrimarySchool & Community Hall	Talati cum Mantri	9825266151	150	40	Yes	Yes

**Ann. F2 Cyclone affected villages in Jambusar taluka: - (0-7 KM) villages**

Sr. No	Village Name	Population	Live Stock	Safe Shelter	Name Of Contact Person	Contact Number	Shelter Capacity	Details of House hold	Drinking Water Facility	Electricity
1	Sarod	7854	3967	Primary School & Community hall	Talati cum Mantri	9904724328	1500	1528	Yes	Yes
2	Kamboi	749	433	Primary school	Talati cum Mantri		200	157	Yes	Yes
3	Malpore	1076	1055	Primary School	Talati cum Mantri	9099807095	1000	182	Yes	Yes
4	Zamdi	1107	697	Primary school	Talati cum Mantri	9904049285	400	235	Yes	Yes
5	Devla	4435	1378	Primary School & High school	Talati cum Mantri	9726573573	1000	897	Yes	Yes
6	Nada	2697	796	Primary school	Talati cum Mantri	9427917529	500	612	Yes	Yes
7	Asarsa	841	167	Primary school	Talati cum Mantri	9726601100	300	149	Yes	Yes
8	Kapuriya	413	150	Primary School	Talati cum Mantri	9913826443	200	90	Yes	Yes
9	Islam pure	1328	658	Mosque & Primary School	Talati cum Mantri	9924865980	1000	265	Yes	Yes
10	Tankari	4415	278	Primary School	Talati cum Mantri	9727750225	256	845	Yes	Yes
11	Doliya	799	400	Primary School	Talati cum Mantri	6354124456	245	152	Yes	Yes
12	Khanpor Deh	4031	2156	Primary School	Talati cum Mantri	8905256047	250	748	Yes	Yes



Sr. No.	Village Name	Population	Live Stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House Hold	Drinking Water Facility	Electricity
13	Sardarpura	411	190	Primary School	Talati cum Mantri	6354124456	150	82	Yes	Yes
14	Mahapura	519	303	Primary School	Talati cum Mantri	8128356054	120	108	Yes	Yes
15	Kundhal	477	184	Primary School	Talati cum Mantri	8128356054	100	114	Yes	Yes
16	Bojadra	1621	1707	Primary School	Talati cum Mantri	9726119196	300	350	Yes	Yes
17	Jafarpura	672	459	Primary School	Talati cum Mantri	9099955690	120	141	Yes	Yes
18	Magnad	3613	1212	Primary School	Talati cum Mantri	9714314217	400	781	Yes	Yes
19	Kareli	5719	4012	Primary School	Talati cum Mantri	8347504164	300	1313	Yes	Yes
20	Vedach	7921	3538	Primary School	Talati cum Mantri	9909238890	400	1744	Yes	Yes

(7-15 KM) villages

### Ann. F3

#### Cyclone affected Villages in Hansot Taluka: - (0-7 Km)

Sr. No.	Village Name	Population	Live Stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House Hold	Drinking Water Facility	Electricity
1	Samli	792	202	Community Hall Primary school	Talati	9428723462	500	179	Yes	Yes
2	Kantiyazal	1218	395	Primary School Community Hall	Sarpanch	9879587392	750	304	Yes	Yes
3	Vamleshvar	727	265	Community Hall Primary School	Sarpanch	9428177381	550	199	Yes	Yes
4	Katpor	2206	992	Primary School 9913064699	Sarpanch	9978546739	1050	513	Yes	Yes

**(7 -15 KM)**

Sr. No.	Village Name	Population	Live Stock	Safe Shelter	Name of Contact Person	Contact Number	Shelter Capacity	Details of House hold	Drinking Water Facility	Electricity
5	Ambheta	1552	350	Community Hall primary School	Sarpanch	9913559228	300	347	Yes	Yes
6	Pardi	597	293	Primary School Community Hall	Sarpanch	9904550264	300	134	Yes	Yes
7	Hansot	8726	416	Primary School High school Community hall	Sarpanch	8511117025	700	1825	Yes	Yes

**Annexure - G Details of Industrial estate villages: -****Annex- G1 Vagra Taluka:-**

S.No	No of Villages	Population	Number Of House Hold	Live Stock	Kaccha House	Pacca House	Name of Contact Person	Contact Number
1	Akhod	831	174	245	103	15	Sarpanch	9099960305
2	Ambheta	1552	347	334	246	170	Sarpanch	7046793148
3	Argama	1188	223	178	186	41	Sarpanch	9723786779
4	Dahej	13495	3426	863	650	500	Sarpanch	8511124948
5	Atali	1150	239	10	50	235	Sarpanch	9714202304
6	Bhensali	1123	228	293	85	152	Sarpanch	7096139179
7	Bhersam	1461	325	489	180	170	Sarpanch	8140371751
8	Galenda	611	120	167	125	17	Sarpanch	7383298782
9	Jagesavar	1571	383	445	174	140	Sarpanch	8320144283
10	Janidara	729	150	296	135	15	Sarpanch	9979351306
11	Jolva	1442	338	85	160	92	Sarpanch	7698495594
12	Juned	443	84	386	150	3	Sarpanch	8140371751
13	Kaladra	1663	939	963	270	25	Sarpanch	9723778530
14	Khajbol	1552	565	566	163	250	Sarpanch	9924916331
15	Kadodara	255	6565	419	210	90	Sarpanch	7228888776
16	Koliyad	676	152	214	144	45	Sarpanch	9723190776
17	Kothia	555	11	308	60	146	Sarpanch	9427465778
18	Lakhigam	4938	1217	1267	130	60	Sarpanch	9727960573
19	Luvra	1663	385	302	175	150	Sarpanch	9316102506

20	Nadarkha	447	92	210	18	62	Sarpanch	7559329013
21	Nandida	719	160	289	176	5	Sarpanch	9712717304
22	Pakhjan	1286	255	308	149	16	Sarpanch	9925054533
23	Piplia	1609	316	336	85	110	Sarpanch	7359054049
24	Rahiyad	1694	335	1300	282	18	Sarpanch	7202068605
25	Sadathala	277	58	191	60	23	Sarpanch	9904302142
26	Samatpor	363	79	105	67	3	Sarpanch	7698436548
27	Sambeti	416	82	74	42	35	Sarpanch	7698436548
28	Saykha	1072	231	647	125	110	Sarpanch	7623873490
29	Suva	1920	413	545	336	200	Sarpanch	7567144436
30	Vadadla	822	201	195	67	11	Sarpanch	9687670496
31	Vahiyal	1170	250	795	215	36	Sarpanch	9328919979
32	Vav	727	155	275	105	178	Sarpanch	9586085386
33	Vengani	908	202	332	98	52	Sarpanch	7096130443
34	Vilayat	2203	444	844	300	196	Sarpanch	9725128716
35	Vorasamni	2514	475	722	115	300	Sarpanch	8156049596

**Annex- G2 Bharuch Taluka:-**

S.No	No of Villages	Population	Number of House Hold	Live Stock	Kaccha House	Pacca House	Name of Contact Person	Contact Number
1	Amlesavar	2392	494	720	300	150	Sarpanch	9925224533
2	Bhadbhut	3835	786	105	290	450	Sarpanch	7698322083
3	Bholav	24605	5786	1380	250	1500	Sarpanch	9924110778
4	Bhuva	689	147	300	105	40	Sarpanch	9824638059
5	Ekshal	938	194	910	140	50	Sarpanch	9924762714
6	Kasva	1336	272	142	160	65	Sarpanch	9879780744
7	Kesrol	8118	165	910	139	166	Sarpanch	8511577850
8	Mahegam	1235	244	245	82	180	Sarpanch	8238762062
9	Manad	565	652	200	100	200	Sarpanch	9316325570
10	Navetha	974	198	104	110	90	Sarpanch	9925224533
11	Palej	12334	2438	1265	760	1680	Sarpanch	9537185554
12	Sankhavad	742	155	335	145	65	Sarpanch	9537852828
13	Vadadla	1576	321	250	42	100	Sarpanch	9023130893
14	Vadva	610	144	630	120	20	Talati	9824976268

**Annex- G3 Jhagadia Taluka:-**

S.No	Villages	Population	Number of House Hold	Live Stock	Kaccha House	Pacca House	Name of Contact Person	Contact Number
1	Dadheda	1094	222	276	230	60	Sarpanch	9909763974
2	Fulvadi	1783	396	256	170	40	Talati	9727289084
3	Kapalsadi	2024	431	844	225	236	Talati	9909521982
4	Limet	1739	377	767	224	298	Sarpanch	9913383685
5	Randedi	447	98	898	120	15	Sarpanch	9913037033
6	Selod	1653	343	347	70	107	Sarpanch	9714657474
7	Talodara	2057	453	1484	223	190	Sarpanch	9913037033

*Source VDMF***Annex-G4 Anklesvar Taluka:-**

S.No	Villages	Population	Number of House Hold	Live Stock	Kaccha House	Pacca House	Name Of Contact Person	Contact Number
1	Panoli	4626	926	1827	467	769	Sarpanch	9726544708
2	Anklesavar	44722	26060				Chief Officer	02646-247137
3	Bakrol	1591	393	543	175	150	Sarpanch	9879448372
4	Bhadkodra	13233	2986	60	170	1108	Sarpanch	9904077239
5	Dadhal	3695	758	627	128	471	Sarpanch	9662989027
6	Gadkhol	6100	25332	1296	1500	3175	Sarpanch	9727074073
7	Jitali	4225	921	1023	353	345	Sarpanch	9998023555
8	Kharod	465	802	760	390	320	Sarpanch	9824791567
9	Kosamdi	12287	2817	1126	660	1200	Sarpanch	9723265790
10	Piraman	4364	848	411	222	1250	Sarpanch	9408308951
11	Sanjali	5344	1560	1315	500	700	Sarpanch	9925738196
12	Sarngpur	16671	3768	576	1700	1500	Sarpanch	8140736528
13	Umarwada	3711	761	956	950	176	Sarpanch	9624359559

*Source VDMF*

## **Annexure -H** **Control Rooms Contact Numbers**

<b>Sr.N</b>	<b>EOCs/ Control rooms</b>	<b>Contact Numbers</b>
1	State EOC	079-23251900,23251902 State Toll Free No – 079-1070
	GSDMA (Director)	23259219, Fax - 23250306
3	Director of Relief	23251509, (R) 23251506
4	Meteorological Dept. for Cyclone Warning (CWC)	079-22865012/22861413 Fax-22865449
5	Add.CEO, GSDMA	23259451,9909973692
6	<b>Bharuch District EOC</b>	<b>02642-242300</b> <b>Toll Free No – 02642-1077</b>
7	<b>Taluka EOCs</b>	
	1. Bharuch	02642-243536
	2. Amod	02641-245040, 225858
	3. Vagra	02641-225221
	4. Jambusar	02644-220070,220025
	5. Ankleswar	02646-224603,244877
	6. Hansot	02646-262026,262001
	7. Jhagadia	02645-220039,220034
	8. Valia	02643-270623
	9. Netrang	02643-282038
8	<b>Nagarpalika EOCs</b>	
	Bharuch Nagarpalika	02642 -243525, 220143,290400
	Ankleshvar Nagarpalika	02646 -247137, 247965, 247785
	Jambusar Nagarpalika	02644 -220360
	Amod Nagarpalika	02641-245442
9	<b>Flood Control Room</b>	
	1.CWC Bharuch Maktampur	02642-249848 (M) 9012238357
	2.Tapi Division (Flood )	0261-2478569
	3 Vishvamitri River & Ajwa Dam	0265-2413439
	4.Beldava, Dholi & Pingut Dam	02643-282251
	Narmada Flood Central Baroda	9909921227
	Garudeshvar (Sardar Sarovad Dam)	02640-237056, 02640-232004
	MP Control Room for upper catchment Rain Status inquiry.	0755-2550170

# Annexure

## Annexure H1

### DISTRICT DISASTER MANAGEMENT COMMITTEE (DDMC) OF BHARUCH DISTRICT

S.No	Name of the Department	Name & Designation of the officer	Phone Number			
			Office	Fax	Resident	Mobile
1.	Revenue	Tushar D Sumera Collector	240600	240602	223701	9978406205
2.	Revenue	J.D Patel Res. Addi. Collector	222332	240602	231275	9978405177
3.	Panchyat	Yogesh Choudhary DDO	240603	240951	245880	9978406230
4.	Home	Dr. Lina Patil Superintendent of Police	223633	223401	223330	9978405066
5.	DEOC	Aadarsh Baser Mamlatdar Disaster	242300			7405551477
6.	GSDMA	Saibal Sarkar District Project Officer	242300			9717393310
7.	Road&Buildings (R&B) State	Anil Vasava Executive Engineer (R&B) State	651640			9408070278
8.	Health & Family Welfare	J.H Dulera Chief District Health Officer (Panchyat)	243660	261332	261332	9726956500 9727702154
9.	Road & Buildings (R&B) Panchyat	D K Chaudhary Executive Engineer, R&B Panchayat	243415	243415		9979368131
10.	Education	N.M Mehta District Education Officer ( Secondary)	240424	240424		9909970211
11.	Education	Dr. N D Patel District Education Officer (Primary)	244210	240951		9909971661
12.	Port Authority	Capt.Banshiva N Ladva Port Officer	241772	243140	269004	9825412186
13.	I/C Fisheries	H V Mehta Superintendent of Fisheries	240453	240453		9913808821
14.	Forest	Urvashi Prajapati Dy. Conservation of Forest(Social Forestry)	269065	222330	241734	7574950461

# Annexure

S.No	Name of the Department	Name & Designation of the officer	Phone Number			
			Office	Fax	Resident	Mobile
15.	Water Supply	Hiral B Devani Ex.Engineer,GWSSB	265560	265581		9978406619
16.	Labour & Employment	D K Vasava Dy. Director. Industries Safety & Health	240421	240421	225838	9825801547
17.	Information Department	S R Patel Dy.Director Information I/c	222348 243778	240850	264003	9429073395 7436052411
18.	Rural Development	C.V Lata Director, DRDA	241953	240745	247557	9978406833
19.	State Road Transport	M. S. Panchal Asst. RTO	233102 240653			9099557769
20.	Agriculture	Kuldip Singh Vala DAO I/c	261611	240951		9537845622
21	Animal Husbandry	R.L Vasava Veterinary Officer (Animal Husbandry)	243146 252471	240951		9427131252
22	Western Railway	D.K Rajul Station Superintendent	261800			9724098417
23	GEB (GETCO)	Darshna Patel Superintendent Engineer	245952			9925211179
24	GEB (DGVCL)	I N Patel Superintendent Engineer	245402 229189		245775	9879200771
25	State Transport ST	C.D.Mahajan Divisional Controller	246102			6359919031
26	Food & Civil Supplies	Ronak J Shah District Supply Officer	241500	240862	266335	7567021674 9925898191
27	Civil Defense	H M Chudasama Inspector Civil Defense	02646- 225700			9925563237
28	Home Guards	Hitesh Gandhi District Home guards	260150			9924136545
29	(GPCB)	Falgun Modi Regional Officer	246333			8849259335 9427318615
30	(GPCB)	S. B Parmar Dy. Env. Eng. (Anklesvar)	02646- 222933	02646- 222933		9427312901

## Annexure

S.No	Name of the Department	Name & Designation of the officer	Phone Number			
			Office	Fax	Resident	Mobile
31	CDMO	Dr. J.D.Parmar Civil Surgeon	241759	241759		9426365030
32	NH (Central)	Suraj Kumar Singh Project Director Surat	0261- 2221223			8347252905
33	NH (Central)	Hitesh J. Soliya National Highway Division, Bharuch	02642- 230800			8980608079
34	GSRDC	Piyush Upadhaya Dy. Engineer (Baroda)	--	-	-	9974041101
35	MIP-Drainage	K. I Chotaliya Ex. Engineer	226460	222827		9173527257
36	GIDC (Bharuch)	A C Patel I/c S.E.	242432 224183			9879110041
37	Notified Area Anklesvar	Arun C patel Chief Officer	02646- 222487	251750		9879110041/9 426889616
38	Irrigation	M G Mehta I/c Ex Engineer Dist. Panchyat	243905	243905		9426831527
39	Notified Area Bharuch	Kartik Prajapati Chief Officer	02646- 222487	251750		9909009051
40	Notified Area GIDC Panoli	Jignesh Prajapati Chief Officer	02646- 272747	272747		9978309485
41	CWC Bharuch	Sakeel Ahmed Ex. Engineer	02642- 249848	--		9012238357
42	Asst. Commissioner Food and Drugs	Mahendra Nakrani Asst. Commissioner	02642- 269525	--		9879508161
43	Irrigation (Ukai)	J C Choudhary Ex. Engineer (Ank-Hansot)	02646- 247403	247451		9099954106



## **Annexure H2**

### **District level Other Officers**

Sr.No	Designation	Phone No (O)	Fax No	Mobile
1	Project Administrator	02642-222331	251760	9427234099
2	District Planning Officer	02642-240771	240771,222492	9427678984
3	Ass.Geolist	260043	240602	9909039980
4	Superintendent Land Record	269571	269571	--
5	District Treasury Officer	02642-240429	220430	9767022901
6	Dist. Employment Officer	02642260702	--	9726016506
7	Dist Social Welfare Officer-state	02642244734	--	9426753204
8	Dist. Social welfare Officer-Panchyat	02642243204	--	8511103814
9	Dist. Vigilance Officer- Tribal	02642265719	--	9650165131
10	GMDC Rajpardi	02645-224768	--	9727792636
11	Asst. Controler Legal metrology	02642-263253	--	--
12	Dist. Register, Co-Operative Societies	02642240651	--	7016809883
13	Social Welfare Officer (Child Marriage)	02642263823	253051	9979022583
14	Asst. Charity Commissioner	02642-264353		9825687371
15	Social Welfare	District Backward Class Officer	244641	--
16	Social Welfare	District Social Welfare Officer(Panchyat)	243204	--
17	Social Welfare	District Social Welfare Officer(Buxipunch))	244734	9427056004

**Annexure –H3****CONTACT DETAILS OF LIASION OFFICER**

<b>TALUKA</b>	<b>DESIGNATION</b>	<b>OFF-PHONE</b>	<b>MOBILE</b>
Bharuch City & Rural	SDM-Bharuch	02642-241980	9978405256
Ankleshvar	SDM- Anklesvar	02646-242648	7567011436
Jambusar	SDM-Jambusar	02644-220070	7567011407
Amod	Asst. Labour Commissioner,	02642-242214	99798 63897
Jhagadia	Deputy Collector, Jhagadia	02645-220052	7567011411
Valia	PO-cum TDO valia	02643-270626	7567018204
Netrang	Dist.Registrar- Cooperative Soc.	02642-240651	7016809883
Hansot	Dy.DDO (Pan.) District Panchyat	02642-252479	7567009044
Vagra	District Supply Officer	02642-241500	7567021674

# Annexure

## Annexure –H4&H5

### Contact Details of Prant Officer / Mamlatdar / TDO & Chief Officers in District :-

Taluka Name	Designation	Officer Name (Shri)	Code	(O)	Mobile	Police Station
Amod	Mamlatdar	Shri Jignesh D Patel	2641	245040	7567001322	245333
	TDO	Shri S R Mojanidar		245269	8758588154	
	Chief Officer	Shri D N Gohil		245442	9574007002	
Jambusar	Prant Officer	Shri A K Kalsariya	02644	220191	7567011407	222411
	Mamlatdar	Shri Arjun Vasava		220070	7567001547	
	TDO	Shri M M Chaudhary		220071	7567012606	
	Chief Officer	Shri Y.J. Ganatra		220360	9879556795	
Bharuch	Prant Officer	Shri U N Jadeja	02642	241980	9978405256	245801
	Mamlatdar	Smt. Roshni Patel		243536	7567011411	
	TDO	Shri D B Patel		243404	75670 12404	
	Chief Officer	Shri Dashrathsinh Gohil		243525	9574007002	
Vagra	Mamlatdar	Ms. Vidhu Khaitan	02641	225221	8460225902	
	TDO	Mr B H Makwana		225223	7567012640 9409632652	
Hansot	Mamlatdar	Shri Hardik Beldiya		262026	7567001392	262033
	TDO	Ms. Alpna M Nair		262025	7567012651	
Ankleshwar	Prant Officer	Smt. Naitika Patel	02646	227648	7567011436	247352
	Mamlatdar	Shri. Karansinh Rajput		224603	7567001495	
	TDO	Shri D.R Patel		247801	75670 18865	
	Chief Officer	Shri Keshav Koldiya		247137	9825808418	
Jhagadia	Prant Officer	Shri D S Bariya	02645	220052	75670 11411	220033
	Mamlatdar	Shri R S Parmar I/c		220039	9824203973	
	TDO	Shri A V Dangi		220036	9727240483	
Valia	Mamlatdar	Shri Neha Savani	02643	270623	9924191984	
	TDO	Shri Rafik Malek		270626	7567018204	
Netrang	Mamlatdar	Shri Gopal R Hardasani	02643	282038	9427056297	270623
	TDO	Shri Rafik Malek		282216	7567866901	

## Annex- H6 Contact Details of Bharuch District Police Station

Sr. No.	Name	STD Code	Phone No.
1	Bharuch HQ & Control Room	02642	223303 224100
2	A Division Police Station	02642	269133
3	B Division Police Station	02642	269233
4	C Division Police Station	02642	225312
5	Bharuch Taluka (Rural)	02642	245801
6	Nabipur Police Station	02642	283233
7	Palaj Police Station	02642	277333
8	Ankleshvar City Police station	02646	247352
9	Ankleshvar Taluka (Rural) P.Station	02466	220960
10	Ankleshvar GIDC Police Station	02646	225551
11	Jhagadia Police Station	02645	220033
12	Umalla Police Station	02645	234330
13	Valia Police Station	02643	270633
14	Hansot Police Station	02646	262033
15	Jambusar Police Station	02644	222411
16	Kavi Police Station	02644	230233
17	Vedach Police Station	02644	233303
18	Amod Police Station	02641	245333
19	Vagra Police Station	02641	224233
20	Dahej Police Station	02641	256233

## Annexure

### Annex-H7Bharuch District Health Department Contact

Sr.No.	Name	Address	MobNo.	Ph No.
1	C.D.H.O.	Dist.Panchayat Compound, Health Branch, Bharuch.	9726956500	02642-243660
2	A.D.H.O.	Dist.Panchayat Compound, FP Branch, Bharuch.	8758755595	02642-243660
3	R.C.H.O	Dist.Panchayat Compound, Health Branch, Bharuch.	9727702154	02642-243660
4	E.M.O.	Dist.Panchayat Compound, Health Branch, Bharuch.	9727702225	02642-243660
5	Q.M.O	Dist.Panchayat Compound, Health Branch, Bharuch.	9727702212	02642-243600
6	D.M.O.	Dist.Panchayat Compound, FP Branch, Bharuch.	982702225	02642-247173
Medical Officer CHC Contact List				
1	Dr. Sunil Singh	B/H SBIMain Branch, Bharuch	7567812880	02642-242923
2	Dr.Kanchan Kumar Singh	CHC Compound, Amod	9727702174	02644-225867
3	Dr.Pravinkumar Singh	Nr.CHC Compound, Vagra	9727702171	02641-225867
4	Dr.Vipul Barodiya	Ankleshwar At&Post Piraman, Subcenter	9727702207	02646-262294
5	Dr.Shusant Kathorwale	Taluka Panchayat Compound, Hansot	9727702206	02646-262294
6	Dr. C J Mehta	Valia Chokdi, CHC Compound, Jhagadia	9727702173	02645-221310
7	Dr.Kisan Vasava	CHC Compound Valia	9427068011	02643-270272
8	Dr.AN.Singh	CHC Compound , Netrang	9727702172	029643-270272
9	Dr. O N Desai	CHC Compound, Jambusar	9016594952	2644-22210

# Annexure

## Annexure-H 8

### Control Rooms (State & Govt. of India)

No .	Department	Phone	FAX
1	Ministry of Home Affairs, New Delhi	011 23092923 011 23093054 011 23092885 011 23093897	011-23092763 011-23093750
2	State Emergency Operation Center (SEOC), Gandhinagar	23251914 23251900 23221902	23251916
3	PS, RD- COR & Secy (SEOC)	23251926	23251912 23251916
4	Irrigation Deptt. Gandhinagar	23220954 23248735 23248736	23240553
5	R & B Deptt. Ahemdabad	26305296 26303490	-
6	Health Commissioner, Gandhinagar	23253343 23250818	23253343 23250818
7	Home Deptt. G'nagar (State Control)	23252957 23252958	23252075
8	DGP, Police Bhavan, G'nagar (State Control) SCR-23254343, 23249257	23246328 23246330/31	23146329
9	Police Commissioner, Ahemdabad	25633636	25630600
10	Gujarat Maritime Board, G'nagar	23238346-48	23234704
11	GEB Vadodara	0265-2330017	2337918 2338164
12	IMD (Seismo), New Delhi	011-24611842	011-24611792
13	IMD (MET), Ahmedabad	22865012	22865449
14	GSRTC,Ahmedabad (Central Office)	25454102	25453280

## Annexure H 9

### Relief CommissionersOffice& SEOC

Sr. No.	Designation	(O)	(R)
1	Relief Commissioner & Ex-Officio Secretary (DM)	079-23251509	23154917
2	Director of Relief & D.S	079-23251611 23251612	23234364
3	Deputy Collector & U.S.	079-232556335	
4	Deputy Collector (DM) (SEOC)	079-23251900	

## Annexure

### Annex-H 10 Gujarat State Disaster Management Authority

S. No.	Name of Officer	Designation	(O)	(M)
1	Shri Kamal Dayani (IAS)	CEO	23259276/502 23259275(F)	9978407002 9978407003
2		PA To CEO	23259276	8905195950
2	Shri A J Asari (IAS)	Addl. CEO	23259451	9978407004
3		PA to Addl. CEO	23259292	9978407007
4	Shri Manoj Patadiya(GAS)	Director (Admin)	23259219	9978407006
5		Director (Finance)	23259278	9978441047

### Annexure-H11 Army, Air Force and Coast Guard

No.	City	(O)
1	Ahmadabad	22856251
2	Ahmedabad	(O)22852444 (R)22852682 (F)22856251
3	Ahmedabad	(O)22852403 (R)22852433 (F)22861902
4	Ahmedabad	22869251
5	Gandhinagar	23242600
6	Delhi	011-23010231, 25687194-97
7	Gandhinagar	(O) 079-23243264, 23243283 (Operation Center) 23243147 (F) 079-23241717
	Dy.Comdt	(O) 079-23243241 (M) 9377858901
8	Mumbai	(O)022-24372472, 24333727 (F)022-24333727, 24372920

### Annex-H12 Air Force Gandhinagar

1	Wing Commander, Air-II for Air Commander-in-Chief, Sector-9, Gandhinagar	23242600/5241 (F)23240076/
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### Annex-H13 Bhaskaracharya Institute of Space Application & Geoinformatic (BISAG)

N o.	Name	Desi.	(O)	(R)	(M)
1	Shri T.P.Singh	Director	23213081/90 (F)23213091	23254846	9909945001
2	Smt. Parul	Manager	23213083	-	9909945008

## Annexure

### Annex-H14 India Meteorological Department and Observatories

No.	Desi.	(O)	(R)	(F)
1	Dir. Meteorology Canter Ahmedabad	22865165 (M)9978406424	26852615	22865449
2	Meteorologist Weather Forecasting A 'bad	22861413	26852615	22865449
3	D G, Institute of Seismological Research, Gandhinagar	23252703 23259100 Fax 23259192		9824020907
4	Asst. Meteorologist II IMD, Bhuj	02832-250575	223051	250575
5	Kevadia Observatory	02640- 232122, 232041	231137	232122
6	079-22865012		22865449	
7	Director, A'bad	079-22865165		
8	Met. (I/c), A'bad	079-22861413		22865449
9	079-22865012		22867206	

### Annex-H15 Institute of seismological Research

Address: Near P.D.P.U. campus, Raisan village, Gandhinagar			
No.	Desi.	(O)	(M)
1	Director General	66739001 66739015(Fax)	997840 7515
2	Scientist-C	66739015	99252 43646
3	-	66739000 (F) 66739028	-

### Annex-H16 BN, NDRF, Chiloda Road, Gandhinagar

1	Control Room	079-23201551
2	Comdt. Officer	(O) 079-23202540 (F) 079-23202540 (R) 079-23202539
3	PA to C.O.	9377206454
4	PRO	9427304214



**Annexure H17****List of other District recourse: - (Specially Rescue)****NDRF**

<b>No</b>	<b>Designation</b>	<b>Name</b>	<b>Tel.No.s</b>
1	Commandant	Shri V V N Prasanva Kumar	(M) 09428826445
2	Dy.Commandant(Opert.)	Shri A K Singh	(M) 7350063759
3	Dy.Commandant(RRC-Gandhinagar)	Shri Ranvijay Kumar	(M) 9427050984
4	Control Room		(O) 2668274245 9870006730

**Annexure H 18****Ahmadabad Mahanagarpalika:-**

<b>S.No</b>	<b>Designation</b>	<b>Name</b>	<b>Tel.Nos</b>
1	Chief Fire Officer	Shri J.N. Khadiya	(M) 9327038758

**Surat Mahanagarpalika:-**

<b>S.No</b>	<b>Designation</b>	<b>Name</b>	<b>Tel.Nos</b>
1	Chief Fire Officer	Shri B.K Pareek	(M)9724345553
2	Divisional fire Officer		(O) 0261-2414195

# Annexure

## Annexure: - H19State EOC Iridium Contact Number (District wise)

Sr. No	Name		SIMCard Serial Number	Tel	Data
1	DoR	SEOC	89881 69214 00053 1170	881621467711	881693167711
2	Collector	Ahmedabad	89881 69214 00053 1279	881621467717	881693167717
3	Collector	Amreli	89881 69214 00053 1303	881621467719	881693167719
4	Collector	Anand	89881 69414 00058 4183	881641465669	881693465669
5	Collector	Banaskantha	89881 69414 00058 4126	881641465662	881693465644
6	Collector	Bharuch	89881 69414 00058 4266	881641465660	881693465642
7	Collector	Bhavnagar	89881 69214 00053 1162	881621467713	881693167714
8	Collector	Dahod	89881 69414 00058 4126	881621466137	881693466119
9	Collector	Dang	89881 69414 00058 4258	881641465659	881693465641
10	Collector	Gandhinagar	89881 69414 00058 4175	881641465668	881693465668
11	Collector	Jamnagar	89881 69414 00058 4209	881641465653	881693465635
12	Collector	Junagadh	89881 69214 00053 1196	881621457712	881693167712
13	Collector	Kheda	89881 69414 00058 4191	881641465670	881693465670
14	Collector	Kutchch	89881 69214 00053 1246	881621467718	881693167718
15	Collector	Mehsana	89881 69414 00058 4225	881641465655	881693465637
16	Collector	Navsari	89881 69414 00058 4159	881641465665	881693465646
17	Collector	Narmada	89881 69414 00058 4134	881641465663	881693465663
18	Collector	Panchmahal	89881 69414 00058 4241	881641465657	881693465639
19	Collector	Patan	89881 69414 00058 4233	881641465656	881693465638
20	Collector	Porbandar	89881 69414 00058 4142	881641465664	881693465645
21	Collector	Rajkot	89881 69414 00058 4274	881641465652	881693465634
22	Collector	Sabarkantha	89881 69414 00058 4217	881641465654	881693465636
23	Collector	Surat	89881 69414 00058 4118	881641465661	881693465643
24	Collector	Surendranagar	89881 69414 00058 4167	881641465666	881693465666
25	Collector	Vadodara	89881 69214 00053 1295	881621467716	881693167716
26	Collector	Valsad	89881 69214 00053 1261	881621467714	881693167715

**Annex- H2O Details of Pipeline Operators in Bharuch Dist.**

Sr.	Company	Pipeline Detail	Oil/Gas	Contact Person	Designation	Mobile	Email
1	GAIL	Dahej – Uran – 30”	Natural Gas	Vinod Ameria	Chief Manager (Surat-hazira)	9691901123	<a href="mailto:vameria@gail.co.in">vameria@gail.co.in</a>
		Hajira-Vijaypur- Jagdishpur – 36”					
2	RIL Ind.	Hazira to Dahej 26”	Gas	Mr. Vivek Krishna Das	VP	9724312201	Vivek.Krishnadas@ril.com
		Hazira to Dahej 24”					
3	PIL	Kakinada(A.P.) to Bhadbhut 48”	Natural Gas	Mr. pradeep Kumar Singh	Lead operations	9630087112	<a href="mailto:Pradeep9.singh@RIL.com">Pradeep9.singh@RIL.com</a>
				Radhey Shyam Singh	Area Mgr	9724168819	Radhey.singh@RIL.com
4	GSPL	Ankleswar to Dahej 24”	Natural Gas	Mr J.Cheena	AGM (O&M)	9825033054	<a href="mailto:chinna@gspc.in">chinna@gspc.in</a>
5	ONGC	Ankleswar to CPF 8”	Oil	Mr.Premchand Mr. K K Pandey	CGM(C&M) GM(C&M)	9428332738 9428332443	Pandey_kiritkant@ongc.co.in
6	IOCL	AMOD TO HAZIRA 12.75”	Oil	Mr.Amit Kumar Mursainia	Sr. Operation Manager	9654383778	mursainiaak@indianoil.in
				Mr.Ajay kumar Verma	Assistant Manager(O&M)	9909963507	ajaykmr@indianoil.in
7	Gujarat Gas	Bharuch Region	Natural Gas	Mr.Dinesh Desai	Deputy Manager (HSE)	9924127631	<a href="mailto:Dinesh.Desai@gujaratgas.com">Dinesh.Desai@gujaratgas.com</a>

## H21 List of Bharuch District Industries Associations President:-

No.	Name	Contact Nos.	Email ID
1	Ankleshvar Industries Association Shri Ramesh Gabani Plot No. – 618-619, GIDC, Ankleshvar	(02646) 222000 253102, 9377522525	<a href="mailto:info@aiaindia.co.in">info@aiaindia.co.in</a>
2	Panoli Industries Association Shri B.S Patel (President)	(02646) 272275, 272828 9426807043	<a href="mailto:piapanoli@yahoo.com">piapanoli@yahoo.com</a>
3	Jhagadia Industries Association Mr. Narendra Bhatt	9909994941	
4	Dahej Industries Association Sri. M. A. Haniya President,	99798 82207	<a href="mailto:mhanian@meghmani.com">mhanian@meghmani.com</a> ;
5	Vilayat Association Mr. Mahesh Vasi	9898014675	<a href="mailto:mahesh.vashi@colourtex.co.in">mahesh.vashi@colourtex.co.in</a>

## **Annexure: - I**

### **List of Dahej by pass & Link Road Societies Members:-**

S.N	Society name & add	Name	Designation	Contact Number
1	Vedant society	Satish B Oza	Member	9998005590
2	Vedant society	Gautam Patel	Member	9925999660
3	Vedant society	Narendrabhai Mistri	Member	9427101410
4	Vedant society	Manish Solanki	Member	9428175580
5	Puspadhan bungalows, link road	Jignesh Gohil	Member	9825992562
6	Puspadhan bungalows, link road	Rusikesh Contractor	Member	9925771728
7	Arbudanagar-2, link road	Chandrakant Sadhu	Member	9998213518
8	Arbudanagar-2, link road	Vijaybhai	Member	9879758029
9	Nandinipark soc, link road	Nileshbhai Parmar	Member	9409067145
10	Arbudanagar-1, link road	Manharbhai Patel	Member	9909029646
11	Aaradhana soc, link road	Maheshbhai Mehta	Member	9427583313
12	Link complex, link road	Dipakbhai Patel	Member	9638558547
13	Link resi plaza, link road	Pratixaben Parmar	Member	9824906814
14	Aasopalav, link road	Kisorbhai Pathak	Member	9638328928
15	Mangaltirth soc, dahej by pass road	Samir Patel	Member	9824325329
16	Ganeshpark, dahej by pass road	Vijaybhai Vasava	Member	9428519339
17	Ganeshpark, dahej by pass road	Jinish Mandviya	Member	9898997511
18	Gael colony, dahej by pass road	Ghanshyam Patel	Member	9725009860
19	Shantiniketan soc, dahej by pass road	Kamleshbhai Patel	Member	9879264345
20	Shantiniketan soc, dahej by pass road	Nireshbhai Patel	Member	9925231569
21	Shantiniketan soc, dahej by pass road	Satish Carpenter	Member	9898327575
22	Niravnagar, dahej by pass road	Naisedh Bhatt	Member	9998967369
23	Mirapark, dahej by pass road	Yogeshbhai Patel	Member	9426864570
24	Sankalp bungalows, dahej by pass road	Thakorbhai	Member	9825321260

## Annexure

S.N	Society name & add	Name	Designation	Contact Number
25	Aischary bung,dahej by pass road	Vijaybhai Gohil	Member	9979882380
26	Dattkrupa,dahej by pass road	Rajnibhai Patel	Member	9428722925
27	Mangaljyot soc,dahej by pass road	Laljibhai Degama	Member	9909672779
28	Mangaljyot soc,dahej by pass road	Chaudhari Chachu	Member	9998213954
29	Madhavpark,dahej by pass road	Mayur Patel	Member	9979154999
30	Narayansrusti,dahej by pass road	Babuji Rajput	Member	9824788932
31	Narayan residensy,dahej by pass road	M K Patel	Member	--
32	Mangaly residensi,dahej by pass road	S G Alal	Member	--
33	Tulsi residensi,dahej by pass road	Piyush Patel	Member	9624855577
34	Narayan garden,dahej by pass road	Dineshbhai Vyas	Member	9998216325
35	Madhuram soc,dahej by pass road	Sanjaybhai Pandya	Member	8866326525
36	Reliance appartment,dahej by pass	Prakashbhai Patel	Member	9586490144
37	Sanvila soc,dahej by pass road	Vasantbhai Patel	Member	9429284162
38	Ganeshkunj,dahej by pass road	Amar Patel	Member	9574007014
39	Chaitanyapark,dahej by pass road	Kiransinh Yadav	Member	9925783778
40	Sakuntal appart,dahej by pass road	Mitesh Shah	Member	9979898030
41	Manglapark soc,dahej by pass road	Rajeshbhai Patel	Member	9974285783
42	Vaibhav soc,dahej by pass road	Manishbhai Shah	Member	9998822043
43	Mangaldip soc,dahej by pass road	Hasubhai Patel	Member	9824311375
44	Aalfa soc,link road	Sanjaybhai Patel	Member	8511105483
45	V d township,dahej by pass road	Atul Patel	Member	9925245719

# Annexure

## Annexure- J -List of Resource

### Annex-J1 List of Tractor

S. N	Address	Taluka	Name of Owner	Contact Number
1	PLOT NO 2900/125 GIDC,AT ANKLESHWAR,SARDAR PATEL ESTATE,	Bharuch,Gujarat,393002	AC PLUS READY MIX	9925880353 Tractor-2
2	A 16 SIDDHI VINAYAK SOCEITY ,MUKTAMPUR,	BHARUCH	BINDUBEN	9898195121 Tractor-2
3	GAJERA RD UCCHAD VILLAGE,TA	JAMBUSAR,BHARUCH,,Gujarat,392 150	SKAN MARINE SERVICES PVT LTD	--
4	61,MARUTI NAGAR,ANDADA,	TA- ANKLESHWAR,Bharuch,Gujarat,392 001	NAGENDRAKUMAR	9167291419 Tractor-1 Loader-1
5	PL NO H/3093/6, FL NO A/101, 1ST FL,HARIDWAR CO OP HOS SOC,GIDC,	ANKLESHWAR, DIST BHARUCH,Bharuch,Gujarat,393002	AAWAD CARTING & TRANSPORT CO.	9879371839 Tractor-1
6	AHIR FALIYA,AT PO DAHEJ	TA VAGARA,,Bharuch,Gujarat,392130	THAKORBHAI	9904388955 Tractor-1
7	S.NO.439 OPP ONGC EPS POINT,AT-PO-ANKALWA	TA-HANSOT,DT- BHARUCH,Bharuch,Gujarat,393030	SPIRE CERA FRIT PVT LTD	7383698257 Tractor-1
8	Badakodra	Anklshwar	ANUP ENTERPRISES	9824476065 Tractor-
9	AT&PO:LIMATE,	Jhagadia	ARJUNBHAI	9913383685 Tractor
10	B-35, GAYATRI KRUPA SOC,B/H AVDHOT NAGAR,BHOLAV,	Bharuch	OM CONSTRUCTION	9879442733 Tractor

## Annexure

### Annex- J2-List of Truck& Dumper:-

S.No	Address	Taluka	Name of Owner	Contact Number
1	NO.8 A/P. KAPODRA NEXT TO OSCAR,HOTEL,	ANKLESHWAR	M/S. NOOR LIFTERS PVT LTD	9904329068 Truck-1
2	171 1 BESIDE MM PETROLEUM,DAHEJ ROAD VILLAGE BHENSALI	Vagra	ADITYA INFRA	9998959445 Truck
3	22 TIRTH NAGAR,B H TVS SHOWROOM	Ankleshwar	MADHAV ENTERPRISE	9824533711 Truck-2
4	Ankleshwar Nagarpalika	Ankleshwar	Chief Officer	02643247137 9825808418
5	Bharuch Ngarpalika	Bharuch	Mayank Rawal	02642220150 9574007011



# Annexure

## Annex- J3-List of JCB

S.No	Address	Taluka	Name of Owner	Contact Number
1	VADI FALIA,AT-DAHEJ,	Vagra	PRADIP KUSHWA	8140909082
2	Saykha	Vagra	NAVAJ ENTERPRISE	9909913387 JCB
3	Umalla	Jhagadia	PRAKESHCHANDRA	9925176163 JCB
4	Sunevkhard	Hansot	HITESHBHAI	7567055000 JCB
5	Vilayat	Vagra	JYOTIBEN	9909995921 JCB
6	Kapodra Chowkdi	Ankleshwar	B S SHAH	9537443734 JCB
7	TEKRA FALIYU,AANOR, AT:RANADA	Amod	VIJAYSINH	7874881182
8	8/9, AMBE TRADE CENTER,1ST FLOOR, RAJPIPLA CHOWKDI,ANKL	Ankleshwar	ASHISH CARTING	9429282455
9	Badakodra	Ankleshwar	ANUP ENTERPRISES	9824476065 JCB-
10	SAROD,	Jambusar	SHAHEJAD SALIMBHAI PATEL	9723250744 JCB-1 Tractor-1
11	DABBA FALIYA,VILL:DADHEDA,	Jhagadia	JAYESHKUMAR R VASAVA	9909763974
12	GR FLOOR.225,NR.FIRE STATION,G.I.D.C. ANKLESHWAR,	Ankleshwar	BUILD WELL ENGINEERS	9925162776
13	STATE HIGHWAY 13,VILLAGE KONDH, VALIA ROAD,	Ankleshwar	GUJARAT GUARDIAN LTD.	7226983666
14	RAJPUT FALIYU,KARSAD,	Valia	BHARATSINH	9879938170
15	AT:KHADKI FALIYU,ANDADA,	Ankleshwar	JAYDEEPBHAI	9723723800
16	0,H,NO.24/C,0 LIMDA FALIYU,JAGESHWAR,,	Bharuch	PAYAL ENTERPRISE	9925890618
17	1938,KAKA TRAVEL STREET,AT&PO:ZADESHWAR,	Jhagadia	HEMAL BHARATBHAI PATEL	9898450011
18	B-83 SHIVANJALI ROW HOS GADKHOL,ANKLESHWAR	Ankleshwar	RENUKA CONSTRUCTION PRO. SANTOSH K.	8469420808

## Annexure

19	KAINIYA NAGAR,SARANGPUR,	Ankleshwar	HARIBHAI BHARWAD	9925475619
20	SARVE NO.260,NR.NILKANTH TEMPLE, IPCL ROAD,	Vagra	ANJANI EXCAVATION OPERATIONS	9925224649
21	,H,NO.24/C,0 LIMDA FALIYU,JAGESHWAR,,	Bharuch	PAYAL ENTERPRISE	9925890618 JCB
22	AT&PO:LIMATE,	Jhagadia	ARJUNBHAI	9913383685 JCB Tractor
23	16 GAJANAND SOCIETY,GAYATRI MANDIR PASE,	Ankleshwar	MARUTI ALANG HOUSE	9824477375 JCB
24	1 SHRIJI DARSHAN BUNGLOWS,ZADESHWAR,,	Bharuch	MURARI KHANDLWAL	9824188221 JCB
25	DARJI FALIYU,AT:AMBHETA	Vagra	JIGNASABEN	9662925022 JCB
26	PLOT NO 3086/75,AKRUTI APPARTMENT,GIDC ANKLESHWAR,	Ankleshwar	RAJENDRAPRASAD SHRIVASTAVA	9033658404 JCB
27	MOTA KUMBHARWAD,NR.BHATWAD,	Ankleshwar	ZULFICAR	9825367117 JCB
28	461, NAVI NAGARI,HINGLOT,,	Bharuch	SADIKHUSAIN UMARJI PATEL	9824124675 JCB
29	B-35, GAYATRI KRUPA SOC,B/H AVDHHOT NAGAR,BHOLAV,	Bharuch	OM CONSTRUCTION	9879442733 JCB
30	DEVAL FALIA,TALODRA	Bharuch	SANTOSH MAHIPAL YADAV	9099212107 JCB
31	NEAR HASTI TALAV, MUNICIPAL NO.2,OPP.GAYATRI MATA TEMPLE,	Ankleshwar	SANJAYKUMAR K MODI	9426885065 JCB
32	54,VANZARAVAS,MEERANAGAR SARANGPUR,	Ankleshwar	AMIT PANCHIBHAI VANZARA	9033658404
33	FF-60,HEXZONE ARCADE,VALIA ROAD,	Ankleshwar	SHIV SHAKTI ENTERPRISE	9825027927
34	VILAYAT 813,VAGRA,,Bharuch,Gujarat,392012	Vagra	JYOTIBEN PRAGNESHBHAI PATEL	9909995921
35	SIDDHESWAR BUNGLOWS, HOUSE NO.26,VILL:BHADKODARA,	Ankleshwar	SATISH GOMANBHAI AHIR	9974553399
36	AT AND POST KADODARA,NEAR PRIMARY HEALTH CENTER	Vagra	ALPESHKUMAR R GOHIL	9662046427
37	HOME VEDIO SHOPPING,MANDVI ROAD,NETRANG,	Netrang	JITENDRABHAI BALUBHAI PATEL	8140096667

## Annexure

38	MANMANDIR,246,RESIDENCY,,KOSAMDI,ANK LESHWAR,	Ankleshwar	ARJUN ENTERPRISE	9904973533
39	DHODHWADA,AT-PANETHA,	TA- ZAGADIA	KUNJALBHAI	9725324144 JCB-1

### Annex- J4 List of Loader

S.No	Address	Taluka	Name of Owner	Contact Number
1	GIDC	Ankleshwar	URVASHI PULP & PAPER MILLS PVT.LTD	9099412855 Loader-2
2	Kosamdi	Ankleshwar	ARJUN ENTERPRISE	9925960848
3	Badakodra	Anklshwar	ANUP ENTERPRISES	9824476065 Loader-
4	61,MARUTI NAGAR,ANDADA,	TA- ANKLESHWAR,Bharuch,Gujarat,392001	NAGENDRAKUMAR	9167291419 Loader-1
5	PLOT NO.D-2/6A, VILLAGE:JOLVA,,DAHEJ-2 INDUSTRIAL ESTATE,GIDC,DAHEJ,	Vagra	FILATEX INDIA LTD.	9099060802 Loader-2
6	A/40,NEW ANAND NAGAR,NEAR,SIDHDHNATH NAGAR,SEVASHRAM,ROAD,	BHARUCH,	MOHSINKHAN	9725771625 Loader-1
7	C-128 SAMRIDDHI PARK BHADKODRA,	TA ANKLESHWAR DI BHARUCH,BHARUCH,,Gujarat,393001	SATISHSINGH	9824476065 Loader-1

## Annexure

### Annex-J5 List of Crain

S.No	Address	Taluka	Name of Owner	Contact Number
1	Piraman	Ankleshwar	SHAIKH NIJAMMUDEEN	9825464522
2	ABC Chowkdi	Bharuch	AMRIT CRANE SERVICE	9825030955
3	ABC Chowkdi	Bharuch	M/S. AMAR CRANE SERVICE	9825030955
4	Zadeshwar	Bharuch	M/S HARI CONSTRUCTION	9978107958
5	Abbott Chokdi	Jhagadia	PARAM PATEL	7043107852
6	A-58 SAIDHAM PARK,AT&PO MANDAVA	ANKLESHWAR	JAYPRAKASH EDAL SINGH	9824387214 Crain-1
7	D-2-E-93, GIDC DAHEJ-II INDUSTRIAL,ESTATE VILLAGE GALENDA,	TALVAGRA,,	JOBBY ENGINEERS PVT LTD	9572912367 Hydra Crain-1
8	PLOT NO.5002/3, BEHIND MEGHMANI,ORGANICS LTD, NR. KHWAJA ROAD, GIDC,,Gujarat,393002	ANKLESHWAR,Bharuch	KM INFRA	9898211333 Crain-1
9	TEKRA FALIYU 207 JAGESHWAR,	TA.VAGRA,	BARKAT CRANES & EQUIPMENT PVT LTD	9821665200 Crain-1
10	46, MANAS NAGAR SOCIETY,OPP BUS STOP NR,SAWAMINARAYAN TEMPL,ZADESHWAR ROAD,	Bharuch	AMRIT CRANE SERVICE	9825030955 Crain-1
11	Kosambi	Ankleshwar	KARAN ENTERPRISE	9879355370
12	Bholav	Bharuch	VINTAGE INFRA PVT. LTD.	9033658404
13	Badakodra	Anklshwar	ANUP ENTERPRISES	9824476065

## Annexure

### Annex- J6 List of Inflatable Light Tower in District:-

Sr.No	Name Of Dept.	Number of Inflatable Tower	Contact Number	
			Mobile	Office
1	Bharuch Nagarpalika	2	9574007002	02642 -243525 220143 , 290400
2	Ankleshvar Nagarpalika	2	9099918903	02646 -247137 247965, 247785
3	Amod Nagarpalika	2	7567001417	02641-245442
4	Jambusar Nagarpalika	2	7567001359	02644 -220360
5	District EOC	3	9717393310	02642-242300

### Annex-J7 List of Diesel Generator in District: - (Govt Dept)

Sr.No	Name Of Dept.	Number of Generator With (K.V.)	Contact Number	
			Mobile	Office
1	Bharuch Mamlatdar Office	1 (10.K.V.)	7567001377	02642-243536
2	Ankleshvar Mamlatdar Office	1 (10.K.V.)	7567001495 9825405969	02646-224603
3	Hansot Mamlatdar Office	1 (10.K.V.)	7567001392	02646-262026
4	Valia Mamlatdar Office	1 (10.K.V.)	9408703208	02643-270623
5	Jhagadia Mamlatdar Office	1 (10.K.V.)	7567001469	02645-220039
6	Vagra Mamlatdar Office	1 (10.K.V.)	7567001417	02641-225221
7	Amod Mamlatdar Office	1 (10.K.V.)	7567001322	02641-245040
8	Jambusar Mamlatdar Office	1 (10.K.V.)	7567001959	02644-220070
9	SDM Office Bharuch	1 (10.K.V.)	9978405256	02642-241980
10	SDM Officer Anklesvar	1 (10.K.V.)	9979076562	02646-242648

## Annex- J8 List of Generator Dealers: - (Private)

S.No	Village	Taluka	Name of Owner	Contact Number
1	Dahej	Vagra	Rajmani Prajapati	07359925311
2	Sherpura Chokdi	Bharuch	Parvesh Ahmed	07947272476
3	Zanor	Bharuch	Manubhai Jak Machi	9428587747
4	Bhadabhut	Bharuch	Somchnd M Tandel	9824783422
5	GIDC	Ankleshwar	Dharamveer Shevakram Singh	9724200342
6	GIDC	Ankleshwar	Harshad Patel	9825003258
7	Dahej	Vagra	Dilip Patel	9879117524
8	Asian Paint Ckokdi	Ankleshwar	Achal Singh (Genset Operater)	8866322803 9426112803
9	GIDC	Ankleshwar	Dwadashi Prajapati	9825349420
10	opp. Yes Bank	Ankleshwar	Nilesh K Patel	9825645540
11	GIDC	Ankleshwar	Skytech Enterprise	9825399928
12	Aladar	Vagra	Prajapati Mukeshbhai Zaverbhai	9099390361

**Annex- J9 List of Fire Tender:-**

<b>Capacity against industrial and chemicals disaster</b>				
<b>FIRE TENDEOR</b>				
<b>S. No</b>	<b>Name &amp; Factory</b>	<b>Address</b>	<b>Contact Number</b>	<b>No Of Fire Tender</b>
1	Gujarat Alkalies & Chemicals Ltd.	Dahej, Tal- Vagra, Bharuch-392 130	9909029646 9979891873	2
2	Petronet Lng Ltd.	Plot No.7/A, Gidc, Dahej, Tal. Vagra, Bharuch	9662526295	2
3	Reliance Industries Ltd.	Reliance Industries Ltd P.O.Dahej, Tal. Vagra Bharuch-392 130	7043043521	--
4	Gujarat Fluro Chemicals Ltd.	12/A, Gidc, Dahej, Ta- Vagra Gujarat	9998984700	1
5	Hindalco Ind. Ltd. Unit: Birla Copper, P.O. Dehej	Lakhigam, Dist. Bharuch Bharuch-392 130	9594959581	3
6	Gujarat Chemical Port Terminal Company Ltd.	P.O. Lakhigam, Dahej Vagra, Bharuch	9998011567	3
7	Gail (India) Ltd	Vill. Roza Tankaria Bharuch	9979876527	2
8	Dpmc Dahej	Gidc Dahej, Tal-Vagra, Dist- Bharuch	9824475576	2
9	Videocon Narmada Glass Ltd.	Village Chavaj Dist. Bharuch 392 002	02642-240803, 240391, 241965	1
10	National Thermal Power Corporation Ltd.	Village : Jhanor Bharuch	02642287451 , 287555, 287488	--
11	G.P.E.C, Bharuch	--	02642-288501- 08	2
12	Dpmc Ankleshwar	Gidc Ankleshwar, Dist-Bharuch	9426889616	4
13	GAIL India	Rozatankaria, Amod Dist-Bharuch	02641- 231015, 233939	1
14	G.N.F.C Bharuch	Bharuch	02642202300 , 663300, 663233	4
15	Gidc Panoli	Gidc Panolo, Tal-Ankleshwar, Dist-Bharuch	02646-272130, 9978309485	3

## Annexure

S. No	Name & Factory	Address	Contact Number	No Of Fire Tender
16	United Phosphorous Ltd (Unit-5).	750 Gidc Indl. Estate Jhagadia Bharuch-393 110	9909994277	1
17	Vardhman Acrylics Ltd.	755 Gidc Mega Estate Jhagadia, Dist. Bharuch	8128652905	1
18	Shriram Alkali & Chemicals (A Unit Of Dcm Shriram Consolidated) Ltd	749 Gidc Indl. Estate, Jhagadia Bharuch-393 110	8758846718 8511495365	1
19	Lanxess India Pvt Ltd	748/2/A,748/3,748/4/A & B Gidc Jhagadia, Dist-Bharuch	9979117904	--
20	Gidc Jhagadia	Gidc Jhagadia, Dist-Bharuch	02645-226108 9727731192	1
21	Nagarpalika	BharuchNagarpalika	02642-220151, 101,102 9033966003	3
22	Nagarpalika	AnklesvarNagarpalika	02646-254101, 247201	4
23	Nagarpalika	Jambusar Nagarpalika	02644 220360, 9687951797	1
24	Nagarpalika	Amod Nagarpalika	02641-245442	1



## Annexure: - J10 BHARUCH DISTRICT AMBULANCE SERVICES

Sr.No	Agency Name	Contact Number
1	Jayaben Modi Hospital GIDC Ankleshvar.	02646-224550
2	Hirabhai Modi Foundation Trust Ankleshvar	9825041750
3	Uttar Bharat Mitra mandal GIDC-Ankleshvar	02646-247940,
4	Rotary Club Of Ankleshvar	02646-247940/244111 9377510018
5	Darul Kuran Trust –Jambusar	02644-220786
6	Civil Hospital Ankleshvar	02646-248239
7	Jambusar Relief Hospital, Jambusar	02644-220088
8	Husenien Committee At&Post Kapasiyapura Jambusar	02644-220901
9	PHC-Sukaltirth Tal: Bharuch	02642281358
10	PFC-Tankari Tal : Jambusar	02644-238279
11	PHC-Mandava Tal : Ankleshvar	02646-244717
12	PHC-Dharoli Tal : Jhagadia	02645-228093
13	PHC- Avidha Tal : Jhagadia	02645-240119
14	PHC-Netrang Tal : Valia	02643-282210
15	Bharuch Nagarpalika	02642-290400 241753/220702
16	Disaster Prevention & Management Center, Ankleshvar	02646-220229 02646-224100
17	Ankleshvar Nagarpalika	02646-249270 02646-247137
18	Gujarat Narmada Valley Fertilizers Co. Ltd. Bharuch	02642-247108 02642-237517
19	Hindalco Industries Ltd. Unit Birla Vagra.	02641-256004
20	Jambusar Nagarpalika	02644-220360
21	NTPC Janor Tal & Dist : Bharuch	02642-287414

**Annex- J11- List of Rescue equipments like Life Jacket, Fiber Ring, and Life boya, Rope, Generator Set Dewatering Pump and FRP boat given by Gujarat State Disaster Management Authority.**

S.No	Name of Taluka	Life Jacket	Fyber Ring	Roap		Generator Set 2-1 K.V.	Dewatering Pump	Fiber Boat	Rubber Boat	Remarks
				200 Feet	100 Feet					
1	2	3.	4.	5.	6	7	9	9	10	11
1	Bharuch	25	10	10	12	1				
2	Jambusar	25	30	5	2	1not work.				
3	Amod	25	20	4	2	1not work.				
4	Vagara	50	50	5	2	1not work.				
5	Anklesvar	25	15	10	02	1not work				
6	Hansot	25	10	03	01	1Notwork				
7	Jhagadia	20	10	5	2	01				
8	Valia	15	10		03	01				
9	SDM Bharuch Office	—	—	—	—	01				
10	SDM Anklesvar Office	—	—	—	—	01				
11	DEOC Office	12	12	02	02	01				
12	Nagarpalika Bharuch	40	15	2	2		5	3	--	--
13	Nagarpalika Anklesvar	10	10	1	2	—	2			1-Search light
14	Nagarpalika Jambusar	25	25	10	04	01	01			
15	Nagarpalika Amod	05	05	,	02	02	1 (5 HP)	1		
16	Dy.Eg. Irrigation Bharuch	—	—	—	—		15 (10 HP)			
17	DSP Office, Bharuch	10	10	03	—	—		2	1	FRP Boat (Not in Use)
	<b>Total</b>	<b>312</b>	<b>232</b>	<b>60</b>	<b>38</b>	<b>14/5work.</b>	<b>24</b>	<b>6/5work</b>	<b>1</b>	

## Annexure: - J12

### DETAILS OF DEWATERING PUMPS GIVEN BY GOVERNMENT:-

Sr. No.	Place of Availability of Dewatering Pump	In-charge Person Name	Nos. of Dewatering Pump	Capacity	Telephone No.
1.	Hansot	Taluka Development Officer	1	10 HP	02641-262025
2.	Vagra	Taluka Development Officer	1	10 HP	02641-225223
3.	Bharuch	Taluka Development Officer	1	10 HP	02642-243504
4.	Amod	Chief Officer, Amod Nagarpalika	1	10 HP	02641-245442
5.	Bharuch	Chief Officer, Bharuch Nagarpalika	5	10 HP	02642-2290400 9574007008
6	Ankleshvar	Chief Officer, Ankleshvar Nagarpalika	2	10 HP	02646-247137
7	Jambusar	Chief Officer, Jambusar Nagarpalika	1	10 HP	02644-220360
Total			12		

Annex- J13 Details of Dewatering pumps under GIDC Bharuch Region								
Sr. No.	Name of Agency	Contact Person	Cell No.	Available pump set	Capacity	Available D.G. Set	Capacity	Location of Pump Set
1	M/s. Hitesh Electrical	Mr. Hitesh Patel	9974705060 9824180020	4	100m3/hr	3	100 KVA	Bharuch/ Ankleshwar
2	M/s Vinod P. Patel	Mr. Vinod Patel	8511182960	8	250m3/hr	3	500 KVA	Vilayat/ Saykha
3	M/a. Sachin Water Supply Co.	Mr. Sushilbhai	9825313004	4	100m3/hr	1	25KVA	Dahej
4	M/s. SVR Construction	Mr.Suket Patel	9033419341	6	250m3/hr	3	100KVA	Dahej
5	M/s. Shailesh P. Patel	Mr. Shailesh P. Patel	9426104331	3	100m3/hr	2	65 KVA	Jhagadiya
6	M/s. Shree Om Electro Mech	Mr. Avdesh Yadav	9904090579	5	100m3/hr	2	500KVA	Ankleshwar/ Panoli

## Annexure

### Annexure: - J14

#### List of Machine Boats information

Sr.No	Village Name	Taluka	Name of Boat Owner/Agency	Contact No
1	Bharuch	Bharuch	JagadisabhaiMachhi	9904350314
2	Bharuch	Bharuch	CampakabhaiVasava	9428443522
3	Nikora	Bharuch	Bachubhai	9898113753
4	Nikora	Bharuch	Phagatbhai	9723625556
5	Kadod	Bharuch	IshvarbhaiVasava	9824345814
6	Mangalesvar	Bharuch	JayantibhaiBhagubhai	9737971593
7	Mangalesvar	Bharuch	SureshbhaiGambhirbhai	9723386499
8	Mangalesvar	Bharuch	DineshbhaiMachhi	9898436669
9	Jhanor	Bharuch	Maheshbhai	9898510526
10	Kabiravad	Bharuch	Bhagatabhai	9904251508
11	Sukalatirth	Bharuch	Kanubhai	9824982907
12	Bhadbhut	Bharuch	RameshbhaiMachhi	9924487041
13	--	Bharuch	Satish Ganabhai Machhi	9714060049
14	--	Bharuch	Arvindbhai ratilal Macchi	9824676465
15	Vadva	Bharuch	Ikabal Umarji Patel	9537074320
16	--	Bharuch	Govind ratilal Machhi	7359445233
17	--	Bharuch	Kirit bhagubhai Machhi	9824089258
18	--	Bharuch	Santosh Vasava	9898073846
19	--	Bharuch	Sambelal kakirabhai Machhi	9824770174
20	--	Bharuch	Raju Shankarbhai Machhi	9723883325
21	--	Bharuch	Kalidas lalabhai Machhi	9904434551
22	--	Bharuch	Kantibhai Machhi	9904176511
23	Bhadbhut	Bharuch	Mubarakbhai	9924596209
24	Uchediya	Jhagadia	GovindbhaiMachhi	7874992176
25	Tarsali	Jhagadia	Mayuddin	9426216803
26	Tarsali	Jhagadia	IsmailAhemadMalek	9924781231
27	Tarsali	Jhagadia	Abdul Rahim Gulam Akbar	9909073683
28	Jalasad	Jhagadia	JivanabhaiVasava	9624663755
29	Bhalod	Jhagadia	ViththalbhaiMachhi	9978279215
30	Bhalod	Jhagadia	Motibhai	9725425835

## Annexure

Sr.No	Village Name	Taluka	Name of Boat Owner/Agency	Contact No
31	--	Jhagadia	Manilal Jemabhai Machhi	9824687607
32	--	Jhagadia	Mohanbhai Nanubhai Vasava	9824620938
33	--	Jhagadia	Natwarbhai Machhi	9723883007
34	Nana Vasav	Jhagadia	Sivabhai Goradhnabhai	9712091389
35	--	Jhagadia	Thakorabhai Balubhai Machhi	9904850917
36	--	Jhagadia	Mahesh Vasava	9033924065
37	--	Jhagadia	Piriya Maganbhai Machhi	9723787483
38	--	Jhagadia	Hasmukhbhai Machhi	9723888481
39	--	Jhagadia	Harilal Machhi	9904481043
40	--	Jhagadia	Jayantibhai Machhi	9904023637
41	--	Ankleshvar	Rajeshbhai Machhi	9909098997
42	--	Ankleshvar	Maheshbhai Machhi	9824495113
43	--	Ankleshvar	Umeshbhai Solanki	9723789479
44	--	Ankleshvar	Bhimabhai	9723392654
45	Juna Kasiya	Ankleshvar	Vinodbhai Panchiyabhai Vasava	9537753130
46	--	Ankleshvar	Saileshbhai Machhi	9904349819
47	Junaskrpo	Ankleshvar	Ranjitbhai Gomanbbhai	9099074951
48	--	Ankleshvar	Vijaybhai Machhi	9904612651
49	--	Jambusar	Naginbhai Chaganbhai Machh	9824780529
50	Kavi	Jambusar	Junaid Ismail	9904611059
51	--	Jambusar	Kantibhai Machhi	9904076580
52	--	Jambusar	Sambubhai Somabhai	9173920166
53	--	Jambusar	Vasantbhai Machhi	9924753277
54	--	Vagara	Ashokbhai Machhi	9904850385
55	Jageswar	Vagara	Patel Kalidas Rayajibhai	9727720722
56	--	Vagara	Chitubhai Mistri	9723288572
57	--	Vagara	Pravinbhai Machhi	9904055385

**Annex - J15 List of Simple Boat**

<b>S.No</b>	<b>Village</b>	<b>Taluka</b>	<b>Name of Owner</b>	<b>Contact Number</b>
1	Bhadabhut	Bharuch	Bharatbhai Dahiyabhai Machi	9824739853
2	Kavi	Jambusar	Islamulhak Ismail	9714184910
3	--	Jambusar	Arvindbhai Machhi	9624058377
4	--	Jhagdia	Ishwarbhai Machhi	9979586823
5	--	Jhagdia	Bhavesbhai Machhi	9904432475
6	--	Vagra	Munnabhai Machhi	7658771920
7	Suva	Vagra	Gohil Dipsang Magan	9979356867

## Annexure

### Annex- K List of Swimmer:-

S.No	Village	Taluka	Age	Name of Swimmer	Contact Number
1	Rohid	Hansot	28	Prakashbhai Babubhai Vasava	6351628234
2	Kantasayan	Hansot	35	Sureshbhai Gomanbhai Rathod	9726569773
3	Vansnoli	Hansot	34	Ratilal Gomanbhai Rathod	9574896604
4	Jetpor	Hansot	30	Suresh Rathod	7698668646
5	Kudadra	Hansot	42	Sajan Vasava	9484520929
6	Parvat	Hansot	46	Ramesh Vasava	9727167970
7	Sunevkalla	Hansot	45	Arvind Vasava	6359757449
8	Alva	Hansot	45	Bachubhai Dhamlabhai Vasava	8238464240
9	Avadar	Anklesvar	31	Chandrakant S Vasava	9727676183
10	Bhadi	Anklesvar	37	Vikashbhai R Vasava	7202821962
11	Bharan	Anklesvar	--	Ajitsinh Mahida	7990522363
12	Boidara	Anklesvar	--	SardarbhaiMansangbhai Vasava	6351974208
13	Dadhal	Anklesvar	--	Sandip K Vasava	9998609447
14	Diva	Anklesvar	--	Hreshbhai Parmar	8849014296
15	Haripura	Anklesvar	46	Vijaysinh Thakor	8758100251
16	Jitali	Anklesvar	33	Naginbhai M Vasava	9978072881
17	Kansiya	Bharuch	34	Vinodbhai Vasava	9537753130
18	Kavabhagol	Jambusar	--	Ramesh Vasava	9904017580
19	Kavabhagol	Jambusar	--	Pravin Rathod	8980946696
20	Kavabhagol	Jambusar	--	Dinesh Rathod	8980946696
21	Kavabhagol	Jambusar	--	Uked Budhabhai Rathod	6353634728
22	Kavabhagol	Jambusar	--	Laxman Rathod	6356795912
23	Kishnad	Bharuch	--	Sunil Patel	9824121955
24	Kishnad	Bharuch	--	Virendra Patel	9824453030
25	Kishnad	Bharuch	--	Vinod Parmar	9726582840
26	Kishnad	Bharuch	--	Vinod Patel	9924025242
27	Thikariya	Bharuch	--	Somabhai Rathod	8347346342
28	Thikariya	Bharuch	--	Suresh Vasava	9323335136
29	Thikariya	Bharuch	--	Manishbhai	9737468906
30	Adol	Bharuch	--	Ravjibhai Rathod	9904266539
31	Adol	Bharuch	--	Bharat Vasava	8347158107
32	Adol	Bharuch	--	Dinesh Vasava	9924489112
33	Adol	Bharuch	--	Armanbhai Vasava	9054222039
34	Ochchhan	Vagra	--	Klshan Patel	9428443337
35	Vengani	Vagra	--	Gambhirbhai	9913330829
36	Kadodara	Vagra	--	Rajesh Rathod	8347276130



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S.No	Village	Taluka	Age	Name of Swimmer	Contact Number
37	Kothia	Vagra	--	Jayenti Chandu Rathod	7569399084
38	Sadathala	Vagra	--	Punjabhai Shivabhai Rathod	9979420393
39	Rahiyad	Vagra	--	Vikrambhai	9714535206
40	Aragama	Vagra	--	Zakir Umarji Patel	9723856093
41	Akhodi	Vagra	--	Alpesh K Rathod	8347531535
42	Ankot	Vagra	--	Kalpesh Parsottambhai Gohil	8320116018
43	Dholgam	Valia	--	Jayantibhai Vasava	9586297572
44	Choramla	Valia	--	Ratilal Jesing Vasava	9727651746
45	Daheli	Valia	--	Ravilal Gopal Vaava	9924121674
46	Jamniya	Valia	--	Rakesh Chaudhari	9726883904
47	Kesargam	Valia	--	Pradipbhai Dashrathbhai	9913482331
48	Petiya	Valia	--	Bachubhai Jethabhai Vasava	9099238109
49	Pithor	Valia	--	Narendra Champak Vasava	9909256438
50	Rundha	Valia	--	Rajubhai Chaudhari	9925731569
51	Sevad	Valia	--	Nareshbhai Vasava	8469970491
52	Singala	Valia	--	Ganeshbhai Vasava	9879161556
53	Kunvarpara	Jhagadia	--	Shashikant A	8320279514
54	Khalak	Jhagadia	--	Chandrasinh Ratanbhai	7046176086
55	Kapat	Jhagadia	--	Manubhai P Vasava	9925327447
56	Kaplsadi	Jhagadia	--	Arvindbhai	9408903056
57	Kantol	Jhagadia	--	Dharmendrabhai	9099292641
58	Kakalpor	Jhagadia	--	Dinesh Vasava	7359761049
59	Jarsad	Jhagadia	--	Arvindbhai H Vasava	8347820378
60	Haripura	Jhagadia	--	Anilbhai N Vasava	9664930619
61	Dholi	Jhagadia	--	Kiranbhai H Vasava	9737071454
62	Amod	Amod	--	Jayantibhai Vasava	9712277145
63	Asarma	Amod	--	Arvind Vasava	9925979365
64	Ambheta	Amod	--	Vinod Vasava	9536256877
65	Aniyadara	Amod	--	Shambhu Dineshbhai Vasava	9327307468
66	Asta	Amod	--	Shailesh Vasava	8469101192
67	Aankalva	Amod	--	Chandrasinh Dahyabhai	9724196195
68	Babodara	Amod	--	Ishwerbhai G Rathod	7359228247
69	Digas	Amod	--	Raju B. Vasava	7980065401
70	Kudadra	Amod	--	Sajan Vasava	9879127843
71	Kathodara	Amod	--	Rajesh Magan Patel	9825423442

## Annexure

### Annexure L List of Trained Aapda Mitra Volunteer

Sr. No	Taluka Name	Training Year	Category	Organization	Person Name	Contact Details
1	Bharuch	FRT	--	Aapda Mitra Volunteer	Aksha J Parmar	7359390098
2	Bharuch	FRT	--	Aapda Mitra Volunteer	Divyesh K Parmar	7096380965
3	Bharuch	FRT	--	Aapda Mitra Volunteer	Nelsan S Sutariya	7201957173
4	Bharuch	FRT	--	Aapda Mitra Volunteer	Imran Khan A Garasiya	9998144221
5	Vagra	FRT	--	Aapda Mitra Volunteer	Jagdishbhai R vasava	9904427110
6	Vagra	FRT	--	Aapda Mitra Volunteer	Amarsang K patanwadia	9712642753
7	Vagra	FRT	--	Aapda Mitra Volunteer	Chandra C U.raj	9913917277
8	Vagra	FRT	--	Aapda Mitra Volunteer	Sureshbhai C Rathod	9737313674
9	Vagra	FRT	--	Aapda Mitra Volunteer	Ashokbhai G raval	9714461396
10	Vagra	FRT	--	Aapda Mitra Volunteer	Dilipbhai N Makvana	9727745691
11	Netrang	FRT	--	Aapda Mitra Volunteer	Nitesh G Vasava	7069952102
12	Netrang	FRT	--	Aapda Mitra Volunteer	Diptesh G Vasava	9727735087
13	Netrang	FRT	--	Aapda Mitra Volunteer	Jitendra J Vasava	8347453197
14	Netrang	FRT	--	Aapda Mitra Volunteer	Bhupat Kumar G vasava	9586804470
15	Netrang	FRT	--	Aapda Mitra Volunteer	Jitendrabhai G Vasava	8347285139
16	Netrang	FRT	--	Aapda Mitra Volunteer	Vipulbhai S Vasava	7096802410
17	Netrang	FRT	--	Aapda Mitra Volunteer	Chhatiyabhai H Vasava	9586543765
18	Netrang	FRT	--	Aapda Mitra Volunteer	Surendrakumar C Vasava	8980937296
19	Netrang	FRT	--	Aapda Mitra Volunteer	Shaileshbhai B Vasava	7069649705
20	Netrang	FRT	--	Aapda Mitra Volunteer	Prakash J Vasava	7575894535
21	Netrang	FRT	--	Aapda Mitra Volunteer	Mahendra M Chaudhari	8238150475
22	Netrang	FRT	--	Aapda Mitra Volunteer	Dilipbhai U Vasava	9712005884
23	Netrang	FRT	--	Aapda Mitra Volunteer	Nagjibhai C Vasava	7623947417
24	Netrang	FRT	--	Aapda Mitra Volunteer	Mehulbhai S Vasava	9574557339
25	Netrang	FRT	--	Aapda Mitra Volunteer	Kalpeshbhai R Vasava	8238433050
26	Netrang	FRT	--	Aapda Mitra Volunteer	Ranchod M Vasava	9726934741
27	Netrang	FRT	--	Aapda Mitra Volunteer	Kanubhai G Vasava	8347023730
28	Netrang	FRT	--	Aapda Mitra Volunteer	Prhlad C Vasava	9409962997
29	Netrang	FRT	--	Aapda Mitra Volunteer	Kamleshbhai R vasava	9687705769
30	Netrang	FRT	--	Aapda Mitra Volunteer	Akshaysinh Vasava	8758388636
31	Netrang	FRT	--	Aapda Mitra Volunteer	Sundarbhai S vasava	9687351683
32	Netrang	FRT	--	Aapda Mitra Volunteer	Arunbhai R vasava	8141527393

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Sr. No	Taluka Name	Training Year	--	Organization	Person Name	Contact Details
33	Netrang	FRT	--	Aapda Mitra Volunteer	Ashvinbhai G vasava	8141129115
34	Netrang	FRT	--	Aapda Mitra Volunteer	Jagatsinh K vasasa	7567411233
35	Netrang	FRT	--	Aapda Mitra Volunteer	Dhirendrabhai N vasava	9909512400
36	Netrang	FRT	--	Aapda Mitra Volunteer	Ravidas D vasava	9913821257
37	Netrang	FRT	--	Aapda Mitra Volunteer	Kamleshbhai R vasava	9428412359
38	Netrang	FRT	--	Aapda Mitra Volunteer	Dilipbhai B Vasava	9428392150
39	Netrang	FRT	--	Aapda Mitra Volunteer	Jagatsinh P vasasa	8758622359
40	Netrang	FRT	--	Aapda Mitra Volunteer	Arjunbhai R Vasava	8140081727
41	Netrang	FRT	--	Aapda Mitra Volunteer	Sanjaybhai D vasava	9574076318
42	Netrang	FRT	--	Aapda Mitra Volunteer	Jashodaben I vasava	8980329538
43	Netrang	FRT	--	Aapda Mitra Volunteer	Jyotiben R vasava	8238366441
44	Netrang	FRT	--	Aapda Mitra Volunteer	Simaben C Vasava	9586138039
45	Netrang	FRT	--	Aapda Mitra Volunteer	Chandrikaben A Vasava	9428362704
46	Netrang	FRT	--	Aapda Mitra Volunteer	Rachnaben R Vasava	7572933882
47	Netrang	FRT	--	Aapda Mitra Volunteer	Kenaben T Vasava	7069447267
48	Netrang	FRT	--	Aapda Mitra Volunteer	Shusilaben N Vasava	9512084306
49	Netrang	FRT	--	Aapda Mitra Volunteer	Dixitaben N Vasava	8141974159
50	Netrang	FRT	--	Aapda Mitra Volunteer	Sarjanaben G Vasava	7874653297
51	Netrang	FRT	--	Aapda Mitra Volunteer	Shitalben K Vasava	7434983349
52	Netrang	FRT	--	Aapda Mitra Volunteer	Snehaben G Vasava	9586372957
53	Netrang	FRT	--	Aapda Mitra Volunteer	Nirmalaben M Vasava	9979764423
54	Netrang	FRT	--	Aapda Mitra Volunteer	Shitalben V Vasava	8758450135
55	Netrang	FRT	--	Aapda Mitra Volunteer	Sejalben B Vasava	9512276042
56	Netrang	FRT	--	Aapda Mitra Volunteer	Amishaben A Vasava	9712144861
57	Netrang	FRT	--	Aapda Mitra Volunteer	Sharmilaben M Vasava	9726934740
58	Netrang	FRT	--	Aapda Mitra Volunteer	Sonalben G Vasava	9626193314
59	Netrang	FRT	--	Aapda Mitra Volunteer	Jagrutiben S vasava	7622906561
60	Netrang	FRT	--	Aapda Mitra Volunteer	Bhagwatibhen Bhagubhai Rathod	9727158359
61	Netrang	FRT	--	Aapda Mitra Volunteer	Jayminibhen Mahendrabhai Vasava	9979663024
62	Netrang	FRT	--	Aapda Mitra Volunteer	Mamtaben Maheshbhai Vasava	9712819496
63	Netrang	FRT	--	Aapda Mitra Volunteer	Bhawnaben Manjibhai Vasava	9925615299
64	Netrang	FRT	--	Aapda Mitra Volunteer	Kokilaben gangaram Vasava	8758355704

## Annexure

Sr. No	Taluka Name	Training Year	--	Organization	Person Name	Contact Details
65	Netrang	FRT	--	Aapda Mitra Volunteer	Mahindrikaben chatrasing Vasava	7624057296
66	Netrang	FRT	--	Aapda Mitra Volunteer	Rashikaben Ratanbhai Vasava	9409664053
67	Netrang	FRT	--	Aapda Mitra Volunteer	Chandrikaben Madhavbhai Vasava	9913507541
68	Netrang	FRT	--	Aapda Mitra Volunteer	Shradhaben Hasmukhbhai Vasava	9512248579
69	Netrang	FRT	--	Aapda Mitra Volunteer	Sudhaben Foolsingbhai Vasava	7567369419
70	Netrang	FRT	--	Aapda Mitra Volunteer	Darshnaben Remsingbhai Vasava	8980149286
71	Netrang	FRT	--	Aapda Mitra Volunteer	Nitaben Maheshbhai Vasava	9687175960
72	Netrang	FRT	--	Aapda Mitra Volunteer	Rekhaben Kanubhai Vasava	7046070610
73	Netrang	FRT	--	Aapda Mitra Volunteer	Amitaben Amarsingbhai Vasava	9727120376
74	Netrang	FRT	--	Aapda Mitra Volunteer	Gauriben Panchiyabhai Vasava	8347233440
75	Netrang	FRT	--	Aapda Mitra Volunteer	Pratiksha Chattrasinh Vasava	9727561912
76	Netrang	FRT	--	Aapda Mitra Volunteer	Nikitaben Chaganbhai Vasava	9586343877
77	Netrang	FRT	--	Aapda Mitra Volunteer	Krishnaben somabhai vasava	7046957887
78	Netrang	FRT	--	Aapda Mitra Volunteer	sushilaben hiralal vasava	9638289718
79	Netrang	FRT	--	Aapda Mitra Volunteer	Manisahben Ranchhodabhai Vasava	9624860589
80	Netrang	FRT	--	Aapda Mitra Volunteer	Vasantiben ranchhodbhai Vasava	9978481059
81	Netrang	FRT	--	Aapda Mitra Volunteer	hirelben Vitthalbhai Vasava	9512286253
82	Netrang	FRT	--	Aapda Mitra Volunteer	Sunitaben Sunilbhai Vasava	9537068983
83	Netrang	FRT	--	Aapda Mitra Volunteer	Bhumikaben Mahindrabhai Vasava	8980537958
84	Netrang	FRT	--	Aapda Mitra Volunteer	Deepikaben Ishwarbhai Vasava	8238989811
85	Netrang	FRT	--	Aapda Mitra Volunteer	Sonalben Chhnabhai Vasava	9723285292
86	Netrang	FRT	--	Aapda Mitra Volunteer	Hanshaben Harendrabhai Vasava	8141647977
87	Netrang	FRT	--	Aapda Mitra Volunteer	Sonalben Babubhai Vasava	8238405829
88	Netrang	FRT	--	Aapda Mitra Volunteer	Subhdraben Sanabhai Vasava	9638308628
89	Netrang	FSR	--	Aapda Mitra Volunteer	Jagrutiben Chimanbhai vasava	7574032228
90	Netrang	FRT	--	Aapda Mitra Volunteer	Krishnaben Surendrasinh Vasava	7874206730
91	Netrang	FRT	--	Aapda Mitra Volunteer	Sitaben Vijaybhai Vasava	7567403617
92	Netrang	FRT	--	Aapda Mitra Volunteer	Harnishaben Dadubhai Vasava	7624082793

## Annexure

Sr. No	Taluka Name	Training Year	--	Organization	Person Name	Contact Details
93	Jambusar	FRT	--	Aapda Mitra Volunteer	Pratik H bhuvir	9712484837
94	Jambusar	FRT	--	Aapda Mitra Volunteer	Jigar P jadav	9687178962
95	Jambusar	FRT	--	Aapda Mitra Volunteer	Dhruvesh B jadav	9408176148
96	Jambusar	FRT	--	Aapda Mitra Volunteer	Anand Sharan N Shere	7227862477
97	Jambusar	FRT	--	Aapda Mitra Volunteer	Govindbhai G Vasava	9726372837
98	Jambusar	FRT	--	Aapda Mitra Volunteer	Gaurang D Bhuvir	9537733830
99	Jambusar	FSR	--	Aapda Mitra Volunteer	KiritKumar B Padhiyar	9638066045
100	Jambusar	FSR	--	Aapda Mitra Volunteer	Ratilal J Rathod	8347589085
101	Jambusar	FSR	--	Aapda Mitra Volunteer	Sanjaybhai R Rathod	7359321279
102	Jambusar	FRT	--	Aapda Mitra Volunteer	Mahendra Bhai P Rathod	8347230036
103	Jambusar	FRT	--	Aapda Mitra Volunteer	Hareshbhai P Jadhav	7621826833
104	Jambusar	FRT	--	Aapda Mitra Volunteer	Sureshbhai A Parmar	8141886884
105	Jambusar	FRT	--	Aapda Mitra Volunteer	Melabhai B Solanki	7202064658
106	Jambusar	FRT	--	Aapda Mitra Volunteer	Bharatbhai K Rathod	9825156348
107	Jambusar	FRT	--	Aapda Mitra Volunteer	Rafik R Pathan	7201047500
108	Jambusar	FRT	--	Aapda Mitra Volunteer	Bharatbhai D parmar	9979278844
109	Jambusar	FRT	--	Aapda Mitra Volunteer	Rameshbhai M vasava	8469973155
110	Jambusar	FRT	--	Aapda Mitra Volunteer	Rajubhai J Patel	7201047898
111	Jambusar	FRT	--	Aapda Mitra Volunteer	Vijaybhai L Parmar	9723846125
112	Jambusar	FRT	--	Aapda Mitra Volunteer	Girishbhai C Parmar	9909451345
113	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Jiteshbhai C Vasava	9904059293
114	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Rajpal P Raul	7069321266
115	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Dhruv P Parmar	8155991724
116	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Avinash S Vasava	7041289112
117	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Mahendrasinh A Raj	8128805500
118	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Niranjanbhai B Gohil	9825090159
119	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Sumitkumar D Gohil	9978196899
120	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Rajendrasinh D Solanki	9714429136
121	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Gauravkumar R jadav	8320268292
122	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Shardaben R Chandravashi	9925969715
123	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Varshaben K Valand	9537442809
124	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Jashodaben V Patel	8238687467
125	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Kesarben M Patel	8980053820
126	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Bhagvatiben A Patel	7567290100

## Annexure

Sr. No	Taluka Name	Training Year	--	Organization	Person Name	Contact Details
126	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Jayaben K Parmar	9687441452
128	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Bhumikaben K Parmar	9601970199
129	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Joshnaben A Parmar	8238050853
130	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Jayshreeben R Gohil	9714983612
131	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Kapilaben B Parmar	8866834146
132	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Lilaben N Prajapati	9601009769
133	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Amratben K parmar	8733947314
134	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Deepikaben N Solanki	9978297090
135	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Hansaben N Vasava	9727630671
136	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Parvatiben K Rohit	7228812852
137	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Gangaben R Kamol	8128696142
138	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Kalavatiben H patel	9824780238
139	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Geetaben V Vasava	8238349099
140	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Nilakunvarba R solanki	8238622382
141	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Roshanbanu K manjara	7041920529
142	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Raluben k Vasava	9723363124
143	Hansot	FRT	--	Aapda Mitra Volunteer	Keyurkumar G Patel	9924111208
144	Jhagadia	FRT	--	Aapda Mitra Volunteer	Jayshreeben C Vasava	9586543965
145	Jhagadia	FRT	--	Aapda Mitra Volunteer	Tejalben V Vasava	9727074117
146	Jhagadia	FRT	--	Aapda Mitra Volunteer	Ravishankar C Machhi	9428687010
147	Jhagadia	FRT	--	Aapda Mitra Volunteer	Pareshbhai C Machhi	9898856935
148	Jhagadia	FRT	--	Aapda Mitra Volunteer	Rakeshbhai K Vasava	9824477661
149	Jhagadia	FRT	--	Aapda Mitra Volunteer	Arvindbhai H Vasava	9429285626
150	Jhagadia	FRT	--	Aapda Mitra Volunteer	Pravinbhai V Vasava	7600384587
151	Jhagadia	FRT	--	Aapda Mitra Volunteer	Rajendrabhai V Pandya	9724881371
152	Jhagadia	FRT	--	Aapda Mitra Volunteer	Ashokbhai P patanvadiya	7696421779
153	Jhagadia	FRT	--	Aapda Mitra Volunteer	Thakurbhai S Machhi	8733917114
154	Jhagadia	FRT	--	Aapda Mitra Volunteer	Rajendrabhai M machhi	8758800173
155	Jhagadia	FRT	--	Aapda Mitra Volunteer	Devjibhai S Machhi	9601320761
156	Jhagadia	FRT	--	Aapda Mitra Volunteer	Rahulbhai C Solanki	9723306123
157	Jhagadia	FRT	--	Aapda Mitra Volunteer	Bhavik B Vasava	9429942602
158	Jhagadia	FRT	--	Aapda Mitra Volunteer	Kalpesh Bhai B Vasava	9712100680
159	Jhagadia	FRT	--	Aapda Mitra Volunteer	Bhupenbhai J Gamit	9909616043
160	Jhagadia	FRT	--	Aapda Mitra Volunteer	Ajaybhai R Gamit	9824554625



## Annexure

Sr. No	Taluka Name	Training Year	--	Organization	Person Name	Contact Details
161	Jhagadia	FRT	--	Aapda Mitra Volunteer	JayKumar M Gamit	8980958262
162	Jhagadia	FRT	--	Aapda Mitra Volunteer	Jaydeepbhai U Gamit	7574917605
163	Jhagadia	FRT	--	Aapda Mitra Volunteer	Rahulbhai R Patil	7817994030
164	Jhagadia	FRT	--	Aapda Mitra Volunteer	Vijaybhai R Gamit	9824554610
165	Jhagadia	FRT	--	Aapda Mitra Volunteer	Harshbhai V Bhadane	9727468005
166	Valia	FRT	--	Aapda Mitra Volunteer	Anitaben D Vasava	7434894102
167	Valia	FRT	--	Aapda Mitra Volunteer	Bhadrashilaben K Vasava	9408385722
168	Valia	FRT	--	Aapda Mitra Volunteer	Rinaben R Vasava	9537493016
169	Valia	FRT	--	Aapda Mitra Volunteer	Pinalben D Ahir	7874152075
170	Valia	FRT	--	Aapda Mitra Volunteer	Ramilaben S Vasava	7572882363
171	Valia	FRT	--	Aapda Mitra Volunteer	Pragnaben A Vasava	9638364716
172	Valia	FRT	--	Aapda Mitra Volunteer	Minakshiben S Vasava	7435844351
173	Valia	FRT	--	Aapda Mitra Volunteer	Savitriben K Vasava	9662728613
174	Valia	FRT	--	Aapda Mitra Volunteer	Nishaben R Vasava	9586902619
175	Valia	FRT	--	Aapda Mitra Volunteer	Manishaben R Vasava	8469605405
176	Valia	FRT	--	Aapda Mitra Volunteer	Dharmendra C Dhariya	9727880047
177	Valia	FRT	--	Aapda Mitra Volunteer	Hitendra C R Kosamiya	9687705545
178	Valia	FRT	--	Aapda Mitra Volunteer	Pankajbhai C Vasava	8980598592
179	Valia	FRT	--	Aapda Mitra Volunteer	Nilashbhai N Vasava	8758373969
180	Valia	FRT	--	Aapda Mitra Volunteer	Nilashbhai R Vasava	9537073983
181	Valia	FRT	--	Aapda Mitra Volunteer	Nilashbhai C Vasava	9099162776
182	Valia	FRT	--	Aapda Mitra Volunteer	Sanjaybhai S Vasava	7069318828
183	Valia	FRT	--	Aapda Mitra Volunteer	Vijaybhai J Vasava	8140813722
184	Valia	FRT	--	Aapda Mitra Volunteer	Tejalben Sanjaybhai Vasava	8758897920
185	Valia	FRT	--	Aapda Mitra Volunteer	Manishaben Maheshbhai Vasava	8238406354
186	Valia	FRT	--	Aapda Mitra Volunteer	Monikaben Mukeshbhai Vasava	9925367136
187	Valia	FRT	--	Aapda Mitra Volunteer	Dimpalben Natwarbhai Vasava	7874744032
188	Valia	FRT	--	Aapda Mitra Volunteer	Sonalben Somabhai Vasava	-
189	Valia	FRT	--	Aapda Mitra Volunteer	Bhawnaben Surdas bhai Vasava	7574095277
190	Valia	FRT	--	Aapda Mitra Volunteer	Trupatiben Sunilbhai Vasava	9925812216
191	Valia	FRT	--	Aapda Mitra Volunteer	Shushilaben Hirajibhai Vasava	9913208841
192	Valia	FRT	--	Aapda Mitra Volunteer	Jashodaben Maheshbhai Vasava	9512273278
193	Valia	FRT	--	Aapda Mitra Volunteer	Raveenaben Rajeshbhai Vasava	8758970645

## Annexure

Sr. No	Taluka Name	Training Year	--	Organization	Person Name	Contact Details
194	Valia	FRT	--	Aapda Mitra Volunteer	Dharmistaben Babubhai Vasava	9537973565
195	Valia	FRT	--	Aapda Mitra Volunteer	Lilaben Chandrasinh Vasava	-
196	Valia	FRT	--	Aapda Mitra Volunteer	Pinalben Sunilbhai Vasava	9925812216
197	Valia	FRT	--	Aapda Mitra Volunteer	Archanaben bharatbhai Vasava	-
198	Valia	FRT	--	Aapda Mitra Volunteer	Rinaben Ramjibhai Vasava	-
199	Valia	FRT	--	Aapda Mitra Volunteer	Rashmitaben Laxmanbhai Vasava	9537095070
200	Valia	FRT	--	Aapda Mitra Volunteer	Manishaben Mansukhbhai Vasava	7069182344
201	Vagra	FRT	--	Aapda Mitra Volunteer	Manharlal B Patel	9904916628
202	Vagra	FRT	--	Aapda Mitra Volunteer	Akshaybhai M Rathod	9904115866
203	Vagra	FRT	--	Aapda Mitra Volunteer	Amit Kumar M vasava	7622821418
204	Vagra	FRT	--	Aapda Mitra Volunteer	Vinodbhai Chandubhai Vasava	7996804370
205	Vagra	FRT	--	Aapda Mitra Volunteer	Maheshbhai Pravenbhai Jhadav	9974156197
206	Vagra	FRT	--	Aapda Mitra Volunteer	Sakerhusan Mohammad Sadigdewan	7623930454
207	Vagra	FRT	--	Aapda Mitra Volunteer	Kamleshbhai Chandubhai Prammar	7283872665
208	Vagra	FRT	--	Aapda Mitra Volunteer	Girishbhai Maganbhai Patel	9714291295
209	Vagra	FRT	--	Aapda Mitra Volunteer	Vishnu Mahesh Vasava	6354468228
210	Vagra	FRT	--	Aapda Mitra Volunteer	Vijaybhai Chimanbhai Limbchiya	9265516213
211	Vagra	FRT	--	Aapda Mitra Volunteer	Sateshbhai Thakorabhai Vsava	7043275095
212	Vagra	FRT	--	Aapda Mitra Volunteer	Raj Mohammad Baktiyar Rasul	7621563043
213	Valia		--	Aapda Mitra Volunteer	Rasmitaben Niteshbhai Choudhary	6354498588
214	Valia	FRT	--	Aapda Mitra Volunteer	Bharatiben Jigneshbhai Surti	7574902711
215	Valia	FRT	--	Aapda Mitra Volunteer	Bhawnaben Bhikhubhai Solanki	7069319860
216	Valia	FRT	--	Aapda Mitra Volunteer	Ranjanben Nathubhai Vasava	9638097571
217	Valia	FRT	--	Aapda Mitra Volunteer	Jayaben hareshbhai Vasava	8338185457
218	Valia	FRT	--	Aapda Mitra Volunteer	Sangeetaben Vishnubhai Vasava	9638202613
219	Netrang	FRT	--	Aapda Mitra Volunteer	Vasava Hansaben Harendrabhai	9327398760
220	Netrang	FRT	--	Aapda Mitra Volunteer	Rachnaben Ranchorbhai Vasava	7572933882
221	Netrang	FRT	--	Aapda Mitra Volunteer	Jagrutiben Chimanbhai Vasava	9327398760
222	Netrang	FRT	--	Aapda Mitra Volunteer	Khanpadbhai Prathamabhai Vasava	9409961097



## Annexure

Sr. No	Taluka Name	Training Year	--	Organization	Person Name	Contact Details
223	Netrang	FRT	--	Aapda Mitra Volunteer	Maheshbhai Jayantibhai Vasava	9426212398
224	Netrang	FRT	--	Aapda Mitra Volunteer	Sirajbhai Prathambhai Vasava	9427160323
225	Netrang	FRT	--	Aapda Mitra Volunteer	Ranchorbhai Vasava	9537284598
226	Netrang	FRT	--	Aapda Mitra Volunteer	Gulabsingh Vasava	8153078027
227	Netrang	FRT	--	Aapda Mitra Volunteer	Durgeshbhai Dashratbhai Vasava	9904528168
228	Jhagadia	FRT	--	Aapda Mitra Volunteer	Sahdevbhai Rameshbhai Vasava	9594961208
229	Jhagadia	FRT	--	Aapda Mitra Volunteer	Devrajbhai Vasava	7434923483
230	Jhagadia	FRT	--	Aapda Mitra Volunteer	Kuntaben Bharatbhai Vasava	9316484053
231	Jhagadia	FRT	--	Aapda Mitra Volunteer	Anitaben Vasava	7202953047
232	Jhagadia	FRT	--	Aapda Mitra Volunteer	Faridabanu Rustombhai Chauhan	7046180189
233	Jhagadia	FRT	--	Aapda Mitra Volunteer	Namrataben Dasratbhai Vasava	8141051059
234	Jhagadia	FRT	--	Aapda Mitra Volunteer	Dixitaben Arvindbhai Vasava	6356034267
235	Hansot	FRT	--	Aapda Mitra Volunteer	Tineshbhai Patel	7622052545
236	Hansot	FRT	--	Aapda Mitra Volunteer	Praveenbhai Ishwarbhai Vasava	9722210592
237	Hansot	FRT	--	Aapda Mitra Volunteer	Virambhai Vikrambhai Vasava	8140768189
238	Hansot	FRT	--	Aapda Mitra Volunteer	Babubhai Prabhatbhai Vasava	9664674565
239	Hansot	FRT	--	Aapda Mitra Volunteer	Vinodbhai Bachubhai Rathod	9316057695
240	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Pavanbhai Jitendrabhai Yadav	9601845871
241	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Rakeshram Ashre Chauhan	9558610142
242	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Jaikumar Nilkantbhai Patel	7567970084
243	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Sachin Dineshbhai Singh	8849038355
244	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Ajay anandilal Namdev	9974225175
245	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Vijay Ramjanam Singh	7778050774
246	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Ganehbhai Rajendrabhai Pardhi	7567571020
247	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Vishwajeet Amarjeet Singh	7260991434
248	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Sintu upendrasingh	7380808009
249	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Montu parmasingh	7258808140
250	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Jaypratap ramkishor Tomar	9410856588
251	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Guddu kamal Singh	9510618515
252	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Amit ramashankar Yadav	7285899742
253	Ankleshwar	FRT	--	Aapda Mitra Volunteer	Hiteshbhai Jayantibhai Patel	9824780239
FRT		Flood Rescue Training				

**Annexure: - M**  
**MAJOR HOSPITAL AND RESOURCES**

Sr No	Name	Location	STD Code	Phone No.	Beds	Burn Ward	Chemical Poisoning Treatment Facility	Ambulance
1	Community Health Centre	Amod	02641	245016	30	N	Y	1
2	Ami Surgical Hospital	Station Road, Ankleshwar	02646	248001	9	Y	Y	-
3	Anand Hospital	Station Road, Ankleshwar	02646	246783	25	N	N	-
4	Jayaben Modi Hospital	Valia Road, GIDC Ankleshwar	02642	239196	60	Y	Y	2
5	Navjeevan Hospital	Behind Panchayat Bhawan, Station Road, Ankleshwar	02646	247157	15	N	N	-
6	Patel Surgical Hospital	Station Road, Ankleshwar	02646	246535	15	Y	Y	-
7	Aman Nursing Home	Zam Zam Complex, 5 Batti, Bharuch	02642	243754	6	N	N	-
8	Bharuch Hospital	Dahej bypass - Bharuch	02642	241044	125	Y	Y	4
9	C J Seth Memorial Hospital	Shalimar Complex - Bharuch	02642	264411	18	N	Y	-
10	Divya Jeevan Sangh Hospital	Nr. Victoria Hotel, Bharuch	02642	243677	22	N	N	1
11	Govardhan Hospital	Bholav Road, Bharuch	02642	241044	35	N	Y	-
12	Government General Hospital	5 Batti, Bharuch	02642	243515	210	Y	Y	7
13	Krishna Hospital	5 Batti, Bharuch	02642	264737	10	N	N	-
14	Parth Surgical Hospital	Shalimar Complex - Bharuch	02642	260844	10	N	Y	-
15	Sevashram Hospital	5 Batti, Bharuch	02642	243493	140	Y	Y	3
16	Shah Memorial Hospital	Ashirwad Complex, 5 Batti, Bharuch	02642	266585	12	N	N	-
17	Vishwas Hospital	Falsuti Nagar, Bharuch	02642	268675	18	N	Y	-
18	Zain Clinic (Dr. Khan)	5 Batti, Bharuch	02642	243691	12	Y	N	-
19	Community Health Centre	Jambusar	02644	220088	50	N	Y	1
20	Community Health Centre	Jhagadia	02645	220078	30	N	Y	1
21	Seva Rural Hospital	Jhagadia	02645	220313	75	Y	Y	1
22	Community Health Centre	Valia	02643	270733	30	Y	Y	1
23	Govardhan Trust Hospital	Valia	02646	270583	35	Y	Y	1
24	Global Hospital	Bharuch	02642	268800,265800 266800	50	Y	Y	2

## Annex-M 1 Other District Major Hospitals

Sr.No	Name of Hospital	Contact Details	
		Mobile	Office
1	Sterling Hospital (Baroda)	9574544456	0265-2354455 02645-2354466 0265-2354488
2	Bhailal Amin Hospital (Baroda)		0265-2284444 0266-2286666 0265-3956222
3	Baroda Heart Institute & Research Centre (Baroda)	9898500101	0265-2325444 0265-2322021
4	Shree Sir Sayaji General Hospital (Baroda)		0265-2424848 0265-2423122
5	Civil Hospital (New) Surat (Surat)		0261-2244985
6	Shree Mahavir General Hospital (Surat)		0261-2331181 0261-2332828 0261-2330180
7	Sanjeevani Multi Speciality Hospital (Surat)	7874285777 8140215777	0261-2215777

## Annex- M 2 BHARUCH DISTRICT BLOOD BANKS

Sr No	Name	Contact Person	Phone No.
1	Red Cross Blood Bank, Bharuch	Dr. J J Khilwani (mo) 9427879628	(02642) 243603
2	Kumarpal Gandhi Blood Bank, Ankleshwar	Dr. Ashis Modi	(02646) 244530

## Annexure

Annexure:-N

BHARUCH DISTRICT NGO CONTACT LIST:-

Sr. No	Name of NGO	Name of Person	Office Phone Number	Residence Number	Mobile Number	Activity
1	Rotary Club	Ketanbhai shah	02642 243612		9825226803	Social
2	President of Lions Club	President Balavansinh			9428887185	Social
3	President of Indian Medical Association.	Prashant Vasava	02642 263290		9537567853	Health & Social
4	President of Patel Welfare Hospital	Mohmad patel A.V.Matadar	(02642) 244880 244881 241044	02642241 044	9824148002 9824854416 9099028169	Health & Socail Activity
5	President of Bharuch District Drugs & Chemical Association	Bharatbhai shah	02642243 559		9925554930	Social
6	G.N.F.C. (NARDESH)	Anurag Srivastava (Project Manager)	(02642) 663480		9429003857	Social
7	N.T.P.C	-	(02642) 287414			Social Activity
8	Videocon, Chavaj	Niraj Saxsena	(02642) 240803		9227196168	Socail Activity
9	CLP India (formerly known G.P.E.C)	General Manager	(02642) 671101 288502		9824008075	Welfare Activity
10	Jan-Education, Bharuch (Jan-Gan Sanstha)	Retul saiyyad fardishben mansuri	02642 260082	02642 265365	9825304175	Education
11	President Jalaram Temple, Ankleshvar	Arvindbhai T Rana Hasmukhbhai M Rana	(02646) 696339		9429478840	Socail & Religious
12	Ankleshvar GIDC	President	02646 251111			Industry related activity

## Annexure

Sr. No	Name of NGO	Name of Person	Office Phone Number	Residence Number	Mobile Number	Activity
13	Kakaba & Kalbadh Public Cheritable Trust, Hansot	President bharatbhai Alpeshbhai	02646 262003 262069		9909031760 9427328622	Health & Socail Activity
14	Gardha Foundation	President	02646 250305	026462545 62	9687979399 9099910901	Social activity
15	Narmada Nagar Industrial Association, Bharuch	President Kirti Patel	02642 228093 245596	02642 227162	9979896160	Welfare activity
16	Bharuch District Civil Eng. Forum, Bharuch	President	02642 241574	02642 226773	9377413049	Social
17	Eklavya Manav Seva Trust.Bharuch.	President Sangitaben Raj	02642 325388		9427105356	Education
18	Narmada Edu.& Scientifics Research Soc.Bharuch	President of	02642 663599 2470011			Education & Socail Activity
19	Gurukul Nahiyer, Amod.	Devkishor swami Bhakti Swami	02641 245511	02641 245511	9687190004 9427101948	Education & Social
20	President Santigram Tancha,Amod	Rohitbhai patel			9726865098	Social Welfare
21	Vikas Agency Development, Amod	President	02641 220580		9428324355	Social& Education
22	President Sramik Vikas Sansthan Vagra	Ramanbhai K Chaucha	02641 225453	942715991 9		Education
23	Birla Cooper . Dahej, Vagra.	Satish Bhavir	(02641) 256004 to06		9904705975	Social activity
24	Munsi Manubarwala Cheritable Trust	S.A.Patel	(02642) 256908 256909			Education & Socail Activcity
25	A.K.R.S.P-Netrang	Ramanbhai Patel	02643		9925239320	Women's Empowerment And Economic developme

## Annexure

Sr. No	Name of NGO	Name of Person	Office Phone Number	Residence Number	Mobile Number	Activity
27	Jhagadia Industrial Accociation	Ashok Panjvani Anil jain Mr. bhatt	(02645) 226087		9909994902 9909994941	Industries & Social welfare Environm ent safety
28	Welfare Hospital & Research Center	Dr.Suketu Dave	(02642) 241044 244881 244880		9824141681 9428025009	Health
29	Human Welfare, Environment & Seafty Association	Gitaben P Thakar			9924395509	Human Welfare & Environm ent safety
30	World Vision India	Ronald John			9867611675	Social
31	Bharuch Dist Mahila Pramukh	Vinaben T.Rana			9904176335 7984342244	Womens Welfare
32	Krishna Manav Seva Traust	Jyotsna N.Machchhar			9898233702	Women welfare
26	Gram Nirvan K.Mandal Thava Netrang	Mansing mangrola Narendrasigh			9426439170 9925035956	Education & Social activity

### **Annexure –OFCI & Civil Supply Godowns in the Bharuch District**

Sr.No	Agency Name	Address	Contact Number
1	Gujarat Co-Operative Markating Society Ltd.	Vagusana NH/8 Tal : Bharuch	02642-231255
2	Civil Supplies Godown	Jambusar	02644-220036
3	Civil Supplies Godown	Amod	02641-2454120
4	Civil Supplies Godown	Vagra	02641-225259
5	Civil Supplies Godown	Bharuch	02642-395188
6	Civil Supplies Godown	Ankleshvar	02646-395695
7	Civil Supplies Godown	Hansot	02646-262525
8	Civil Supplies Godown	Jhagadia	02645-220048
9	Civil Supplies Godown	Valia	02643-270679

## **Annexure P**

### **List of Panjarapol**

Sr.No	Agency Name	Address	Contact Number
1	Bharuch Panjrapol. Saktinath Modi Park near Bharuch	Sureshbhai I Shah. Sonari MahelBharuch	02642-653885 9824157170
2	Panjrapol Kava Bhagol Jambusar	Bhalchandra C Shah.N/R Police Station – Jambusar	02 644-220031

Annexure-Q													
DETAILS OF HELIPAD													
Fmn / Units	Name of location	GPS coard of helipad in lat / long.	Heli pad elevation in mtr & feet	Excact size of helipa d in mtr	Surface of helipad i.e. black top/ concret e / kachha	Gener al wind patter n i.e. South Westerly / Easterly etc.	Avlb of fire figtinh equip., refuelli ng, med facility and wind sock.	Obst within 200 mtr oof Helipa d with height & aproox bearin g from helipad .	No two helip ad shoul d have same name .	Controlling Agncy (Army / BSF/Civ Adm) if clv adm., pt incl the name / appt and tele No. of the office controlling.	Regd . Or not	Last landing date (incl type of hepctr)	Remarks (Any other info)
1	G.N.F.C „ Bharuch	Latitude 21°-43'-23.6" Longitude 73°-01'-25.2"	-	Cricket Ground	Kachha (Grass)	-	-	No	-	G.N.F.C. Co.Ltd., Bharuch	-	-	-
2	Videoc on, Chavaj	Latitude 21°-44'-35.9" Longitude 72°-59'-47.1"	-	12 mtr dia	Concrete	-	-	No	-	Videocon Co.Ltd., Chavaj	-	-	-
3	G.P.E.C „ Paguth an	Latitude 21°-46'-52.3" Longitude 72°-58'-37.3"	-	19 mtr dia	Concrete	-	-	No	-	G.P.E.C., Paguthan	-	-	-
4	Nikora	Latitude 21°-46'-52.1" Longitude 73°-07'-42.9"	-	19 mtr dia	Concrete	-	-	No	-	Nikora (Private)	-	-	-



Fmn / Units	Name of location	GPS coord of helipad in lat / long.	Heli pad elevation in mtr & feet	Excact size of helipad in mtr	Surface of helipad i.e. black top/ concrete / kachha	General wind pattern i.e. South Westerly / Easterly etc.	Avlb of fire fighting equip., refuelling, medical facility and wind sock.	Obst within 200 mtr oof Helipad with height & aproox bearing from helipad	No two helipad should have same name.	Controlling Agency (Army / BSF/Civ Adm) if civ adm., pt incl the name / appt and tele No. of the office controlling.	Regd . Or not	Last landing date (incl type of heptr)	Remarks (Any other info)
5	O.N.G.C., Ankleshwar	Latitude 21°-38'-17.9" Longitude 73°-00'-49.3"	-	25 mtr dia	Asphalt	-	-	No	-	O.N.G.C. Ltd., Ankleshwar	-	-	-
6	Pandvai Sugar Factory	Latitude 21°-28'-58.4" Longitude 72°-55'-19.1"	-	20 mtr dia	Concrete	-	-	No	-	Pandvai Sugar Factory	-	-	-
7	G.A.C.L., Dahej	Latitude 21°-42'-25.3" Longitude 72°-35'-59.7"	-	19 mtr dia	Concrete	-	-	No	-	G.A.C.L., Dahej	-	-	-
8	Reliance (I.P.C.L.), Dahej	Latitude 21°-41'-29.4" Longitude 72°-34'-39.6"	-	30 mtr dia	Asphalt	-	-	No	-	Reliance Co.Ltd. (I.P.C.L.), Dahej	-	-	-

Fmn / Units	Name of location	GPS coord of helipad in lat / long.	Heli pad elevation in mtr & feet	Excact size of helipad in mtr	Surface of helipad i.e. black top/ concrete / kachha	General wind pattern i.e. South Westerly / Easterly etc.	Avlb of fire fighting equip., refuelling, medical facility and wind sock.	Obst within 200 mtr oof Helipad with height & aproox bearing from helipad .	No two helipad should have same name .	Controlling Agency (Army / BSF/Civ Adm) if civ adm., pt incl the name / appt and tele No. of the office controlling.	Regd . Or not	Last landing date (incl type of heptr)	Remarks (Any other info)
10	Welspun, Dahej	Latitude 21°-43'-06.8" Longitude 72°-38'-13.4"	-	20 mtr dia	Concrete	-	-	No	-	Welspun Co. Ltd., Dahej	-	-	-
11	Birla Century Jhagadia GIDC	Latitude 21°-40'-10.00" Longitude 73°-08'-12.7"	-	22 mtr dia	Concrete	-	-	No	-	Birla Century Jhagadia GIDC, 826, GIDC Industrial Estate	-	-	-
12	Sakata Inks Co. Ltd.	Latitude 21°-33'-01.2" Longitude 72°-59'-51.2"	-	22 mtr dia	Concrete	-	-	No	-	Sakata Inks Co. Ltd. Panoli, Ta.Ankleshwar Dist.Bharuch	-	-	-

**Annexure :- R**

List of Bharuch District MAH Units :-

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Hendled With Quantities	Hazardous Chemicals Quantities	Disasters Likely	No.Of Trained Manpower	Contact Person	Contact No
1	2	3	4	5	6	7	8	9	10
1	Amal Rasayan Ltd.	136/137, Gidc Ankleshwar Bharuch-393002	Manufacturing of Inorganics Chemicals	Oleum (Sulphur Trioxide)	500 mt	Fire & toxic	4	Uttam Koley	7096422166
2	Air Liquid India Holding Pvt Ltd	Plotno.38/1,Gidc, Jhadia Dist-Bharuch	Industrial Gas	Liquid Oxygen	250 mt	Fire explosion	4	Mr. Dalbir Singh Rawat	9662002522
3	Atul Limited	297, Gidc Ankleshwar, Dist-Bharuch	Manufacturing of Organic Chemicals	Liq So3 So2	60 mt 15 mt	Fire explosion	8	Pratik Chavda	9824116482
4	Alkyl Amines Chemicals Ltd	D-2/ch/149/2,GIDC Dahej,Bharuch	Manufacturing of Chemicals	Ammonia Methonal	186 MT 1390 MT	Fire explosion	--	Ramsh Shah	9820798375
5	Elantas Beck India Ltd.	Plot 1 & 122, Gidc Ankleshwar Bharuch	Manufacturing of Inorgsnics Chemicals	Formaldehyde	23 mt	Fire	7	Deepak Kumar	9607928711
6	Bharat Glass tube	Plot No. 9208-9213, GIDC Ankleshwar ,	Manufacturing of Organics Chemicals	LPG	16 T	Toxic & fire	--	Mr. Chauhan	9824033822

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Handled With Quantities	Hazardous Chemicals Quantities	Disasters Likely	No.Of Trained Manpower	Contact Person	Contact No
7	Birla Cellulosic	Birladham, Kharach Kosamba (R.S.) Bharuch-394 120, Gujarat	Chemicals & Visposal Fiber	Carbon Disulphide	350 mt	Fire explosion & toxic	15	Narendra Patel	9157308010
8	Bharat Rasayan Ltd	Dahej, vagra Bharuch	Manufacturing of Chemicals	chlorine	18 mt	Explosin	4	Ajay Gupta Pushpendra Dubey	7046500020 9081777013
8	Chemie Organic Chemicals	Plot No.758 Gidc Estate, Jhagadia Bharuch	Monocloro Benzin	Chlorine	18 mt	Fire Explosion & Toxic	8	Vijay Rathor	7226078833
9	Covestro (India) pvt.ltd	Plot no. 3501-3515, Gidc ,Ankleshwar Dt. Bharuch-394 116 Gujarat	--	--	--	--	--	Hitesh Gandhi	9727008079
10	Cheminova India Ltd.	27,28 Gidc Phase Iv Bharuch Panoli-394 116	Pesticides	Chlorine	96 t	Fire & Toxic	6	Yogesh Trivedi	9825323541
11	Clp India Pvt Ltd	Paguthan Bharuch-392 015	Closed	--	--	--	--	--	--

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Hendled With Quantities	Hazardous Chemicals Quantities	Disasters Likely	No.Of Trained Manpower	Contact Person	Contact No
12	Clp India Pvt Ltd	Vill: Naphtha Storage Terminal Post-Haldar	Closed	--	--	--	--	--	--
13	Coromandal International Ltd	PlotNo.3204,GIDC Ankleshwar Bharuch-383 002	Pesticides	Acrylonitrile	45 kl	Fire Explosion & Toxic	8	Ashok Pawar	8128651005
14	Dhanveen Pigments Pvt Ltd	Plot No.31505 To 3107,Phase-Iii	Manufacturing Of Pigments Green 7	Chlorine	50 mt	Chlorine likege	8	Bhupat.P. Ramoliya	9824128555
15	Expanded Polymer Systems Pvt Ltd	Ch-10, Dahej Tal-Vagara, Dist-Bharuch	Manufacturing Of Inorgsnics Chemicals	Propylene Oxide Eo,	15 mt	Explosin	6	Harish Thadani	8511178934
16	Flourescent chemical Industries pvt. Ltd.	Plot no. 311, GIDC, Panoli		chlorine	25 mt	--	--	Mukesh Patel	9824024951
17	Gail (India) Ltd	Vill. Roza Tankaria Bharuch	Gas Procesing Unit	Lpg	208,500 tpa	Gas likege	12	Hitendra Patle	9979876527

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Hendled With Quantities	Hazardous Chemicals Quantities	Disasters Likely	No.Of Trained Manpower	Contact Person	Contact No
18	Galaxy Surfactants Ltd	892,Gidc Jhagadia, Dist-Bharuch	Manufacturing Of Inorgsnics Chemicals	Ethylene Oxide	50 t	Explosin	8	Bhavesb Dasadiya	9426277206
19	Gujarat Alkalies & Chemicals Ltd.	Dahej,Tal-Vagra Bharuch-392 130	Manufacturing Of Inorgsnics Chemicals	Chlorine	1290 mt	Chlorine likege	25	M.B.Patel	9909029646
20	Gujarat Borosil Ltd.	Ankleshwar Rajpipla Road Govali, Tal. Jhagadia Bharuch	Glass	Lpg	58 ton	Fire explosion	11	Shrinivas Panda	8511195485
21	Gujarat Chemical Port Terminal Company Ltd.	P.O. Lakhigam, Dahej Vagra,Bharuch	Chemicals Transpotestion	Benzene Butadiene Propane Methanol Naphtha Styrene M- Xylene	9000 m <sup>3</sup> 4000 m <sup>3</sup> 50000 m <sup>3</sup> 2900 m <sup>3</sup> 34800 m <sup>3</sup> 12000 m <sup>3</sup> 6440 m <sup>3</sup>	Explosin	18	Pavan K Mishra	9998011567
22	Gujarat Fluro Chemicals Ltd.	12/A,Gidc, Dahej, Ta-Vagra Gujarat	Manufacturing Fine Chemicals	Chlorine	315 kl	Toxic & fire	20	Manoj N Kamaliya	9998984700
23	Gujarat Guardian Ltd.	Village Kondh Tal: Valia ,Bharuch	Glass	Lpg	120 mt	Fire explosion	18	Yatin Chayya	9898922111

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Handled With Quantities	Hazardous Chemicals Quantities	Disasters Likely	No.Of Trained Manpower	Contact Person	Contact No
24	Gujarat Insecticides Ltd.	805/806, Gidc Ankleshwar, Bharuch	Pesticides	Chlorine Bromine	10 mt 60 mt	Toxic	6	R.N Chhawsaria	9825415227
25	Gujarat Narmada Valley Fertilisers Co. Ltd.	P.O. Narmadanagar Bharuch-392015	Fertilizer	Ammonia Chlorine Lpg Methanol Naphta	20093 t 18000 t 45 t 7290 t 144 t	Fire explosion & toxic	40	PS Keshwani	8200261954
26	Hemani Industries Ltd.	Plot No. 3208, Gidc Ankleshwar Bharuch	Pesticides	Chlorine	21.6 mt	Fire explosion & toxic	8	Dinanath R. Shivaji R Prasad	9328424017 9328424018
27	Heuback Pigments Ltd.	Plot No.D-11/B/5, GIDC-2 Dahej Ta-Vagra Dist-Bharuch	Pigments	Chlorine	105.30 mt	Toxic & fire	8	Kishore Patel Nitin Shah	9265655891 9724503790
28	Hindalco Ind. Ltd. Unit: Birla Copper, P.O. Dehej	Lakhigam, Dist. Bharuch Bharuch-392 130	Manufacturing Of Copper	Propane Nephtha Ammonia	292 mt 440 mt 10000 mt	Toxic & fire	20	Anand Pawar	9594959581
29	Hindustan Petroleum Corpn. Ltd.	Piludra, Nr. Ongc Ctf Unit Ankleshwar, Bharuch	Closed	--	--	--	--	--	--

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Hendled With Quantities	Hazardous Chemicals Quantities	Disasters Likely	No.Of Trained Manpower	Contact Person	Contact No
30	Hunts Mann Performance Product India Pvt Ltd	321, G.I.D.C., Panoli Dist. Bharuch	Manufacturing Of Inorganics Chemicals	Ethylene Oxide	30 mt	Explosin	22	Arvind Tiwary	9825899546
31	Impro Interchem Pvt. Ltd.	Plot No.414, Gidc Panoli, Bharuch	Manufacturing Of Inorganics Chemicals	Ethylene Oxide	7 mt	Explosin	6	Manoj Pandey	6351179625
32	Indian Oil Corpn. Ltd.	Village Rojatankaria Dist. Bharuch Amod-392 410	Lpg Bottaling	Lpg	2000 mt	Explosin	5	Amit Kumar Mursainia	9654383778
33	Indofil Chemicals Company	Plot No. Z-7-1 & Z-8 Sez Dahej Road Tal-Vagara	Fungi Side	Cs <sub>2</sub>	125 mt	Explosin	28	Mukesh Premjani Vishal Patel	9930359130 8238050585
34	Industrial Solvents & Chemicals Ltd.	Plot Nos. 7906,70,7909 Gidc, Ankleshwar Bharuch	Manufacturing Of Inorganics Chemicals	Sulphar Trioxide	45 mt	Toxic & fire	8	Ketan	9998902341
35	Ion Exchange (India) Ltd.	Plot No.5811-12-13, Gidc Estate Ankleshwar Bharuch-393 001	Water Treatment	Oleum(Sulphar Trioxide)	168 mt	Fire explosion & toxic	10	Ramesh K. Bodar	9374215028



Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Handled With Quantities	Hazardous Chemicals Quantities	Disasters Likely	No.Of Trained Manpower	Contact Person	Contact No
36	Jubilant Lifescience Ltd	Plot no.5 Vilayat Gidc Bharuch 393 110		Ammonia	100 mt	Toxic	12	Company Landline Number	2641281500
37	Jayshree Aromatics Pvt Ltd,	Plot No. 4703,4704 Gidc, Ankleshwar.	Manufacturing Of Aromatics	Chlorine	48 mt	Chlorine likege	8	Hashmukh Patel	9825031253
38	Kanoria Chemicals & Industries Ltd.	3407 G.I.D.C. Industrial Estate Ankleshwar-393002	Organics & Inorganics Chemicals	Formaldehyde	1600 kl	Toxic & fire	10	Ketanbhai	9904097239
39	KIJ Organic Ltd.	Plot No.759, Gidc, Jhagadia Dist. Bharuch	Plasticizer	Chlorine	50 mt	Chlorine	8	Rajeshkumar Nahta	9825042991
40	Lanxess India Pvt Ltd	748/2/A, 748/3, 748/4/A & B Gidc Jhagadia, Dist- Bharuch	Ion Exchange Resin	Acrylonitrile	30 t	Fire explosion & toxic	58	Utpal Kachchhi	9979117904
41	Meghmani Fine Chem Ltd	Plot No.Ch-1 & Ch-2, Gidc, Dahej Tal-Vagara Dist-Bharuch	Manufacturing Of Fine Chemicals	Chlorine	15 t	Toxic & fire	8	Vasant Patel	9879507391

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Handled With Quantities	Hazardous Chemicals Quantities	Disasters Likely	No.Of Trained Manpower	Contact Person	Contact No
42	Meghmani Organic Ltd.	Plot No.-5001/B, Gidc, Ankleshwar.	Pesticides	Acrylonitrile	52 kl	Toxic	6	Vasant Patel	9879507391
43	Merchem Limited	24,24/1,Gidc Panoli, Tal-Ankleshwar,Dist-Bharuch	Manufacturing Of Inorganics Chemicals	Cs <sub>2</sub>	120 kl	Toxic	6	--	--
44	Meridian Chem Bond Ltd	Plot No.5906/4,Gidc Ankleshwar, Dist-Bharuch	Manufacturing Of Inorganics Chemicals	Chlorine	100 t	Toxic	8	Devendra Singh	9374689059
45	Meridian Chem Bond Ltd.	Plot No. 3209 Gidc Ankleshwar Bharuch-393 002	Manufacturing Of Organics Chemicals	Chlorine	70 t	Toxic	12	Devendra Singh	9374689059
46	Mohan Polyfab Pvt. Ltd.	Plot No.6510, Gidc Ankleshwar,Bharuch	Manufacturing Of Organics Chemicals	Chlorine	10 t	Toxic	8	P.P Agrawal	9824037015
47	National Thermal Power Corporesion Ltd.	Village : Jhanor Bharuch	Power Janresion	Chlorine	10 t 100 t	Toxic	45	Smriti Srivastava	9650999838

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Hendled With Quantities	Hazardous chemicals quantities	Disasters likely	No.of trained manpower	Contact Person	Contact no
48	Navjeevan-O-Chem	5903/1, Gidc Estate Ankleshwar Bharuch-393 002	Manufacturing Of Organics Chemicals	Chlorine	20 t	Toxic	4	Kirit Patel	9825039426
49	ONGC C2,C3 & C4 Extraction Plant	7D SEZ-II Area, Dahej		Ethane Propane Butane Ethyl Mercaptan	4189m3 1950m3 1150m3 3520 kg	--	--	Surendra Sharma	9428007334
50	P I Industries Ltd	237 Gidc Panoli, Bharuch	Pesticides	Chlorine Phorate Ethion	10.8 t 100 t 100 t	Toxis & explosion	24	Rammurti rai	9227562335 6359177204
51	Panoli Intermediate (India) Pvt. Ltd.	Plot No. 778/1, Gidc Jhagadia, Bharuch -393 110	Monocloro Benzin	Chlorine	100 t	Fire explosion & toxic	8	Pankaj Humat	7228009997
52	Panoli Products Pvt. Ltd.	Plot No.33/3, 33/6 Gidc Panoli, Tal-Ankleshwar Dist-Bharuch	Manufacturing Of Arometics	Chlorine	100 t	Chlorine likege	3	Pankaj Humat	7228009997
53	Panorama Aromatics Ltd.	Plot No. 2908-2911, Phase Iii Gidc, Panoli, Bharuch	Manufacturing Of Arometics	Chlorine	19.8 mt	Chlorine likege	5	Mukeshbhai Patel	9825033576

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Handled With Quantities	Hazardous chemicals quantities	Disasters likely	No.of trained manpower	Contact Person	Contact no
54	Petronet Lng Ltd.	Plot No.7/A, Gidc, Dahej, Tal. Vagra,Bharuch	Lng Storage	Lng	592000 cubic meter	Toxis & explosion	30	Sushil Macchi	9662526295
55	Reliance Industries Ltd.	Reliance Industries Ltd P.O.Dahej, Tal. Vagra Bharuch-392 130	Manufacturing Of Organics Chemicals	Chlorine Ethylene Oxide Ethylene Naphtha Propylene Hexane Vinyl Chloride Monomer Butane Ethane/Propane	450 m <sup>3</sup> 120 mt 4800 m <sup>3</sup> 54000 mt 4800 m <sup>3</sup> 1250 m <sup>3</sup> 5000 m <sup>3</sup> 400 m <sup>3</sup> 4800m <sup>3</sup>	Fire explosion & toxic	50	Piyush Joshi	7043043521
56	Saint Gobain Glass India Ltd	36, Gidc Jhagadia , Dist-Bharuch	Glass	Lpg	15 t	Fire explosion	8	Hemant Modi	9898734174
57	Sajjan India Ltd.	Plot 6102-03/6117-19 Gidc Ankleshwar ,Bharuch	Manufacturing Of Organics Chemicals	Chlorine	26 nos	Fire & toxic	10	Gurupad Kondaguli	7046077768

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Handled With Quantities	Hazardous chemicals quantities	Disasters likely	No.of trained manpower	Contact Person	Contact no
58	Sanghvi Organics P. Ltd.	Plot No.3516, Phase Iii Gidc Panoli Bharuch-	Manufacturing Of Organic Chemicals	Chlorine	70 tonners	Chlorine likege	15	M.K.Pillai	9725001334
59	Savla Chemicals Ltd.	26-A Gidc Estate Panoli, Dist. Bharuch Bharuch-394 116	Manufacturing Of Organic Chemicals	Isobutylene Methyl Tertiary Butyl Ether	180.6 mt/month 2123.74	Explosin	8	VD Prajapati	9377510523
60	Shilpa Chemical Industries	Plot No. 4777 Gidc Ankleshwar, Dist-Bharuch	Manufacturing Of Organic Chemicals	Ethylene Oxide	7 mt	Explosin	6	Vikash Shah	9426134682
61	Shivam In Corporation	521 Gidc Panoli, Bharuch	Dyes Chemicals Intermediates	Chlorine So <sub>2</sub> So <sub>3</sub>	120 mt 100 mt 20 mt	Chlorine likege	6	Prakash Patel	9825600136
62	Shree Sulphuric Ltd.	2801, Gidc, Ankleshwar Dist. Bharuch	Manufacturing of Inorganics Chemicals	Oleum(Sulphar Trioxide)	172	Toxic	8	Chirag Joshi Dharmesh Patel	9773278054 9724347920
63	Shri Ganesh Khand Udhog Sahkari Mandali Ltd.	Vataria, Valia	Alcohol	Industrial Alcohol Ethanol	1193 kl 1190 kl	Fire & toxic	8	Vasant Patel	8839969825 7621027528

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Handled With Quantities	Hazardous chemicals quantities	Disasters likely	No.of trained manpower	Contact Person	Contact no
64	Shriram Alkali & Chemicals (A Unit Of Dcm Shriram Consolidated) Ltd	749 Gidc Indl. Estate, Jhagadia Bharuch-393 110	Manufacturing Of Inorganics Chemicals	Chlorine	1235 mt	Toxic	15	B M Patel	8758846718 8511495365
65	Shyam Chemicals	Plot No. 6004, Gidc Ankleshwar Bharuch	Manufacturing Of Organics Chemicals	Chlorine	900 mt 900 kg tonners	Explosin	6	Vijay Dua	9723916456
66	Siddhi Samrat Dye-Chem Pvt. Lt	Pl.No.6450, Gidc Estate, Ankleshwar	Manufacturing Of Organics Chemicals	Ethylene Oxide	8 t	Explosin	6	Nilesh	9824106450
67	Stearling Auxiliaries Pvt.Ltd.	Plot No.12/A-2,Gidc, Village-Dahej	Manufacturing Of Organics Chemicals	Ethylene Oxide Propylene Oxide	70 mt 20 mt	Explosin	18	Nikhil Agarwal	9909287465
68	Styrolution India Pvt. Ltd.	Dahej, Vaghra Taluka Bharuch	Manufacturing Of Organics Chemicals	Styrene Monomer Very Highly Flammable Liquids	2000 mt	Explosin	16	Rajesh Shukla Gunvant Zala	7486007324 6353986648

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Handled With Quantities	Hazardous chemicals quantities	Disasters likely	No.of trained manpower	Contact Person	Contact no
69	Sun Chloride Pvt. Ltd.	603, Gidc, Panoli Bharuch	Aluminium Chloride, Sodium Molibled	Chlorine	20 t	Chlorine likege	4	Lovekumar.. Patel	9825466444
70	Tml Industrie Ltd.	Village Pilodra, Jambusar Bharuch	Manufacturing Of Fine Chemicals	Acrylonitrile Chlorine	200 ton 54 kl	Toxic	6	Moolraj Sindha	9662023479
71	United Phosphorous Ltd (Unit-5).	750 Gidc Indl. Estate Jhagadia Bharuch-393 110	Pesticides	Chlorine Carbon Disulhide	307 mt 300 mt	Toxic & explosin	15	J.C Trivedi	9909994277
72	United Phosphorous Pvt. Ltd. (Unit No.2),	3405/3406, G.I.D.C. Ankaleshwar Dist. Bharuch	Pesticides	Ter. Butyl Mercqption (Tbm)-Phorate	40 kl	Toxic & explosin	18	Jayesh Gol	9909149503
73	United Phosphorus Ltd. (Unit-1)	117, Gidc, Ankleshwar Dist. Bharuch	Pesticides	Chlorine Carbon Disulhide	22 tonners of 900 kgs 30 ton	Toxic & explosin	10	Mr. Rana bhai	9909994369

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Handled With Quantities	Hazardous chemicals quantities	Disasters likely	No.of trained manpower	Contact Person	Contact no
74	United Phosphorus Ltd. (Unit-3)	3101 Gidc, Ankleshwar Bharuch	Pesticides	Ddvp Mcp Phosphamidon Cypermethrin	50 t 50 t 50 t 50 t	Toxic & explosin	6	Hitesh Gohil	9714786746
75	Vardhman Acrylics Ltd.	755 Gidc Mega Estate Jhaghadia, Dist. Bharuch	Acrylics Yan	Acrylonitrile	2160 t	Fire explosion & toxic	40	Jignesh Parmar	8128652905
76	Videocon Industries Ltd	Village Chavaj Dist. Bharuch 392 002	Closed	--	--	--	--	--	--
77	Wanksons Chemical Industries Pvt. Ltd.	Plot No. 518, Gidc Panoli Ankleshwar, Bharuch	Chloral	Chlorine	50 t	Chlorine likege	15	Bharat Patel	9428879895
78	Srf Limited	D-2/1, Gidc Phase-2, Pcpir Dahej Industrial Area, Tal-Vagara, Dist-Bharuch	Manufacturing Of Fine Chemicals	Chlorine	132 kl	Toxic & explosin	15	Yogesh Mittal Vikas Yadav	9081240001 9978445120
79	Grasim Industries Limited	Plot No.1. Gidc Vilayat, Tal-Vagra, Dist-Bharuch	Manufacturing Of Viscos Fiber	Chlorine Carbon Disulphide	1340 mt 3405 mt	Toxic & explosin	20	Suvodh Gautam	7309063134



Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Handled With Quantities	Hazardous chemicals quantities	Disasters likely	No.of trained manpower	Contact Person	Contact no
80	Payal Petrocheem Pvt Ltd	Plot No.D-2/Ch-li, Dahej Gidc , Tal-Vagra, Dist-Bharuch	Manufacturing of Inorganics Chemicals	Chlorine	600 mt	Toxic	6	Damodar Patil	7574851684
81	Shri Khedut Sahakari Khand Udiyog Mandli Ltd	At-Pandvai, Tal-Hansot, Dist-Bharuch	Storege	Industrial Alcohol Ethanol	1193 kl 1190 kl	Explosin	12	Kanu B Patel	9512219633
82	Convergence chemicals Pvt.Ltd	D-2/11/A, GIDC Phase-II, Nr. Vadadala Village, Ta-Vagra dist-bharuch	--	Chlorine Hydrogen Floride	18mt 20mt	Toxic	--	Saket Guha Deepak Shah	7046044476 9979896115
83	Ganesh LPG Bottling Plant	Plot No. 19 GIDC Panoli	--	LPG	150 ton	--	--	Jagdish Mardia	9825802092
84	Glomet Tech Pvt. Ltd.	Z-22,Sez, Dahej	--	Chlorine	18 T	Toxic	--	Jayeshhai Damani	9727716206
85	GNFC	D-2/8 GIDC Rahiyad, Dahej	--	TDI	--	--	--	K H patel Ashwin Modi	9898023744 9898906155
86	Hemani Industries Ltd. Unit-III	G.I.D.C. Ind. Estate, Dahej	--	Chlorine Bromine	37 ton 10mt	--	--	Dinanath R Rai	9328424017

Sr. No	Factory Name	Address	Activity Carried Out	Hazardous Chemicals Handled With Quantities	Hazardous chemicals quantities	Disasters likely	No.of trained manpower	Contact Person	Contact no
87	Hikal Limited	629/630,GIDC Panoli	--	Ethion	140mt	--	--	Mr. Keyur Shah	7600014782
88	Macson Products Unit-II	Plot No. 6606/2-B GIDC, Ankleshwar	--	Ethylene oxide	7.5 T	--	--	Piyush N. Patel	9426746682
89	Thermax Limited	903/1,GIDC, Jhagadiya	--	Formaldehyde	25mt	--	--	Bhaves Panchal	9377818889
90	Sukha chemical Industries	Plot No. 4705-1/6&7,GIDC Ankleshwar	--	Chlorine	25 T	--	--	Parbat P. Dobariya	9377510530
91	Indo Baijin Chemicals Pvt. Ltd.	Z-7/1,Sez,Dahej	--	Cs2	2000mt	--	--	Dharmesh Parmar	9638537080
92	ONGC Petro Additions Ltd.	Z-1& Z-83,SEZ,Dahej	--	Chlorine Neptha Butadine Ethylene Propylene Propane Butane	12 mt 18120 m3 8400 m3 112000m3 22400 m3 2266 m3 2266 m3	--	--	Somnath Sarkar	9099007516

(Source DISH & DIC)

## Annexure

### **Annexure: -S**

#### **Capacity against industrial and chemicals disaster Trained personnel at Taluka level & chemicals experts / technicians**

Sr.	Expert Name	Expertise Details, Qualification, Designation	Address	Phone Number (O,R,M)	Remarks
1	2	3	4	5	6
1.	Mr. Vijay aashar	Fire prevention, Dpmc head	Fire Station, Notified Area, Gidc , Ankleshwar	(O) (02646) 220229 9428689616	
2.	Mr. Manoj Kotadia	Fire prevention, Dpmc	Fire Station, Notified Area, Gidc , Ankleshwar	(M) 9426889616 02641-256133	
3.	Mr. Paresh ardhavaue	Chemical accident	Gnfc Ltd.Po.- Narmadanagar , Bharuch-392015	(M) 99099 94534	
4.	Mr. Santosh Pandey	Chemical accident	--	(O)2646 -251519 (M) 7574804515	
5.	Mr. M.B Patel	Chemical accident	Gujarat Alkalies and chemicals Limited,P.O. Dahej, Ta. Vagra, Bharuch, Dahej,Gujarat	(M) 9909029646	
6.	Mr. Manoj N kamaliya	Chemical accident	Gujarat Fluorochemicals Ltd, 12-A, Dahej GIDC, Vagra,Bharuch	(O) 02641618090	

*(Source DISH-2019 Offsite Emergency Plan)*

## Annexure

### **Annexure :-T**

#### **List of Doctors in MAH Industries**

S.no	Factory name	Address	Medical Offi.	Qualification	Phone no
1	2	3	4	5	6
1	Amal Rasayan Ltd.	136/137,Gidc AnkleshwarBharuch-393002	Dr.Amit Shah	M.B.B.S AFIH	9824150384
2	Air Liquid India Holding Pvt Ltd	Plotno.38/1,Gidc, Jhgadia Dist-Bharuch	Dr.ChiragGuvaniwala	M.B.B.S AFIH	9099016106
3	Atul Limited	297, Gidc Ankleshwar, Dist-Bharuch	Dr.Amit Shah	M.B.B.S AFIH	9099016106
4	Bharat Glass Tube Ltd.	Plot No.9208-9213, Gidc Ankleshwar	Dr.Amit Shah	M.B.B.S AFIH	9824150384
5	Birla Cellulosic	Birladham, Kharach Kosamba (R.S.) Bharuch-394 120,			
6	Cheme Organic Chemicals	Plot No. 758 Gidc Estate, Jhagadia Bharuch	Dr.Amit Shah	M.B.B.S AFIH	9824150384
7	Cheminova India Ltd.	242/P, Gidc Panoli Dt. Bharuch-394 116	Dr.Akash Chhabda	MD.CIH	9328823687
8	Cheminova India Ltd.	27,28 Gidc Phase Iv Bharuch Panoli-394 116	Dr.Akash Chhabda	MD.CIH	9328823687
9	Clp India Pvt Ltd	Paguthan Bharuch-392 015	Dr.Priyesh Modi	M.B.B.S. CIH	9824112284
10	Clp India Pvt Ltd	Vill: Naphtha Storage Terminal Post-Haldar	Dr.Priyesh Modi	M.B.B.S. CIH	9824112284
11	Coromandal International Ltd	Plot No. 3204, Gidc Indl. Estate, Ankleshwar Bharuch-383 002	Dr.Akash Chhabda	MD.CIH	9328823687
12	Gail (India) Ltd	Vill. Roza Tankaria Bharuch	Dr.J.B Vaidhya	M.B.B.S CIH	
13	Gujarat Alkalies & Chemicals Ltd.	Vagra Bharuch-392 130	Dr.R.K.Brambhatt Dr. Kinjal Prajapati	M.B.B.S CIH M.B.B.S CIH	9998499668 9725122179

## Annexure

S.no	Factory name	Address	Medical Officer	Qualification	Phone no
14	Gujarat Borosil Ltd.	Ankleshwar Rajpipla Road Govali, Tal. Jhagadia Bharuch	Dr.J.J.Khilwani	M.B.B.S	9427879628
15	Gujarat Chemical Port Terminal Company Ltd.	P.O. Lakhigam, Dahej Vagra,Bharuch	Dr.Himansu Vanza	M.B.B.S CIH	9824143883
16	Gujarat Fluro Chemicals Ltd.	12/A,Gidc, Dahej, Ta-Vagra Gujarat	Dr.H.I.Shah	M.B.B.S CIH	9426892220
17	Gujarat Guardian Ltd.	Village Kondh Tal: Valia ,Bharuch	Dr.Naresh Shah	M.B.B.S CIH	9427413129
18	Gujarat Insecticides Ltd.	805/806, Gidc Ankleshwar, Bharuch	Dr.Anil Bhalodia	M.B.B.S CIH	9979856427
19	Gujarat Narmada Valley Fertilisers Co. Ltd.	P.O. Narmadanagar Bharuch-392015	Dr.Jaydeep Joshi	M.B.B.S CIH	9879263067
20	Hemani Industries Ltd.	Plot No. 3208, Gidc Ankleshwar Bharuch	Dr.Amit Shah	M.B.B.S CIH	9824150384
21	Heuback Color Ltd.	Plot No.9003 To 9010, Gidc Indl. Estate Ph. ViAnkleshwar, Bharuch	Dr.Deepa Nadkarni	M.B.B.S CIH	9824149109
22	Hindalco Ind. Ltd. Unit: Birla Copper, P.O. Dehej	Lakhigam, Dist. Bharuch Bharuch-392 130	Dr.Manju Ramnani	M.S	9904705981
23	Hindustan Petroleum Corpn. Ltd.	Piludra, Nr. Ongc Ctf Unit Ankleshwar, Bharuch	Dr.ChiragGuvaliwala	M.B.B.S CIH	9099016106
24	Hunts Mann Performance Product India Pvt Ltd	321, G.I.D.C., Panoli Dist. Bharuch	Dr.Vilas Patel	M.B.B.S CIH	9909995931
25	Hycle Ltd.	629/630, Gidc Panoli Bharuch	Dr.Akash Chhabda	M.D.CIH	9328823687
26	Indofil Chemicals Company	Plot No. Z-7-1 & Z-8 Sez Dahej Road	Dr.Himansu Vanza	M.B.B.S CIH	9824143883

## Annexure

S.no	Factory Name	Address	Medical Officer	Qualification	Phone no
27	Industrial Solvents & Chemicals Ltd.	Plot Nos. 7906,70,7909 Gidc, Ankleshwar Bharuch	Dr.Amit Shah	M.B.B.S CIH	9824150384
28	Ion Exchange (India) Ltd.	Plot No.5811-12-13, Gidc Estate Ankleshwar Bharuch-393 001	Dr.Amit Shah	M.B.B.S CIH	9824150385
29	J M Hubar India Pvt Ltd	754 Jhagadia Indl. Estate Gidc Bharuch 393 110	Dr.Amit Shah	M.B.B.S CIH	9824150386
30	Kanoria Chemicals & Industries Ltd.	3407 G.I.D.C. Industrial Estate Ankleshwar-393002	Dr.Amit Shah	M.B.B.S CIH	9824150386
31	Lanxess India Pvt Ltd	748/2/A,748/3,748/4/ A & B Gidc Jhagadia, Dist-Bharuch	Dr.Himesh Mehta`	M.B.B.S CIH	9725954515
32	Meghmani Fine Chem Ltd	Plot No.Ch-1 & Ch-2, Gidc,Dahej Tal- Vagara Dist-Bharuch	Dr.A.K.Patel	M.S. CIH	9898595681
33	Meghmani Organic Ltd.	Plot No.- 5001/B,Gidc, Ankleshwar	Dr.A.K.Patel	M.S. CIH	9898595682
34	Meridian Chem Bond Ltd	Plot No.5906/4,Gidc Ankleshwar, Dist- Bharuch	Dr.Amit Shah	M.B.B.S CIH	9824150384
35	Meridian Chem Bond Ltd.	Plot No. 3209 Gidc Ankleshwar Bharuch-393 002	Dr.Amit Shah	M.B.B.S CIH	9824150385
36	Omnova Solution India Pvt Ltd	Dungari Bharuch-393 135	Dr.Amit Shah	M.B.B.S CIH	9824150385
37	P I Industries Ltd	237 Gidc Panoli, Bharuch	Dr.Vilash Patel	M.B.B.S CIH	9909995931
38	Panoli Intermediate (India) Pvt. Ltd.	Plot No. 778/1, Gidc Jhagadia,Bharuch- 393 110	Dr.Himesh Mehta	M.B.B.S CIH	9725954515
39	Petronet Lng Ltd.	Plot No.7/A, Gidc, Dahej, Tal. Vagra,Bharuch	Dr. Jadeja Dr.Ashis Vyas	M.B.B.S CIH M.B.B.S CIH	7567555432 9825460911

# Annexure

S.no	Factory name	Address	Medical Officer	Qualification	Phone no
40	Reliance Industries Ltd.	Reliance Industries Ltd P.O.Dahej, Tal. Vagra Bharuch-392 130	Dr. Paren Shah	M.B.B.S CIH	9998987298
41	Saint Gobain Glass India Ltd	36, Gidc Jhagadia , Dist-Bharuch	Dr.Borasia	M.B.B.S CIH	9427873387
42	Shree Sulphuric Ltd.	2801, Gidc, Ankleshwar Dist. Bharuch	Dr.Amit Shah	M.B.B.S CIH	9824150384
43	Shri Ganesh Khand Udhyog Sahkari Mandali Ltd.	Vataria, Valia	Dr, Balvant Dodia	M.B.B.S CIH	9825141857
44	Shriram Alkali & Chemicals (A Unit Of Dcm Shriram Consolidated) Ltd	749 Gidc Indl. Estate, Jhagadia Bharuch-393 110	Dr.Dev Varma	M.D.CIH	9824003883
45	Shyam Chemicals	Plot No. 6004, Gidc Ankleshwar Bharuch	Dr Himesh Maheta	M.B.B.S CIH	9725954515
46	Stearling Auxiliaries Pvt.Ltd.	Plot No.12/A-2,Gidc, Village-Dahej	Dr.Himansu Vanza	M.B.B.S CIH	9824143883
47	Styrolupion India Pvt. Ltd.	Dahej,Vaghra Taluka Bharuch	Dr.Himansu Vanza	M.B.B.S CIH	9824143884
48	United Phosphorous Ltd (Unit-5).	750 Gidc Indl. Estate Jhagadia Bharuch-393 110	Dr.Vilash Patel	M.B.B.S CIH	9909993931
49	United Phosphorous Pvt. Ltd. (Unit No.2),	3405/3406, G.I.D.C. Ankaleshwar Dist. Bharuch	Dr.Vilash Patel	M.B.B.S CIH	9909993932
50	United Phosphorus Ltd. (Unit- 1)	117, Gidc, Ankleshwar Dist. Bharuch	Dr.Vilash Patel	M.B.B.S CIH	9909993933
51	United Phosphorus Ltd. (Unit-3)	3101 Gidc,Ankleshwar Bharuch	Dr.Vilash Patel	M.B.B.S CIH	9909993934
52	Vardhman Acrylics Ltd.	755 Gidc Mega Estate Jhagadia, Dist. Bharuch	Dr Himesh Maheta	M.B.B.S CIH	9725954515

## Annexure

S.no	Factory name	Address	Medical Officer	Qualification	Phone no
53	Jubilant Infrastructure Ltd	Plot No.5, Vilayat Gidc, Tal- Vagra, Dist-Bharuch	Dr.Kamlesh Yadav	M.B.B.S CIH	9099906490
54	Welspun Crop Ltd	At Jolva,Tal-Vagra, Dist-Bharuch	Dr.Himansu Vanza	M.B.B.S CIH	9824143883
55	Universal Chemicals And Industriess Pvt Ltd	Gidc Dahej, Tal-Vagra, Dist-Bharuch	Dr.Himansu Vanza	M.B.B.S CIH	9824143884
56	K.Patel Dyechem Industries Ltd	157,Gidc Ankleshwar Dist-Bharuch	Dr.Satish Mistri	M.B.B.S CIH	9824114604
57	Thermax Ltd	903,Gidc Jhagadia, Dist-Bharuch	Dr.ChiragGuval iwala	M.B.B.S CIH	9099016106
58	Asian Paints Pthalic Div	2702, Gidc Ankleshwar, Dist-Bharuch	Dr.Amit Shah	M.B.B.S CIH	9824150384
59	Endeka Ceramics India Pvt Ltd	Gidc Jhagadia, Dist-Bhauch	Dr.Himesh Mehta`	M.B.B.S CIH	9725954515
60	Fosroc Chemicals India Ltd	6204,Gidc Ankleshwar, Dist-Bharuch	Dr.Amit Shah	M.B.B.S CIH	9824150314
61	K Patel Chemopharma Pvt Ltd	153, Gidc Ankleshwar, Dist-Bharuch	Dr.Girish Purohit	M.B.B.S CIH	9825368538
62	Devanshi Dyestuff	141, Gidc Ankleshwar, Dist-Bharuch	Dr.Naresh Shah	M.B.B.S CIH	9824100171
63	Flometalic India Ltd	821, Gidc Jhagadia, Dist-Bharuch	Dr.Ranjit Parmar	M.B.B.S CIH	9898027111
64	Amsal Chem Pvt Ltd	401,Gidc Ankleshwar, Dist-Bharuch	Dr.Himesh Mehta`	M.B.B.S CIH	9725954515
65	Glenmark Generics Ltd	3109,Gidc Ankleshwar, Dist-Bharuch	Dr.Girish Purohit	M.B.B.S CIH	9825368538
66	Arti Ind. Ltd	758/1,Gidc Jhagadia, Dist-Bharuch	Dr.Amit Shah	M.B.B.S CIH	9824150384
67	Abg Shipyard Ltd Dahej	Dahej,Vaghra Taluka Bharuch	Dr.Ramesh Agrawal	M.B.B.S CIH	9687667499
68	Universal Chemicals & Ind.Pvt Ltd	Gidc Dahej, Tal-Vagra, Dist-Bharuch	Dr.Himansu Vanza	M.B.B.S CIH	9824143883
69	Asian Paints Ltd	2602,Gidc Ankleshwar, Dist-Bharuch	Dr.Girish Purohit	M.B.B.S CIH	9825368538
70	Bell Ceramic Pvt Ltd	At-Dora, Tal-Amod, Dist-Bharuch	Dr.Himesh Mehta`	M.B.B.S CIH	9725954515
71	Alkem Laboratory Ltd	At-Naugama Mandva, Tal-Ankleshwar, Dist-Bharuch	Dr.Amit Shah	M.B.B.S CIH	9824150384



**Annexure: - U Antidotes****Annex-U1 Capacity against industrial and chemicals Disaster Antidotes Details**

Sr. No	i. Name of Company	Plot No.	Ph. No.	Name of Chemicals	Name of Antidotes	Qty.
1	Pioneer Chem Ltd.,	412, Panoli	272393 / 394	Aniline	Methylene blue injection	04
2	Sun Pharma. Ltd.,	24/25, Panoli	272534, 272363, 272364 Fax:225729	CH3OH	Baking Soda	--
				Toluene	Milk of magnesia	500 ml
				Ethyl Acetate	Novacine	--
				Cyanide	Cyanide Kit	1 Nos.
					Charcoal Tablet	500
3	Merchem Ltd., GIDC, Panoli	24/1 Panoli	272438/39	Aniline	Methylene blue injection	10 Nos.
4	Bayer Crop Sciences Ltd.	6301-10 A & 6008-10	02646-661110, 661234	Ethoprophos and Nemacur	Atropine (Injection)	100
					2-Pyridine Aldoxime Methiodide (PAM Injection)	07
				Diisopropyl amine and Monoisopropyl amine	Methylene Blue (Injection)	25
				Sodium cyanide	Cyanide Kits - 01	02 Kits
5	Isagro (Asia) Agro Chemicals Pvt. Ltd.	640 Panoli	02646-272017/19/46 Extn.-201	Sodium Cyanide	Anti cyanide	70 ml
				Snake bite	Anti snake venom	10 ml
6	Galaxy Surfactants Limited,	892, Jhagadia	(02645)290620	General	Tetanus Vaccine	30
				General	Inj. Anti Snake	4
				Phenol	Venom Glycerin	5 Ltr
7	Aarti Industries Ltd.	758 / 1-2-3 Jhagadia	02645-226276 – 78/79 Fax : 226178	D.M.C.B. P.C.A. D.N.B.	Methylene blue	25

# Annexure

Sr. No	Name of Company	Plot No.	Ph. No.	Name of Chemicals	Name of Antidotes	Qty.
8	Meghmani Organics Ltd,	5001/ B	222971, 226371, <b>Fax- 222965</b>	Chloropyrphos Acrylontrile	Atropine sulphate &	5&2
					PAMHIL	1Kit
					Amyl Nitrate	
9	Hemani Industries Ltd.	3207/A & B,3208/1 &2	226195, 250627, Fax:227554	Bromine	Sodium Thio Sulphate Soln(30%)	310 ltr
10	Cheminova (I) Ltd (Intermediate Div.)	27-28 <b>Panoli</b>	645870, 645872, 645859-60-63	Chlorine	Milk of magnesia Atropine injection/	04 nos 06 nos
				Oregano phosphorus	PAM injection	02 nos
				HCL	Milk of magnesia	04 nos
11	Atul Ltd.	297/1	222518, 251416, 253389, 253387, 02632-230233,	Cresol	Castor Oil	15 Bottles
				For Gaseous Emission	Oxygen Treatment	2 Set
12	Bharuch Eviro-Infrastructure Ltd.	9701-16	225228 <b>Fax : 222849</b>	Organo Phos	Pam -25mg/ml	05
				Organo Phos	Antropin 0.6gm	10
				Aniline	Methalin blue	02
13	IPCA Laboratories Limited	4722-23	220594, 221962 <b>Fax- 250435</b>	3-Chloropropionitrile	Amyi Nitrite	8-10
14	Vardhman Acrylics Ltd.	755, <b>Jhagadia.</b>	02645-226064, 226069, 226080 <b>Fax- 226065</b>	Acrylonitrile	Cynide antidote kit.	12 ampoules

## Annexure

Sr. No	Name of Company	Plot No.	Ph. No.	Name of Chemicals	Name of Antidotes	Qty.				
15	Lupin Limited	123/124/125 /9	304266 <i>Fax- 251868</i>	Multipurpose	Inj. Dexona	3 vial				
					Inj. Avil	4 ampoule				
				Multipurpose	Inj.Adrenalin	5 ampoule				
					Inj. Epsolin	2 ampoule				
					Inj. Tetanus Oxide	2 ampoule				
					Inj. Methelin blue	2 ampoule				
16	PI Indutries	237, <b>Panoli</b>	02646-655471/72/73/74	Phorate (PHT), Propanephos(PF T), Ethion colt DETA O-Diethyl Dithio Phosphoric Acid , Diethyl Thiophours Chloride(DTCL) Fortox --10kg, Kitazin, Fosmite, carina, Rocket, Colfer ,Oliy Mass(EKO, Na, DTA,PFT, KO,P2S5.	PAM (Inj) Atropine Sulphate ( <b>Inj &amp; tab</b> )	4 no Atropine Sulphate ( <b>inj</b> )- 400 no & <b>tab.</b> 500 NO.				
				02. Cypermethylene	Phi no verbitol (Tab & Inj)	N/A				
				03 Cyanide kit	Sodium Nitrait (Inj ),Sodium Thiosulphat ( Inj)Amile Nitrite (Inj)	4.no				
				Chlorine	Deriphyline	20 no.				
				General	Charcoal (Tab)	300 no				
				General	Baking Soda	2 Packet				
				17	Cheminova India Ltd.	241 <b>Panoli</b>	02646-645843	Organo Phosphorus Compound	Atropin Injection	20
									Pam Injection	06
Methyelene blue	02									

# Annexure

Sr. No	Name of Company	Plot No.	Ph. No.	Name of Chemicals	Name of Antidotes	Qty.
18	Cheminova India Ltd. (Formulation)	242 <b>Panoli</b>	02646-645843/46/47/48	1.Chloropyriphos	Atropine Sulphate	20 nos
				2.Quinaphose 3.Triazophos 4.Dimethoate 5.Profenophos 6.Phosalone 7.Fyfanon (Malathion)	2 PAM Injection	06 nos
19	Subhasri pigments pvt. Ltd.,	1211.1202.1203& 1213	02646-220918, 221780	Chlorine	Milk o Magnesia	5 Bottles
20	Finornic Chemicals (IO Pvt. Ltd.	6234	250177, 251792	O-phenyl diamine - & CS2	Oxygen,	2 Cylinder s
					Activated Charcoal	2 Kg.
					NaHCO3,	--
				Sulphuric Acid	Milk of Magnesia	2 bags
21	United Phosphorous Ltd. (Unit – 3)	3101/2	251189	MCP	Atropine Sulphate	40
				DDVP	PAM Hill	05
22	Gharda Chemicals Ltd.	3525& 3512 <b>Panoli</b>	272152, 272386	HCl, Na OH, MCB, DMAC,	Methylene Blue –	06
				HNO3	Anti Snake Venom	02
23	Coromandel International Ltd.	3204	02646 - 6465941	Organo Phosphorous Comp.	Atropine,	09
					PAM	03
				Highly Toxic Chemicals	DizaPAM	02
24	Huntsman Perfomance Products	321 <b>Panoli</b>	272437/272009. Ext. No: 117	Hydrofluoric Acid	Calcium Gluconate	10 no. Injection
				Organophosphat e Compounds	Inj.-Atropine	10 no. Injection
				Oral Toxaenic (Methyl Chemicals)	Tab.- Charcoal	200 no. Tablets
				Acidosis & Hexamal Toxaenic	Soda bicorb	05 no. Injection

## Annexure

Sr. No	Name of Company	Plot No.	Ph. No.	Name of Chemicals	Name of Antidotes	Qty.
25	Chemet Wets & Flows Pvt. Ltd.	129/C/2	239490 079-26583242	Agrochemical Powder,	Atropine Sulphate	1 Box
				Agrochemical liquid	PAM	--
26	Chemet chemicals Pvt. Limited	6230/31/15	239206, 222826	Organo phosphorous	Atropine Sulphate	1 Box
					PAM	1 Unit
27	CadilaPharmaceutic als Limited	294	02646-252626	Cyanide base compounds	Cyanide antidote	01
				Nitro based compounds	Inj.Methylene blue	25
				DEG,Magnesiumsalt &phosphorus compounds	Inj.Cllcium gluconet	10
				Anti hypertension, Conversation	Inj. Clamps	09
				In any type of injury	Inj.T.T	2 Aump.
				Snake bite	Antiserum	2
				Ammonia	Gentamicin.Eye Drops	10
				Halogen Compounds	Milk	All time available
				Methylene chloride	Aspirin	20 Tab.
28	Heubach Colour Pvt. Ltd. (Unit -3)	6105,6107, 6111	222153,2220 83	Aniline, Toluene, Nitro Benzene	Milk of Magnesia	10 ml.
				HCl, Acid	Methylene Blue	110 ml.
29	Cadila Health Care Ltd. (UNIT- 1)	291	220719, 220722 <b>Fax</b> : 250672	Sodium Cyanide	Cyanide Antidote	1 Kit
				Acid/ Alkali	Antiseptic Cream	4 Nos.
30	Cadila Healthcare Ltd. (UNIT - 2)	5/1/B	<b>Fax</b> : 250672,	Sodium Cyanide	Cyanide Antidote	1 Kit
				Acid/ Alkali	Antiseptic Cream	4 Nos.
31	BASF India Ltd.	6216	221890, 221703	Aniline Sulphanilic Acid Soda Ash Morpholine	Methylene Blue	06

## Annexure

Sr. No	Name of Company	Plot No.	Ph. No.	Name of Chemicals	Name of Antidotes	Qty.
32	Hikal Ltd.	629/630 <b>Panoli</b>	02646-302100	Organophosphorous compound/gas	Inj.Atropine Inj.PAM	104
				Cyanide	Cyanide anti dote kit	1
				Pest control	Inj.vitamin-K	2
				Sanke bite	Inj.ASV	2
				Non Organo	Inj.permacort	2
				phosphorous compund/ gas	Inj.Deriphylline	2
33	Heubach Colour Pvt. Ltd. (Unit -2)	A-1/406	222153, 222083	Aniline, Toluene, Nitro Benzene	Methylene Blue	10 ml.
				HCl	Milk of Magnesia	110ml.
35	Sanofi India Limited,	3501, 3503,6310 B-14	(02646) 668405 / (02646) 668419	Aniline	<b>Inj. Methylene Blue</b>	5.
				<b>Organo Phosphorus</b>	<b>Inj. Atropin / Inj PAM</b>	502
				<b>Snake Bite</b>	<b>Inj. ASV</b>	2
				<b>for Gastric Lavage</b>	<b>Activated Charcoal</b>	20 Tab.
36	Ambica Chemical Industries	7414	02646-270152,2390 77,250764	Alumina Tri Hydrate Dilute Sulfuric Acid	-- <b>Milk of Magnesia</b>	
37	OMNOVA Solutions India Pvt. Ltd.	Vill: <b>Dungri</b> , Ta:Valia,	(02643) 270152, Fax : 270010	Acrylonitrile	Cyanide Antidotes Kit	02 Nos Kit

## Annexure

Sr. No	Name of Company	Plot No.	Ph. No.	Name of Chemicals	Name of Antidotes	Qty.
38	Asian Paints Ltd. (Paints)	2602	308001, 308110, <b>Fax</b> 308198	Phosphoric acid	Milk & Vegetable Oils	11
				Ethylene diamine	Inj. Calcium Gluconate	1
				Phenol 100%	Polyethylene Glycol	1
				Desmodour N75	Broncholidator (inj. , Deripphyl)	1
				Tetra potassium pyrophosphate	Inj. Atropine	1
				TD Mecraptant	Ether drops, inj Pyridoxine	1
				Ortho xylene	Inj. Diazepam	1
				Mixed xylene	Inj. Diazepam	1
				Iso phorone di isocyanate	Bronchodilator, inj. Deripphyl	1
				Toluene	Inj. Diazepam	1
39	Ion Exchange (India) Ltd.	5811-13	02646-302719,302700,302704, <b>Fax</b> -250130,	Oleum	milk of megnesia, milk, sodium hydro carbonate	02 bottles
				Chlorosulphonic acid (CSA)	milk of megnesia, milk, sodium hydro carbonate (4% concentration)	02 bottles
				Trimethylamine (TMA )	methylene blue	02 ampoule

## Annexure

				Di-Methylamine (DMA)	methylene blue	02 ampoule
				HCl	large quantity of water, milk of megnesia, Eno, Eye drops	02 bottles 02 bottles
				H <sub>2</sub> SO <sub>4</sub> (98 %)	milk of megnesia milk,	02 bottles
				EDC	Not available	N/A
				H <sub>2</sub> S	Amile Nitrate or Sodium Nitrate, Pyridoxine 25 mg/kg, pure O <sub>2</sub>	Amile Nitrate kit – 01
				Caustic Soda Lye	Vinegar	02 bottles
40	Shree Sulphurics Pvt. Ltd.	2801/A	222436, 221335, 227166 <b>Fax- 215836</b>	Acids Alkalis Chlorine	Lime water / Milk of magnesia	2 ltr
					1% Citric acid	2 ltr
					Potassium permanganate	2 ltr
41	Solvay Specialties India (P) Ltd.	3526-27 <b>Panoli</b>	272575- 76,329667- 68 <b>Fax-</b>	Snake bite	Inj. Antiserum snake venom	04
				Aniline poisoning	Inj. Methylene blue	07
				Orgeno phosphorus poisoning	Inj.PAM	03
42	Unique Chem.,	5, <b>Panoli.</b>	272510, 272508 <b>Fax- 272842</b>	Aniline	Methyi blue	10
				Acid	Anti acid	05
43	UPL –1	117/118	251223, 250336 9824156701	Orgeno phosphorus	Atropine PAM	N/A



# Annexure

Sr. No	Name of Company	Plot No.	Ph. No.	Name of Chemicals	Name of Antidotes	Qty.
44	Chemie Org. Chem. (I) Pvt. Ltd	758 <b>Jhagadia</b>	02645-226019, 226020 <b>Fax</b> : 226145	Benzene	Milk of magnesia	250ml
				Chlorine Nitric acid Sulphuric acid	Soframmicene -do- -do-	250ml -do- -do-
45	Samrat Pharma. Ltd.	A2-3445	220774, Fax:251291	Chlorine	Water/Milk/Fresh air	N/A
46	Sanghvi Organics Pvt. Ltd.	3513-3516	02646-272276	Chlorine	Soda Water	N/A
				Toluene	Oxygene, Novasine,	
				HCl	Eye Drops ENO, Eye Drops,	N/A
47	Rajashree Polyfil	Rajashree Nagar Umalla	02640-308555	Mono Ethylene Glycol –	Potassium Permanganate	N/A
					Activated Carbon	
				Resorcinol	Dichlormid Chloride	N/A
				Oxalic Acid	Calcium Chloride	N/A
				Formaldehyde	Activated Charcoal	N/A
				Caprolactum	Ether, Veronal	N/A
48	Surya Remedies Pvt. Ltd.	1101	226290	HCl	Soframycin	N/A
				H2SO4	Antibiotics	
49	Surya Drugs & pharmaceuticals	1102	226694	Oleum Bromine HCl Spent Acid	Soframycin Antibiotics	N/A
50	Heubach Colour Pvt. Ltd.	9002-9010	252160,252159	HCl	Milk of Magnesia	N/A
				Chlorine, Bromine	Sodium Bi-Carbonate	

## Annexure

Sr. No	Name of Company	Plot No.	Ph. No.	Name of Chemicals	Name of Antidotes	Qty.
51	Birla Cellulosic	Birla dham, Kharach, Kosamba	270001-05, 271180	Carbon Disulphide  Hydrogen Sulphide Chlorine Ammonia Sulphur Dioxide Sulphuric Acid	Oxygen & Symptomatic Treatment --do-- --do-- --do--	N/A
52	Lanxess India Pvt Ltd	Plot No.748, GIDC, Jhagadia	02645-224136	Aniline	Inj. Methyline blue	6 Ampoules ( 10 ml )
				Acrylonitrile	Inj. Cyanide Kit	02 Nos
				Snake venom	Inj. Anti snake serum	02 vial (10 ml )

## Annexure: - U2

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 vapor 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	Ammonia 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.

## Annexure

Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
5.	Carbon Dioxide	Asphyxiate	Non-flammable	It is simple asphyxiant and can cause oxygen deficiency in confined space / non ventilated areas. Respiratory protection is required.
6.	Carbon Monoxide	Flamm-able, 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. Incase of eye exposure, wash with copious amount of water for 15 minutes, keeping eyelids apart
8.	Coal	Flame-able	Dry chemical powder, water supply	Incomplete combustion may produce CO1, sulphur dioxide; hence respiratory protection may be required to fight the fire.
9.	Formic Acid	Flame-able, 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.	b) Fuel Oil	Flame-able	Carbon dioxide, dry chemical powder, foam	Remove the contaminated clothese. Wash the affected parts of skin with plenty of soap and water and seek medical advice immediately for inhalation of vapours / fumes.
11.	High Speed Diesel	Flammable	Dry chemical powder, foam	- do -

## Annexure

Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
12.	Hydro-choleric 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.	Hydrogen	Flammable, Explosive	Dry chemical powder, halon. Let fire burn under control. Stop flow of gas.	It is simple asphyxiate and can cause oxygen deficiency in confined space / non ventilated areas. Move victim to the fresh air and apply resuscitation methods.
14.	Hydrogen 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 nuke thiamine. Vitamin C may be injected intravenously. In case of eye exposure, it should be treated with boric acid solution.

## Annexure

Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
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 hearts beats absents, 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	Flame-able, 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,	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.

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Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
21	Methyl Formate	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. 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. In case of eye, contact immediately, refer to ophthalmologist.
23	Mono Ethylene Glycol	Flamm-able, 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	Flamm-able	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	Flamm-able	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.

## Annexure

Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
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	Asphy-xiant	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.



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Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
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, cyanosis (turning blue) fever hypoxemia and X ray may show fine scattered nodes in the lungs are vulnerable to virus.
31	Potassium Hydroxide	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 ophthalmological opinion. Treat skin burns conventionally.
32	Potassium Methoxide	Flammable, Toxic	Only dry chemical powder is allowed to be used. It reacts with water and CO <sub>2</sub> .	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. Baking soda in glass of water should be given.
33	Propionic Acide	Flammable, Toxic, Corrosive	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. If heart beats are absent, give external cardiac compression. Incase of eye contact flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with water & soap.

Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
34	Rhodium Triiodide	-	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. Incase 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. Incase of eye contact flush with plenty of water for about 15 minutes. Remove wet clothese 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 hearts beats are absent, give external cardia compression. Atropic rhinitis and phayngitis 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. Incase of 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. Incase eye contact flush with plenty of water for 15 minutes. Remove wet clothes and wash affected area with plenty of water.
38	Trichloro Ethylene	Flamm-able, 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

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				medical treatment urgently.
Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
39	Ortho Dichloro Benzene	Flamm-able, 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. Incase of eye contact flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty 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 atleast 15 minutes. Do not induce vomiting.
41	Acrylo-nitrile	Flamm-able, 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 ampule 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 Comp-ounds	-	Non flammable	Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If heart beats are absent, give external cardia compression. If substance has gone in eyes wash with plenty of water for about 15 minutes, holding eyes open and obtain medical treatment urgently.

Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
43	Aniline	Flamm-able, 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 methamoglobinemia. Antidotes are methylene blue. Incase of eye contact flush with plenty of water for 15 minutes. Remove wet clothes and wash affected area with plenty of water
44	Benzene	Flamm-able, 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. Incase of eye contact flush with plenty of water for 15 minutes. Remove wet clothes and wash affected area with plenty of water.
45	Nitro-benzene	Flamm-able, 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 methamoglobinemia. Antidote is methylene blue. Incase of eye contact flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty of water.
46	c) Phosgene	Corrosive Toxic	Non flammable	Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. Phosgenen is very toxic incase of inhalation. It has very low TLV – 0.1 ppm. Keep the person under observation for 72 hours for possibility of delayed effect. Incase of eye contact, flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty of water.

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Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
47	Toluene	Flamm-able, 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. Incase 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 Toluenen	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. Incase of eye contact flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty of water.
49.	Metaol-uene Di Amine	Flamm-able, 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. Incase 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. Toluenen Di Isocynate is very toxic if inhaled.. In cause pulmonary edema. TLV of TDI vapour is ver low i.e. 0.0005 ppm. If splashed on skin, incauses sensitization of skin tissue. Incase of eye contact, flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty of water.

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Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
51	Methyl Iodine	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. 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. Incase of eye, contact immediately, refer to ophthalmologist.
52	Chloro Sulphonic Acid	A poison to irritant, corrosive	Use DCP, foam if exposes to fire.	Remove victim to fresh air. If there is difficulty breathing, give oxygen. Do not induce vomiting. Obtain medical treatment urgently.
53	Carbon Di Sulphide	Flamm-able, Explosive	Use DCP, CO2	Remove victim to fresh air. If there is difficulty breathing, give oxygen. Do not induce vomiting. Obtain medical treatment urgently.
54	Ethylene Oxide	Flamm-able, Carci-nogen	Use DCP	Remove victim to fresh air. If there is difficulty breathing, give oxygen. Do not induce vomiting. Obtain medical treatment urgently.
55	Acephate Anilo-phose Ethion Phorate Quinal-phos	Non flamm-able	Use DCP, foam if exposed to fire.	Atropine sulphate in dose 2 – 4 mg for adult, 2 pam 1000 – 2000 mg / im.
56	Alachor Carbenda-zim Thiophanate – M	Non flamm-able	Use DCP, foam is exposed to fire	Inject 1 gm of Eralidioxime chloride IV. Do not induce vomiting if the injected poison is principally a hydrocarbon solvent.
57	Mancozeb Thiram	Non flamm-able	Use DCP, foam is exposed to fire	Low toxicity, no specific treatment.
58	Allethrin Cyperm-ethrin Fevalrate	Toxic	Use DCP, foam is exposed to fire	The treatment is symptomatic.
59	Alumi-nium Phosphate	Non flamm-able	Use DCP, foam is exposed to fire	Injection copper sulphate 0.25 gm.
60	Isopro-turon	Non flamm-abl	Use DCP, foam exFir	Supportive treatment.

## Annexure

Sr No	Name Of Chemical	Hazard Characteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
61	Hexa-conazole Propi-conazole	Non flamm-able	Use DCP, foam is exposed to fire	There is no specific antidotes and treats the victim symptomatically.
62	Propane	Flamm-able, Explosive	DCP, Water	First aid.
63	Propylene	Flamm-able, Explosive	DCP, Water	First aid.
64	Styrene Monomer	Flamm-able	DCP, Foam compound	-
65	Phospho-ric Acid	d) orrosive	-	Skin Contact: - Wash with clean water. Apply dry sterile dressing. Eye Contact: Through wash with clean water, apply benoxinate (novesine) drop (0.4%). Inhalation: Administer O <sub>2</sub> , Give him fresh drink water. Ingestion: Milk of magnesia, fresh egg, administer him oxygen.

**Annexures U3 Other Emergency Resources – Antidote Suppliers**

Sr.	Toxic Chemicals Handled in District (esp. In mah units)	Antidotes Required	Antidote Supplier* Name with Address And Phone:- Numbers, Contact persons	Quantity of antidotes Available	Remarks
1	Chlorine	Oxygen	Bhupat bhai Shriji entreprize, (02646) - 25207(M) 98250 40093 Heubach colour	3oxygen cylinders	
2	Chlorine		Mr. Sanjaybhai, Vijay medico 01/riddhi siddhiarcadeNew colony,Gidc nkleshwer, (o) 250634		
3	Cs2	Oxygen & symptomatic treatment	Aims industries ltd. G-5, paris plaza, M. G. Road no.#9, Udhna - udhyognagar, udhna, surat.		
4	Aniline & nitrobenzene	Methylene blue Inj usp 10 ml	<ul style="list-style-type: none"> <li>▪ Vulcan laboratories p ltd, p-36, kasba ind estate, phase - iii, kolkata-700107</li> <li>▪ Troika pharmasuitticals ltd, Om tower, settelite road, Ahmedabad. Ph 079 26856242/43/44/45</li> <li>▪ Walker's pharma pvt. Ltd, Gate no.285- b, kasar amboli, Tal. Mulshi dist. Pune. Pin- 411004</li> <li>▪ Sajjan india limited</li> <li>▪ Gnfc ltd</li> <li>▪ Omnova solutions india private limited</li> <li>▪ Industrial solvents &amp; chemicals pvt.ltd. Ankleshwar.</li> </ul>	<ul style="list-style-type: none"> <li>▪ 4 ampules</li> <li>▪ 103 ampules</li> <li>▪ 1 ampules</li> <li>▪ 40 impulse</li> </ul>	



## Annexure

Sr.	Toxic Chemicals Handled in District (esp. In mah units)	Antidotes Required	Antidote Supplier* Name with Address And Phone:- Numbers, Contact persons	Quantity of antidotes Available	Remarks
5	Acid , oleum	Milk of magnesia	<ul style="list-style-type: none"> <li>▪ Vijay medico, nr. Manav mandir, ankleshwar.</li> <li>▪ Deys medical stores manufacturing ltd., 62-bindel road, culcutta, 700019.</li> <li>▪ At main gate of shree sulphurics pvt.limited</li> <li>▪ Industrial solvents &amp; chemicals pvt.ltd. Ankleshwar.</li> </ul>	<ul style="list-style-type: none"> <li>▪ 250 ml x 3</li> <li>▪ 340ml x 1</li> </ul>	
6	Chlorine	Injection atropine, injection pam	Mr. Anil joshi (m) 94282 68024 (r) 02646 - 210227	Inj. Atropine -40 vials, Inj. Pam - 20	
7	Acid exposure	Universal charcoal	West-coast pharma work ltd	500 tabltes	
8	Snake bite	Antisnake venom	Gnfc ltd	- 10 nos.	
9	Chlorine Ammonia	<ul style="list-style-type: none"> <li>▪ Atropine amp.</li> <li>▪ Adrenaline</li> <li>▪ Pam inj.</li> <li>▪ Anti snack vial.</li> <li>▪ Xylocain</li> <li>▪ R c crom vial</li> <li>▪ Avil vial</li> <li>▪ T.t vial</li> <li>▪ Phenargen</li> <li>▪ Deriphyline.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mr. Sanjaybhai M/s. Vijay medical stores, Ankleshwar. (o) 02646 - 250634 (m) 98983 94090</li> <li>Shriram alkali &amp; chemicals Plot no. 749, gidc , Jhagadia industrial estate, jhagadia, Dist. Bharuch. Phone no. 02645-226021-23</li> </ul>	<ul style="list-style-type: none"> <li>▪ 10 nos.</li> <li>▪ 2 nos ampul</li> <li>▪ 1 no.</li> <li>▪ 1 nos.</li> <li>▪ 1 nos.</li> <li>▪ 1 nos.</li> <li>▪ 5 nos.</li> <li>▪ 11 nos.</li> <li>▪ 5 nos. Ampul</li> <li>▪ 10 nos ampul</li> </ul>	

## Annexure

### Annexure: - V

#### List of Evacuation Information – Sheltering

Sr.	Evacuation area location	Capacity of peoples	Details of Contact Persons
1	2	3	4
1	Primary School, Borbatha bet, Ankleshwar	100	Mahesh Rathod(Sarpanch) 9428674402
2	Jalaram Mandir, Ankleshwar	250	Kaileshben Vasava(Sarpanch) 9337458223
3	Primary School, Nava Dhanturiya, Ankleshwar	150	Sonaben Vasava(Sarpanch) 8155069447
4	Primary School, Pungam, Ankleshwar	100	Nehaben Vasava(Sarpanch) 9664659185
5	Primary School, Haripura, Ankleshwar	100	Sanket Kumar Patel(Sarpanch) 7359963094
6	Primary School, Navi Divi, Ankleshwar	120	Saritaben Vasava(Sarpanch) 9979101376
7	Primary School, Mandwa, Ankleshwar	100	Radhaben Vasava(Sarpanch) 9638636459
8	Primary School, Nava Chapra, Ankleshwar	500	Santaben Rohit(Sarpanch) 9173813995
9	Primary School, Tariya, Ankleshwar	250	Parulben Rakeshbhai(Sarpanch) 9879815953
10	Lal Bazar Main Mishra School, Bharuch	120	Nagar Primary Sikshan Samity 9725944069
11	Navadera Mishra School, Bharuch	200	Nagar Primary Sikshan Samity 9925909294
12	Dandiya Bazar Mishra School, Bharuch	180	Nagar Primary Sikshan Samity 9427831438
13	Kasak Mishra School, Bharuch	75	Nagar Primary Sikshan Samity 7227099235
14	Station Road Mishra School, Bharuch	75	Nagar Primary Sikshan Samity 9428887844
15	Chhipwad Branch Kumar School, Bharuch	100	Nagar Primary Sikshan Samity 7575823909
16	Primary School Pardi	80	Shantaben Patel 9427873752
17	Primary School Utraj	100	Mehulbhai Patel 9825587741
18	Prathmik Shala Anklava	200	Bhaveshbhai Patel 6353510583

## Annexure

Sr.	Evacuation area location	Capacity of peoples	Details of Contact Persons
19	Lmidi Chowk Mishra School,Bharuch	120	Nagar Primary Sikshan Samity 9727808324
20	Munda Faliya Gujarati Kumar Mandal, Bharuch	75	Nagar Primary Sikshan Samity 9898662684
21	Ta. M. Mahila Mu. Kanya School	135	Nagar Primary Sikshan Samity 9276204260
22	Vejalpur branch Kanya School, Bharuch	160	Nagar Primary Sikshan Samity 9879490069
23	Station Road Branch Mishra School, Near Rmta Ankh ni Hospital, Opp. Kalamandir, Bharuch	180	Nagar Prathmic Sikshan Samity 9427449080
24	Lahori Godawn Mishra School,Bharuch	80	Nagar Prathmic Sikshan Samity 9558820524
25	Lallubhai G High School, Haldar	250	Principal (O) 2642 - 288652
26	Lions School, Ankleshwar	100	2646 - 223735
27	Lion's School,Natinal School	200	Principal – 02646 – 244 375
28	Santoshi Nagar Mishra School,Bharuch	160	Nagar Prathmic Sikshan Samity 9624910303
29	Police Head Quarter Mishra School, Bharuch	160	Nagar Prathmic Sikshan Samity 9428326848
30	Vejalpur Mishra School,Bharuch	180	Nagar Prathmic Sikshan Samity 9428326848
31	Gayatri Nagar Mishra School Bharuch	120	Nagar Prathmic Sikshan Samity 9033549818
32	Tadia Mishra School	80	Nagar Prathmic Sikshan Samity 9898592034

## Annexure

Sr.	Evacuation area location	Capacity of peoples	Details of Contact Persons
33	NagarPalika High School,Jambusar	500	Principle,Chief Officer 02644-220303
34	Primary School, Dahej	100	Devendrabhai Pandya 9904231141 6984734403
35	Station area Prathmic School, Jambusar	500	Chief Officer 9662740240
36	Primary School Tankariya,Bharuch	250	Nagar Prathmic Sikshan Samity 9904052826
37	Primary Mishra School,Barbet,Bharuch	200	Nagar Prathmic Sikshan Samity 7698122986
38	Yuvak Mandal, Sitpona	200	9974615676
39	High School,Varediya,Bharuch	250	9712251821
40	Primary School,Kahan	200	9726716195
41	Primary School, Dhodi	100	9904052664
42	Primary School, Adol	150	9924106413
43	Primary School, Bori	100	9824052397
44	Primary School, Bambusar	100	9724956705
45	Primary School, Jhanghar	100	9824181054
46	Primary School, Samlod	500	7567865670
47	Primary School, Dabhali	100	9998025210
48	Primary School, Nabipur	200	8758744777
49	Rajput Panch Utsav Samiti, Derol	100	9913910980
50	Primary School,Kavitha	100	9978768426
51	Aganwadi,Kavitha	100	9427833806
52	Sahakari Mandali, Kavitha	200	9727202547

## Annexure

Sr.	Evacuation area location	Capacity of peoples	Details of Contact Persons
53	Community Hall, Mangleshwar	500	8866721767
54	Community Hall,Sindhot	350	9662296993
55	Primary School,Karmali	100	9429411638
56	Sadhna Cu. Society,Nikora	100	9428323969
57	Anandi Ma Ashram	100	9979270523
58	Primary School,Sosara	200	9924899544
59	Majdur Kalayan Kendra, Vaddala	250	9424956025
60	Primary School, Amadada	300	9998216498
61	Primary School, Vesadada	200	9974615676
62	Shri Gayatri Mandir, Zadeshwar	100	9427110903
63	Nilkanth Mahadev Mandir, Zadeshwar	250	9426823070
64	Primary School, Zadeshwar	200	9904231141
65	Primary School, Bholav	150	9033690725
66	MPCS Katpor, Hansot	550	9913064699
67	MPCS Rahiad,Vagra	550	9586748258
68	MPCS Suva, Vagra	550	8460225902
69	MPCS Kaladara, Vagra	550	8460225902
70	Primary School Panjroli	70	Dharmendrasinh Dhareeya 9879932681
71	Primary School Kharach	120	Kamlesh C Parmer 9099181054
72	Primary School Ghodadara	100	Mukesh Vasava 9106616471
73	Primary School Kathodara	50	Rakesh Patel 9427817824

## Annexure W

List of Overtopping Roads of Bharuch R & B Department (State) in heavy rain

Sr.No	Route Information	Affected Route in km
1	Derol- Vagara - Gandhar road	4.2 to 4.8 KM
2	Amod - RojhaTankariyaMuller Dahej Road	0.980 to 2.0 KM 2.4 to 3.8 KM 4.5 to 5.2 KM 7.6 TO 8.0 KM
3	Ankleshwar - HansotSahol Road	33.2 to 72.2 KM 33.2 to 33.4
4	Ilav - Kharach - Kosamba Road	3. 8 to 4. 0 KM 5.2 to 5.4 KM
5	Dayadara - Nabipur Road	5.2 to 5.6 KM
6	Valia – Mangarol	6 .4 to 6.6 KM
7	Link Road Bharuch	0.4 to 1.0 KM

## Annexure: - W1

List of Overtopping Roads of Bharuch R & B Department (Panchyat) in heavy rain

Sr.No	Taluka	Route Information
1	Ankleshwar	SarfuddinApproach Roach (Rural Road) 4.10 KM
2.	Ankleshwar	From Old N.H 8 to Old Borbhatha Road (Plan of Rural Road) 2.00 KM
3	Ankleshwar	From Old Chhapra to Old Kansia Road Joining N.H 8 (RR) 3.40 KM
4	Ankleshwar	New Kansia-Old Kansia Joining Ankleshwar Mandva Road (RR Plan) 2.50 KM
5	Ankleshwar	Nava Danturia to Koyli Road (Main District Road) 5.40 KM
6	Ankleshwar	SakkarpurPungam Road (RR) 5.50 KM
7	Ankleshwar	SajodSakkarpur Road (a.District Road) 4.00 KM
8	Ankleshwar	BhadeeKharodBakrolKapodra Road (M.D.R) 10.80 KM
9	Ankleshwar	Old DiveeApproach Road (RR Plan) 2.00 KM
10	Ankleshwar	AndadaApproach Joining N.H 8 (RR Plan) 2.50 KM
11	Hansot	AmbhetaPardeeHansot Road (A.D.R) 5.00 KM
12	Hansot	HansotMotvanPanoli Road (MDR) 8.00 KM
13	Hansot	VadhwanKoteswar Road (RR Nonplan) 2.00 KM

## Annexure

14	Hansot	IlavBalotaDharad Road (A.D.R) 6.80 KM
15	Hansot	VamleshwarAnklavaDhamradBolavAniyadra Road (A.D.R) 13.50 KM
16	Hansot	PandvaaiApproach Road (RR) 5.00 KM
17	Hansot	RoheedMotvan Road (RR) 3.00 KM
18	Jhagadia	Madhee Jhagadia Road (MDR) 4.20 KM
19	Jhagadia	MadheeLadvavad Road (RR Plan) 4.00 KM
20	Jhagadia	Or To Patar Road (RR) 0.61 KM
21	Jhagadia	UmallaAshaVelugam Road Part PanethaIdorVelugam (MDR) 22.00 KM
22	Jhagadia	TothidraTarsali Road (RR) 3.80 KM
23	Jhagadia	GudechaAamlajar Road (RR) 4.20 KM
24	Valia	PatharVasava Street Road (RR) 1.40 KM
25	Valia	PatharJokhala Road (RR) 2.70 KM
26	Valia	MauzaHathaakundi Road (RR nonplan) 4.50 KM
27	Valia	DaheliPeethor Road (A.D.R) 3.20 KM
28	Valia	ValiaDesadViththal Village BhamadiaGundiya Road (MDR) 14.40 KM
29	Vagra	KadodaraPakhajan Road (MDR) 11.85 KM
30	Vagra	Rahad Approach Road (RR) 2.40 KM
31	Vagra	VagraBhersamKotheeyaSadakhalaKhojbal Road (A.D.R) 20.10 KM
32	Vagra	VagraVichhiyaadKolvanaMachhasara Road (A.D.R) 20.10 KM
33	Vagra	VastiKhandalee Approach Road (A.D.R) 2.80 KM
34	Vagra	ChanchvelOchhanVaheeyal Road (MDR) 12.88 KM
35	Bharuch	Shuklatirth Approach Road (RR) 1.50 KM
36	Bharuch	KarjanKarmaali Joining Bharuch Shukltirth Road (RR) 3.20 KM
37	Bharuch	ShuklatirthKadod Road (RR Nonplan) 3.50 KM
38	Bharuch	Shuklatirth Bypass road (RR Non plan) 2.00 KM
39	Jambusar	AnakheeJafarpuraBojadara Road (MDR) 7.80 KM
40	Jambusar	VelamBojadara Road (RR Nonplan) 4.80 KM
41	Jambusar	ThakorTalavadeeSindhav Road (RR) 7.60 KM
42	Jambusar	MalpurBhadkodraJantarnNondhanaUber Road (MDR) 38.60 KM
43	Jambusar	MadafarKansagar Road (RR) 6.00 KM
44	Amod	TanchhaAnorDhamanad Dora Road (MDR) 12.60 KM
45	Amod	AchhodMachhasaraMangrolDenava Road (MDR) 9.60 KM
46	Amod	AmodPursa road (DMR) 5.00 KM
47	Amod	Shreekothee Road Adavala Road (RR) 3.80 KM

કુદરતી આપત્તિઓ (Natural Calamities) ને કારણે થતા માનવ મૃત્યુ / પશુ મૃત્યુ / ઈજા તેમજ સ્થાવર / જંગમ મિલકતને થતા નુકશાન માટે નાણાંકીય સહાય ચૂકવવાના સંકલિત ધોરણો બાબત.

ગુજરાત સરકાર,  
મહેસુલ વિભાગ  
ઠરાવ ક્રમાંક: સીએલએસ / ૧૦૨૦૧૨ / ૨૫૩ / સ.૩  
સચિવાલય, ગાંધીનગર.  
તારીખ : ૨૭ / ૦૪ / ૨૦૧૫

વંચાણે લીધા :-

- (૧) મહેસુલ વિભાગનો તા. ૨૧/૦૮/૨૦૧૦ નો ઠરાવ ક્રમાંક: સીએલએસ/૧૦૨૦૦૬/૧૨૪૧/સ.૩
- (૨) મહેસુલ વિભાગનો તા. ૨૦/૧૨/૨૦૧૦ નો પરિપત્ર ક્રમાંક: સીએલએસ/૧૦૨૦૦૬/૧૨૪૧(૧)/સ.૩
- (૩) મહેસુલ વિભાગનો તા. ૨૪/૧૦/૨૦૧૧ નો ઠરાવ ક્રમાંક: સીએલએસ/૧૦૨૦૦૬/૧૨૪૧/સ.૩
- (૪) મહેસુલ વિભાગનો તા. ૦૨/૦૪/૨૦૧૨ નો ઠરાવ ક્રમાંક: સીએલએસ/૧૦૨૦૦૬/૧૨૪૧/સ.૩
- (૫) ભારત સરકારનો તા. ૧૬/૦૧/૨૦૧૨ નો પત્ર ક્રમાંક ૩૨-૭/૨૦૧૧/ એન.ડી.એમ.-I
- (૬) મહેસુલ વિભાગનો તા. ૦૭/૦૮/૨૦૧૨ નો ઠરાવ ક્રમાંક: સીએલએસ/૧૦૨૦૧૨/૨૫૩/સ.૩
- (૭) ભારત સરકારનો તા. ૧૩/૦૮/૨૦૧૨ નો પત્ર ક્રમાંક ૩૨-૩/૨૦૧૦/ એન.ડી.એમ.-I
- (૮) ભારત સરકારનો તા. ૧૮/૦૮/૨૦૧૨ નો પત્ર ક્રમાંક ૩૨-૧૭/૨૦૦૮/ એન.ડી.એમ.-I
- (૯) ભારત સરકારનો તા. ૨૧/૦૬/૨૦૧૩ નો પત્ર ક્રમાંક ૩૨-૩/૨૦૧૩/ એન.ડી.એમ.-I
- (૧૦) મહેસુલ વિભાગનો તા. ૨૬/૦૮/૨૦૧૩ નો ઠરાવ ક્રમાંક સીએલએસ/૧૦૨૦૧૨/૨૫૩/સ.૩.
- (૧૧) ભારત સરકારનો તા. ૨૮/૧૧/૨૦૧૩ નો પત્ર ક્રમાંક ૩૨-૩/૨૦૧૩/ એન.ડી.એમ.-I
- (૧૨) મહેસુલ વિભાગનો તા. ૦૪/૦૭/૨૦૧૪ નો ઠરાવ ક્રમાંક સીએલએસ/૧૦૨૦૧૨/૨૫૩/સ.૩.
- (૧૩) મહેસુલ વિભાગનો તા. ૨૦/૦૮/૨૦૧૪ નો ઠરાવ ક્રમાંક સીએલએસ/૧૦૨૦૧૨/૨૫૩/સ.૩.
- (૧૪) ભારત સરકારનો તા. ૦૮/૦૪/૨૦૧૫ નો પત્ર ક્રમાંક ૩૨-૭/૨૦૧૪/ એન.ડી.એમ.-I



### આમુખ :-

રાજ્યમાં વિવિધ પ્રકારની કુદરતી આપત્તિઓને કારણે થતા નુકસાન માટે ઉપર વંચાણે લીધા ઠરાવોથી સહાયના ધોરણો અને સહાય ચુકવવાની પ્રક્રિયા તથા તેના અધિકારો આપવામાં આવ્યા છે. ભારત સરકારે સહાયના ધોરણોમાં કરેલ સુધારા ધ્યાને લઈ કુદરતી આપત્તિઓના પ્રકાર, સહાયના સુધારેલા ધોરણો, સહાય ચુકવવામાં વિસંગતતા નિવારવા રાખવાની કાળજી વગેરે બાબતોની સંકલિત સુચનાઓ બહાર પાડવી અનિવાર્ય જણાય છે.

### ઠરાવ :-

રાજ્યમાં કુદરતી આપત્તિઓ જેવી કે, (૧) ભારે વરસાદ - પૂર (Heavy Rainfall - Flood), (૨) વાદળ ફાટવું (Cloud burst), (૩) વાવાઝોડું (Cyclone), (૪) દુષ્કાળ (Drought), (૫) ભૂકંપ / ત્સુનામી (Earthquake / Tsunami), (૬) જમીન ધસી જવી (Landslides), (૭) હિમપ્રપાત (Avalanches), (૮) કરાની વૃષ્ટિ (Hailstorm), (૯) ઠાર અને શીત લહેર (Frost and Cold wave), (૧૦) જીવાતનું આક્રમણ (Pest attack), (૧૧) આગ (Fire) વિગેરેથી થતા નુકસાન માટે સહાય મંજૂર કરવાના અધિકારો તથા સહાય મંજૂર કરવાની પ્રક્રિયા કાળજીપૂર્વકની વિચારણા કરી નીચે મુજબ અમલ કરવા આ સંકલિત ઠરાવ કરવામાં આવે છે.

ભારત સરકારે વંચાણે લીધેલ ક્રમ (૭) ના ઓફિસ મેમોરેન્ડમથી ઠાર અને શીત લહેરનો પણ કુદરતી આપત્તિમાં સમાવેશ કર્યો છે જે નીચે મુજબ છે.

ભારત સરકાર ના સંદર્ભ-૭ માં દર્શાવેલ પત્રથી ઠંડી / ઠાર / હિમપ્રપાત / હિમપ્રકોપ ને પણ કુદરતી આપત્તિ ગણવામાં આવેલ છે અને સહાય માટે નીચે મુજબના માપદંડ નક્કી કરવામાં આવેલ છે.

- (i) હિમપ્રપાત / હિમપ્રકોપ પ્રભાવિત વિસ્તારોમાં જ્યાં સામાન્ય સંજોગોમાં ૧૦° સે. કે તેથી ઉપરનું તાપમાન રહેતું હોય ત્યાં ૭° સે. થી વધુ નીચે તાપમાન જાય ત્યારે તથા
- (ii) જે વિસ્તારમાં ૧૦° સે. થી નીચે તાપમાન રહેતું હોય તેવા વિસ્તારોમાં ૫° સે. થી નીચું તાપમાન જાય ત્યારે,
- (iii) ઉપરોક્ત તાપમાન ભારત સરકાર ના હવામાન ખાતાની કચેરી એ જે તે વિસ્તાર માટે પ્રસારિત કરેલ તાપમાન ની તત્કાલિન સ્થિતિ માપદંડ તરીકે ધ્યાને લેવાની રહેશે.
- (iv) જે પ્રભાવિત વિસ્તારોમાં પાકને ૩૩% અને તેથી વધુ નુકસાન થયું હશે તેને દુષ્કાળ, કરા વૃષ્ટિ, જીવાત આક્રમણ અને અન્ય આપત્તિઓની જેમ સહાયને પાત્ર રહેશે. તે જ રીતે પશુ, મરઘાં વિગેરેને પણ ઠરાવેલ સહાય મળવાપાત્ર થશે.

કુદરતી આપત્તિઓ ને કારણે થતા માનવ મૃત્યુ અને ઈજા, સ્થાવર જંગમ મિલકતને નુકશાન, ખેડૂતો, માછીમારો, હસ્તકલા અને હાથશાળના કારીગરોને થતા નુકશાન તથા પશુ મૃત્યુ સહાયના

સુધારવા ધોરણો.	
1	માનવ મૃત્યુ સહાય
	રૂ. ૪,૦૦,૦૦૦/-
2	નાશ / નુકશાન પામેલ કાચા / પાકા મકાનો / ઝુપડા મરામત સહાય
2.1	સંપૂર્ણ નાશ પામેલ મકાનો અને મોટું નુકશાન પામેલ મકાનો
	રૂ. ૯૫,૧૦૦/- પાકુ મકાન (સમતલ/સપાટ વિસ્તારમાં આવેલ)
	રૂ. ૧,૦૧,૯૦૦/- પાકુ મકાન (પર્વતીય વિસ્તારોમાં આવેલ-ઈન્ટીગ્રેટેડ એક્શન પ્લાન લાગુ હોય તેવા જિલ્લાઓ સહિત)
	રૂ. ૯૫,૧૦૦/- કાચા મકાન
	રૂ. ૧,૦૧,૯૦૦/- કાચા મકાન (પર્વતીય વિસ્તારોમાં આવેલ-ઈન્ટીગ્રેટેડ એક્શન પ્લાન લાગુ હોય તેવા જિલ્લાઓ સહિત)
2.2	આંશીક રીતે નુકશાન પામેલ કાચા / પાકા મકાનો (ઓછામાં ઓછું ૧૫% નુકસાન હોય તો જ મળવાપાત્ર)
	રૂ. ૫,૨૦૦/- પાકુ મકાન
	રૂ. ૩,૨૦૦/- કાચુ મકાન
	(ઉપરોક્ત રકમ ઉપરાંત બંને કિસ્સામાં રૂ. ૬,૦૦૦/- રાજ્ય સરકારના બજેટમાંથી મળવાપાત્ર રહેશે.)
2.3	નાશ / નુકશાન પામેલ ઝુપડા
	રૂ. ૪,૧૦૦/-
	(ઉપરોક્ત રકમ ઉપરાંત રૂ. ૩,૦૦૦/- રાજ્ય સરકારના બજેટમાંથી મળવાપાત્ર રહેશે.)
2.4	ઘર સાથે સંકળાયેલ કેટલ શેડ
	રૂ. ૨,૧૦૦/-
3	અપંગતાના કેસમાં સહાય (વ્યક્તિદીઠ)
	રૂ. ૫૯,૧૦૦/- ૪૦% થી ૬૦% અપંગતામાં
	રૂ. ૨,૦૦,૦૦૦/- ૬૦% થી વધુ અપંગતામાં
4	ગંભીર ઈજાથી હોસ્પિટલમાં દાખલ થવાના કેસમાં
	રૂ. ૧૨,૭૦૦/- એક સપ્તાહથી વધુ સમય હોસ્પિટલમાં દાખલ રહે તો
	રૂ. ૪,૩૦૦/- એક સપ્તાહથી ઓછા સમય હોસ્પિટલમાં દાખલ રહે તો
5	દૈનિક રોકડ સહાય (કેશ ડોલ્સ)
	રૂ. ૬૦/- દૈનિક પુખ્ત વયના વ્યક્તિ માટે (વધુમાં વધુ ૩૦ દિવસ માટે, જરૂરિયાત જણાય તો પ્રથમ તબક્કામાં ૬૦ દિવસ સુધી લંબાવી શકાય તથા દુષ્કાળ કે જીવાત આક્રમણના



	(કિસ્સામાં સળંગ ૯૦ દિવસ સુધી લંબાવી શકાય)
	રૂ. ૪૫/- બાળકદીઠ (વધુમાં વધુ ૩૦ દિવસ માટે, જરૂરિયાત જણાય તો પ્રથમ તબક્કામાં ૬૦ દિવસ સુધી લંબાવી શકાય તથા દુષ્કાળ કે જીવાત આક્રમણના કિસ્સામાં સળંગ ૯૦ દિવસ સુધી લંબાવી શકાય)
6	કપડાં અને ધરવખરી સહાય
	રૂ. ૧,૮૦૦/- કપડાં સહાય (કુટુંબદીઠ)
	રૂ. ૨,૦૦૦/- ધરવખરી સહાય (કુટુંબદીઠ)
7	પશુ મૃત્યુ સહાય (પશુદીઠ)
7.1	દુધાળા પશુ
	રૂ. ૩૦,૦૦૦/- ગાય / ભેંસ / ઉંટ / ચાક વિગેરે માટે
	રૂ. ૩,૦૦૦/- ઘેટા / બકરા વિગેરે માટે
7.2	બીન દુધાળા પશુ
	રૂ. ૨૫,૦૦૦/- ઉંટ / ઘોડા / બળદ વિગેરે માટે
	રૂ. ૧૬,૦૦૦/- રેલ્લો(પાડો-પાડી) ગાયની વાછરડી / ગધેડો / પોની વિગેરે
8	મરઘાં મૃત્યુ સહાય
	રૂ. ૫૦/- પ્રતિપક્ષી વધુમાં વધુ રૂ. ૫૦૦૦/-પ્રતિ કુટુંબ ની મર્યાદામાં(પક્ષીનું મૃત્યુ કુદરતી આપત્તિના કારણે થયેલ હોવું જોઈએ)
9	કૃષિ સહાય
9.1	બે હેક્ટર સુધી જમીન ધરાવતા ખેડૂતોને સહાય
	રૂ. ૧૨,૨૦૦/- જમીન ધોવાણ માટે (પ્રતિ હેક્ટર)
	રૂ. ૧૨,૨૦૦/- પર્વતીય વિસ્તાર (પ્રતિ હેક્ટર)
	રૂ. ૧૨,૨૦૦/- ફીશ ફાર્મના ધોવાણ અને પુનઃ સ્થાપન રીપેરીંગ (પ્રતિ હેક્ટર)
	રૂ. ૩૭,૫૦૦/- પ્રતિ હેક્ટર લેન્ડસ્લાઈડીંગ કે નદીનું વહેણ બદલાવાના કારણે જમીન અંશતઃ નકામી બની ગયેલ હોય કે વહેણમાં દબાઈ ગયેલ હોય
9.2	બે હેક્ટર સુધી જમીન ધરાવતા ખેડૂતોને ઈનપુટ સબસીડી (૩૩% અને તેથી વધુ નુકશાનનાં કિસ્સામાં)
	રૂ. ૬,૮૦૦/- પ્રતિ હેક્ટર બિન પિયત (વાવેતર વિસ્તારની મર્યાદામાં)
	રૂ. ૧૩,૫૦૦/- પ્રતિ હેક્ટર પિયત (વાવેતર વિસ્તારની મર્યાદામાં અને રૂ. ૧૦૦૦/- થી ઓછી નહીં તેટલી સહાય)
	રૂ. ૧૮,૦૦૦/- પ્રતિ હેક્ટર બારમાસી પાક (વાવેતર વિસ્તારની મર્યાદામાં અને રૂ.

	૨૦૦૦/- થી ઓછી નહીં તેટલી સહાય)
9.3	બે હેક્ટરથી વધારે જમીન ધરાવતા ખેડૂતો (પાકને ૩૩% અને તેથી વધારે નુકશાનના હિસાબા) (વધુમાં વધુ ૨ હેક્ટરની મર્યાદામાં જ સહાય ચૂકવી શકાશે)
	રૂ. ૬,૮૦૦/- પ્રતિ હેક્ટર બિન પિયત (વાવેતર વિસ્તારની મર્યાદામાં)
	રૂ. ૧૩,૫૦૦/- પ્રતિ હેક્ટર પિયત (વાવેતર વિસ્તારની મર્યાદામાં)
	રૂ. ૧૮,૦૦૦/- પ્રતિ હેક્ટર બારમાસી પાક (વાવેતર વિસ્તારની મર્યાદામાં)
10	માછીમારીને થયેલ નુકશાન સહાય
	રૂ. ૪,૧૦૦/- અંશતઃ નુકશાન પામેલ હોડી રીપેરીંગ માટે
	રૂ. ૨,૧૦૦/- અંશતઃ નુકશાન પામેલ જાળી રીપેરીંગ માટે
	રૂ. ૯,૬૦૦/- સંપૂર્ણ નાશ પામેલ હોડી બદલવા માટે
	રૂ. ૨,૬૦૦/- સંપૂર્ણ નાશ પામેલ જાળી બદલવા માટે
	રૂ. ૮,૨૦૦/- (હેક્ટરદીઠ) ઈનપુટ સબસીડી મત્સ્યબીજ માટે
11	હસ્તકલા અને હાથશાળ કારીગરો માટે સહાય
	રૂ. ૪,૧૦૦/- નુક્સાન પામેલ સાધનોની ખરીદી માટે
	રૂ. ૪,૧૦૦/- નુક્સાન પામેલ કાચા / પાકા માલ સામાન માટે

ઉપર્યુક્ત ટેબલ મુજબની સહાય મંજૂર કરતી વખતે નીચેની સુચનાઓ ધ્યાને લેવાની રહેશે.

૧. મૃત્યુ સહાય :-

- (૧) મૃત્યુ પામેલ વ્યક્તિ દીઠ રૂ. ૪,૦૦,૦૦૦/- ની સહાય ચૂકવવાની રહેશે. આ રકમ SDRF માંથી ચૂકવવાની રહેશે. આ મૃત્યુ સહાય સરકારી કર્મચારી/રાહત કે બચાવ કામગીરી કરતા અન્ય કર્મચારી, કે જે રાહત કામગીરીમાં રોકાયેલ હોય તેમનું તે દરમિયાન મૃત્યુ થાય તો તેમને પણ મળવાપાત્ર રહેશે. આફત રાહત અંગેની મોકડીલ તથા તૈયારીની કામગીરી દરમિયાન પણ જો કોઈ કર્મચારીનું મૃત્યુ થાય તો તેને પણ આ સહાય મળવાપાત્ર રહેશે.
- (૨) નિર્દિષ્ટ કરેલી કુદરતી આફતને લીધે વિદેશમાં પોતાની જીંદગી ગુમાવનાર ભારતીય નાગરિક તથા ભારતીય સંઘ પ્રદેશમાં પોતાની જીંદગી ગુમાવનાર વિદેશી નાગરિકની બાબતમાં તેના કુટુંબને આ સહાય મળવાપાત્ર થશે નહીં.
- (૩) સક્ષમ અધિકારી ધ્વારા મૃત્યુ કુદરતી આફતના કારણે થયું છે તેવું પ્રમાણપત્ર મેળવવાનું રહેશે.
- (૫) કુદરતી આપત્તિની સીધી અસરના કારણે મૃત્યુ થયેલ છે તે બાબતની તપાસ અને ખાતરી મહેસુલી તથા પોલીસ તંત્રએ કરવાની રહેશે.



- (૬) મૃત્યુ પામનાર દરેક કીસ્સામાં પોલીસ ફરીયાદ (એફ.આઈ.આર.) અથવા "બનાવની જાણવા જોગ નોંધ" પોલીસ સ્ટેશને થયાના રિપોર્ટની નકલ કેસની ફાઈલ સાથે રાખવાની રહેશે.
- (૭) પોસ્ટમોર્ટમ રીપોર્ટ રેકર્ડ પર લેવાનો રહેશે.
- (૮) મૃત્યુના સંજોગોનું રેકર્ડ બનાવવાનું રહેશે. જેમાં બનાવનું સ્થળ, ગામ, જેના અધિકાર ક્ષેત્રમાં છે તે ગામના સરપંચ, તલાટીસહ મંત્રી અથવા નગર પંચાયત, નગર પાલિકા અથવા મહાનગર પાલિકાના ચૂંટાયેલ સભ્ય, ચીફ ઓફીસર / વોર્ડ ઓફીસરનું કુદરતી આપત્તિની સીધી અસરને કારણે મૃત્યુ થયેલ છે તે બાબતેનું પ્રમાણપત્ર રેકર્ડ પર રાખવાનું રહેશે.
- (૯) મૃત્યુ સહાયની મંજૂરી અંગેનો આખરી નિર્ણય શહેરી વિસ્તાર માટે જિલ્લા કલેક્ટર અને ગ્રામ્ય વિસ્તાર માટે જિલ્લા વિકાસ અધિકારીની કક્ષાએ લેવાનો રહેશે.
- (૧૦) આ રકમ ચૂકવતી વખતે મરનાર વ્યક્તિ અથવા તેના વારસદારોની આવક, ધંધો, તેમને મળેલ અન્ય સહાય અથવા તેમના જીવન વિમાની વિગત વગેરે જેવી બાબતો ધ્યાનમાં લેવાની રહેશે નહીં.
- (૧૧) રાજ્ય સરકાર ધ્વારા સંપૂર્ણ કે અંશતઃ પ્રિમિયમથી ખેત મજૂરો, ખેડૂતો, વિદ્યાર્થીઓ, શ્રમીકો વિગેરેને વિમાનુ રક્ષણ પુરૂ પાડવામાં આવેલું હોય તો ત્યાં આ સહાયની રકમ ચૂકવ્યાની જાણ સંબંધિત જિલ્લા કક્ષાના અધિકારી જેવા કે જિલ્લા શિક્ષણાધિકારી / જિલ્લા ખેતીવાડી અધિકારીને કરવાની રહેશે.
- (૧૨) કોઈ વિશિષ્ટ સંજોગોમાં પોલીસ ફરીયાદ થયેલ ન હોય અથવા પોસ્ટ મોર્ટમ થયેલ ન હોય તો તેવા કેસો સંજોગો / પરિસ્થિતિને ધ્યાનમાં લઈ વર્ગ - ૧ ના જિલ્લા કક્ષાના અધિકારી મારફતે ઉપલબ્ધ રેકર્ડની ચકાસણી કરાવી આ મૃત્યુ કુદરતી આપત્તિઓના કારણે થયું છે પરંતુ વિશિષ્ટ સંજોગો / પરિસ્થિતિને લીધે પોલીસ ફરીયાદ / પોસ્ટ મોર્ટમ થયેલ નથી તેવા સંજોગોમાં માનવ મૃત્યુ સહાય ચૂકવવા અંગેનો નિર્ણય જિલ્લા કક્ષાની સમિતિએ લેવાનો રહેશે.
- (૧૩) કુદરતી આપત્તિઓના કારણે કોઈપણ વ્યક્તિ તણાઈ જવાથી અથવા ડુબી જવાના કારણે લાપત્તા થયેલ હોય અથવા લાશ મળતી ન હોય અથવા વણચોળખાયેલ રહેતી હોય તેવા કિસ્સામાં (દરિયામાં માછીમારી માટે ગયેલ માછીમારોના કિસ્સા સહીત) કુદરતી આપત્તિના સંજોગો ધ્યાને લઈ નીચે જણાવેલ જિલ્લા કક્ષાની કમિટીમાં સહાય ચૂકવવા અંગે નિર્ણય લેવાનો રહેશે.

(૧)	જિલ્લા કલેક્ટર	અધ્યક્ષ
(૨)	જિલ્લા વિકાસ અધિકારી	સભ્ય
(૩)	જિલ્લા પોલીસ અધિકારી	સભ્ય
(૪)	જિલ્લા સીવીલ સર્જન	સભ્ય
(૫)	જિલ્લાના નિવાસી અધિક કલેક્ટર	સભ્ય

- (૧૪) દરિયાઈ વાવાઝોડાના કારણે કોઈ માછીમારનું દરિયામાં ડુબી જવાથી મૃત્યુ થાય તથા લાપત્તા થયેલ હોય તેવા કિસ્સામાં મૃત્યુ સહાય મંજૂર કરતી વખતે ભારતીય હવામાન ખાતાનો આ અંગેનો ચેતવણી રીપોર્ટ ધ્યાને લઈ તે પછી સહાય મંજૂર કરવા / નહીં કરવા બાબતે યોગ્ય નિર્ણય લેવાનો રહેશે. આ અંગેના કાગળો જિલ્લા મત્સ્યોદ્યોગ અધિકારીએ તૈયાર કરવાના રહેશે.
- (૧૫) સામાન્ય રીતે જે વ્યક્તિનું મૃત્યુ કુદરતી આપત્તિના લીધે વીજ કરંટ લાગવાથી થયેલ હોય તેવા કિસ્સામાં સહાયની રકમ મંજૂર કરી ચૂકવતા પહેલાં સંબંધિત વીજ-જોડાણ અધિકૃત છે કે કેમ તેની ખાતરી કર્યા બાદ તથા વીજ-જોડાણ અધિકૃત અને કાયદેસર હોય તે અંગેનો રીપોર્ટ મેળવી તે પછી જ રાહત મંજૂર કરવાની રહેશે.
- (૧૬) રાજ્યમાં એક જિલ્લામાં રહેતા વ્યક્તિનું અન્ય જિલ્લામાં મૃત્યુ થયેલ હોય તો જે જિલ્લામાં મૃત્યુ થયેલ છે તે જિલ્લાના સક્ષમ અધિકારીએ તમામ રેકર્ડ તૈયાર કરી આ અંગે યોગ્ય નિર્ણય લઈ મૃત્યુ થયેલ વ્યક્તિનો જે જિલ્લામાં કાયમી વસવાટ હતો તે જિલ્લાના સક્ષમ અધિકારી મારફતે મૃતક વ્યક્તિના વારસદારોને સહાયનું ચૂકવણું કરવાનું રહેશે.
- (અ) નીચેના કિસ્સાઓમાં થયેલ મૃત્યુ કુદરતી આપત્તિથી થયેલ ગણાશે નહીં. તેથી આવા કિસ્સાઓમાં આ ઠરાવ હેઠળ મૃત્યુ સહાય મળવાપાત્ર થશે નહીં.
- (૧) નદી, તળાવ, જળાશય, વાંકળામા ન્હાવા પડેલ વ્યક્તિ ડુબી / તણાઈ જાય તો.
- (૨) તળાવ, નદી, કોતર કે જળાશયના કીનારે કપડાં વાસણ ધોવા કે અન્ય કામે ગયેલ હોય અને પગ લપસતા કે તણાઈ જવાના કિસ્સામાં.
- (૩) નર્મદા કેનાલ કે અન્ય પ્રતિબંધિત વિસ્તારમાં પ્રતિબંધ હોવા છતાં ત્યાં ગયેલ હોય અને ત્યાં કોઈ કારણસર મરણ થાય તો.
- (૪) નદી / નાળા તેમજ નીચાણવાળા વિસ્તાર વગેરેમાં પુર અંગે ચેતવણી આપી હોય અને સ્થળાંતર કરવા માટે વાકેફ કરવા છતાં તેનો અમલ ન કરે ને આવી જગ્યાએ અતિવૃષ્ટિ / પુર વગેરેમાં મૃત્યુ થાય તો.
- (૫) નશો કરેલ વ્યક્તિનું મૃત્યુ થવાથી.
- (૬) નદી / તળાવ / વાંકળા / જળાશય કીનારે પુરના પાણીની પરિસ્થિતિ જોવા કે અન્ય કારણસર જવાથી પગ લપસી જવાથી.
- (૭) પુરના પાણીથી ઘેરાઈ ગયેલ વિસ્તારમાં માંદગીથી મૃત્યુ.
- (બ) મૃત્યુ સહાયની રકમના ચૂકવણાં બાબત :-
- (૧) મૃત્યુ સહાયના કેસ તથા અન્ય રાહતના કેસો કલેક્ટર / જિલ્લા વિકાસ અધિકારીશ્રીને મંજૂર કરવા અધિકૃત કરવામાં આવે છે.
- (૨) આ સહાયની રકમ એકાઉન્ટ પેઈ ચેક / ડ્રાફ્ટથી ચૂકવવાની રહેશે.
- (૩) આ સહાયની રકમ મરનાર વ્યક્તિના (૧) પતિ-પત્નિ (૨) માતા - પિતા (૩) પુત્ર - પુત્રી (પરણીત હોય તો પણ) જેવા સીધીલીટીના વારસદાર અને તે ન હોય તો

- તેના કુટુંબના અન્ય સભ્યો કે જે મરનાર પર સંપૂર્ણ પણે આધારીત હતા તેમને જ (આ ક્રમમાં ) સહાય ચૂકવવાની રહેશે. અન્ય કુટુંબીજનોની સંમતિ હોય તો આ રકમ એક જ વ્યક્તિને ચૂકવી શકાશે અથવા જરૂર જણાયે સંયુક્ત નામનો એક બનાવવાનો રહેશે. તે સિવાય અન્ય ઈસમોને આ સહાય ચૂકવી શકાશે નહીં.
- (૪) આ રાહત વ્યક્તિના મૃત્યુ પછી જેટલી ઝડપથી ચૂકવી શકાય તેટલી ઝડપથી ચૂકવવાની રહેશે. અને રાહત ચૂકવવામાં વિલંબ ન થાય તે જોવાની જવાબદારી સંબંધિત જિલ્લા કલેક્ટર / જિલ્લા વિકાસ અધિકારીની રહેશે.
- (૫) આ અંગેનું સંકલીત માસીક પત્રક જિલ્લા કલેક્ટરશ્રીએ રાહત નિયામકશ્રી ગાંધીનગરને દર માસે મોકલી આપવાનું રહેશે.

૨. અપંગતા અને માનવ ઈજા સહાય :-

- (૧) કુદરતી આપત્તિની સીધી અસરને કારણે થતી ઈજામાં શરીરનો કોઈ અવયવ કે આંખો ગુમાવવા માટે સિવિલ સર્જનનું અપંગતાનું પ્રમાણપત્ર ધ્યાને લઈ તેમજ નોર્મ્સમાં નિર્દિષ્ટ કર્યા મુજબ હોસ્પિટલાઇઝેશન માટે ઈજા સહાય ચૂકવી શકાશે.

૩. દૈનિક રોકડ સહાય (કેશ ડોલ્સ) :-

- (૧) કુદરતી આપત્તિઓનો ભોગ બનેલ કુટુંબ કે જેનો ખાધાખોરાકી / અનાજનો જથ્થો ધોવાઈ ગયેલ હોય/તણાઈ ગયેલ હોય અથવા જેમની આજીવિકા ગંભીર રીતે પ્રભાવિત થયેલ હોય અને જે રાહત શિબિરમાં ના રહેતા હોય તેવા કુટુંબને મંજૂર કરી ચૂકવી શકાશે.
- (૨) કુદરતી આપત્તિની ગંભીરતાના સંજોગો તપાસી આ નાણાંકીય મર્યાદાની અંદર આ સહાય મંજૂર કરવાના અધિકાર જિલ્લા કલેક્ટર / જિલ્લા વિકાસ અધિકારીને અને તેઓ જે અધિકારીને સત્તા આપે તે અધિકારીને રહેશે.

૪. કપડાં અને ઘરવખરી સહાય :-

- (૧) કુદરતી આપત્તિઓથી બે દિવસથી વધારે સમય માટે અસર ગ્રસ્ત રહેલ હોય અને જેના ઘર તણાઈ ગયેલ હોય, સંપૂર્ણ નાશ પામ્યા હોય, બે દિવસથી વધુ સમય સુધી પાણીમાં હોય તેવા નિરાધાર કુટુંબની વ્યક્તિઓનાં કપડા, વાસણો અને ઘરવખરીને નુકશાન થયું હોય તેવા કુટુંબને કપડાં સહાય રૂ. ૧,૮૦૦/- અને ઘરવખરી સહાય રૂ. ૨,૦૦૦/- ની પ્રાંત અધિકારી / નાયબ કલેક્ટર / નાયબ જિલ્લા વિકાસ અધિકારી અથવા કોઈ ચોકકસ કુદરતી આપત્તિને ધ્યાનમાં લઈ ચોકકસ સમય માટે અધિકૃત કરેલ જિલ્લાના અધિકારી આ સહાય મંજૂર કરી શકશે.

કેશ ડોલ્સ અને ઘરવખરીના સહાયના ચૂકવણા સમયે નીચેની બાબતો ધ્યાનમાં લેવાની રહેશે.

- (અ) આ સહાય મંજૂર કરતી વખતે અસરગ્રસ્ત કુટુંબની આવક, ધંધો, તેને મળેલ અન્ય સહાય, વિમો અથવા તેના કાયમી વસવાટનું સ્થળ અથવા મકાન બાંધકામ અધિકૃત છે કે નહીં વગેરે બાબતો ધ્યાનમાં લેવાની નથી.



- (બ) સંબંધિત અધિકારીએ આ સહાય મંજૂર કરતી વખતે સ્થાનિક પરિસ્થિતિ, કુટુંબને પડેલ મુશ્કેલી, કુદરતી આપત્તિની ગંભીરતા વગેરે ધ્યાને લઈને સૂચવ્યા મુજબ સહાય ચૂકવવાની રહેશે.
- (ક) રહેણાંકના વિસ્તારમાં પાણી ભરાયાની બાબત સ્થાનિક રેકર્ડ પર લાવવાની રહેશે.
- (ખ) અસર પામેલા વિસ્તાર નક્કી કરવાનો નિર્ણય સત્તા પ્રાપ્ત અધિકારીએ કરવાનો રહેશે.
- (ગ) નીચાણવાળા વિસ્તારોમાંથી સલામત સ્થળે રાહત કેમ્પોમાં ખસી જવા માટે પુરતી સૂચના અને સગવડ કરવામાં આવી હોય છતાં જે વ્યક્તિઓ આ રીતે સ્થળાંતર કરી ગયા ન હોય તેવા કિસ્સાને પાત્રતામાંથી બાકાત રાખવાના રહેશે.
- (ઘ) કેશડોલ્સ અને ધરવખરીની પાત્રતા અંગે વખતો વખત બહાર પાડવામાં આવેલા ધોરણો પ્રમાણે સર્વે કરાવી પાત્રતા નક્કી કરવાની રહેશે.
- (ચ) સહાય વિતરણની વિગતોનું રેકર્ડ નિભાવવાનું રહેશે.
- (છ) સામાન્ય સંજોગોમાં આ સહાય એકાઉન્ટ પેઈ ચેક / ડ્રાફ્ટ ધ્વારા કુટુંબના વડાને ચૂકવવાનું રહેશે. પરંતુ સ્થાનિક સંજોગો ધ્યાનમાં લઈ આ સહાય નાણાં વિભાગના ઠરાવથી નક્કી કરેલ મર્યાદામાં રહીને રોકડ સ્વરૂપમાં બે સ્થાનિક જવાબદાર વ્યક્તિની હાજરીમાં ચૂકવવા સક્ષમ અધિકારી હુકમ કરી શકશે.
- (જ) આ સહાયની ચૂકવણી બનતી ત્વરાએ થાય તે જોવાનું રહેશે.
૫. નાશ પામેલ / નુકશાન પામેલ કાચા / પાકા મકાનો / ઝુંપડા સહાય :-
- (૧) સંપૂર્ણ નાશ પામેલા અથવા આંશીક નુકશાન થયેલા પાકા / કાચા રહેણાંકના મકાનને ખરેખર થયેલ નુકશાન અંગેના સર્વે ટીમના રીપોર્ટ ધ્યાનમાં લઈ સહાયની રકમ નક્કી કરવાની રહેશે.
- (૨) SARF સિવાયનો ખર્ચ રાજ્ય સરકારની ગ્રાન્ટમાંથી કરવાનો રહેશે.
- (૩) સહાય મંજૂર કરતી વખતે કાચા / પાકા મકાન અધિકૃત પરવાનગી લઈ બાંધેલ છે કે કેમ તે વિગત તપાસવી જરૂરી રહેશે. બિનઅધિકૃત બાંધકામના કીસ્સામાં કાચા / પાકા મકાનોની સહાય ચૂકવવાની રહેશે નહીં.
- (૪) મોજણી ટીમની રચના :- નાશ પામેલ/નુકશાન પામેલ કાચા/પાકા મકાનની મોજણી માટેની નીચે મુજબની સર્વે ટીમની રચના કરવાની રહેશે.
- (અ) સીનીયર કારકુનથી ઉતરતા દરજ્જાના ન હોય તેવા મહેસુલી / પંચાયત સંવર્ગના કર્મચારી / અધિકારી.
- (બ) અધિક મદદનીશ ઈજનેરથી ઉતરતા દરજ્જાના ન હોય તેવા ટેકનીકલ કર્મચારી / અધિકારી.
- (ક) જે તે ગામના તલાટી / તલાટી કમ મંત્રી.
- (ડ) મોજણી ટીમની રચનાના હુકમો કલેક્ટરશ્રી અને જિલ્લા વિકાસ અધિકારીની સંયુક્ત સહીથી કરવાના રહેશે.



- (ગ) મોજણી માટેના નિયત નમૂનામાં મળેલ અરજીપત્રકની વિગતો અંગે સ્થળ તપાસણી કરીને ટીમના તમામ સભ્યોશ્રીએ ચકાસણી રીપોર્ટમાં સહી કરવાની રહેશે.
- (ઘ) મોજણી સ્થાનિક આગેવાનો, પંચોની હાજરીમાં કરવાની રહેશે અને તે અંગે પંચોની સહી મેળવવાની રહેશે.
- (ચ) મોજણી ટીમ નુકશાનના અંદાજો અંગે સ્વયં સ્પષ્ટ વિગતો દર્શાવી અંદાજીત નુકશાનની રકમ સહીત અભિપ્રાય આપવાનો રહેશે.
- (છ) મોજણી દરમિયાન નાશ પામેલ/નુકશાન પામેલ કાચા/પાકા મકાન / ઝુંપડાના માલિક સાથેનો તારીખ અને સમય દર્શાવતો પોસ્ટકાર્ડ સાઈઝનો ફોટોગ્રાફ સરકારી ખર્ચે મોજણી ફોર્મ સાથે સામેલ કરવાનો રહેશે.
- (જ) મોજણી કર્યા બાદ તુર્તજ મોજણી ટીમના વડાએ મોજણીનો અહેવાલ સબંધિત મામલતદાર / તાલુકા વિકાસ અધિકારીને યાદી બનાવી સૂપ્રત કરવાનો રહેશે.
- (ઝ) સક્ષમ અધિકારી એટલે કે, શહેરી વિસ્તારમાટે સબંધિત મામલતદાર અને ગ્રામ્ય વિસ્તારમાટે સબંધિત તાલુકા વિકાસ અધિકારીએ ટેકનીકલ કર્મચારીના સ્થળ નિરીક્ષણ પછી મકાનોને થયેલ ખરેખર નુકશાન તેમજ પંચનો અભિપ્રાય અને મોજણી ટીમનો નુકશાન અંગેના અહેવાલની વિગતો ધ્યાને લઈ સહાય મંજૂર કરવાના હુકમો કરવાના રહેશે.
- (ટ) બાંધકામની માલીકી અંગે કોઈ ઝઘડો અથવા વાદ વિવાદ હોય તો તે અંગે ઝડપથી યોગ્ય જણાય તેવી તપાસ કરી ગુણદોષ આધારે સ્વવિવેક અનુસાર નિર્ણય લઈ ઈન્ડેમ્નીટી બોન્ડ લઈ અસરગ્રસ્ત મકાન માલીકને સહાયની રકમ ચૂકવવાની રહેશે.
- (ઠ) મકાન સહાયને રહેઠાણના મકાનો માટે જ ચૂકવી શકાશે.
- (ઢ) ઝુંપડા સહાયમાં કેટલશેડ / ઝુંપડાના નાશ / નુકશાન માટેની સહાય અંગે ઝુંપડુ એટલે કે, કામ ચલાઉ, મેક શીફ્ટ એકમ, કાચા મકાનો કરતા નિમ્ન કક્ષાનું સાંઠાનું બનેલું, ગારો, પ્લાસ્ટીક શીટનું બનેલું, પરંપરાગત રીતે રાજ્ય સરકાર/જિલ્લા તંત્ર દ્વારા જાહેર નકકી થયેલ હોય તેવું ઝુંપડું.
- (પ) સરકારી કે પંચાયતની જમીનમાં દબાણ કરી બાંધવામાં આવેલ ઝુંપડા અતિવૃદ્ધિ/ભારે વરસાદથી સંપૂર્ણપણે નાશ પામેલ હોય તેમને નીચેની શરતો પરિપૂર્ણ કરવાની શરતે સહાય ચૂકવવાની રહેશે.
- (અ) પંચાયત કે સરકારી જમીનમાં દબાણ કરીને બાંધવામાં આવેલ અને અસરગ્રસ્ત થયેલ ઝુંપડાને પણ તેઓ દબાણ ખાલી કરે અને અન્ય જગ્યાએ વસવાટ કરે તે શરતે સહાય ચૂકવવાની રહેશે.
- (બ) નદી, તળાવ વગેરે જળાશયોના વિસ્તારમાં ગેરકાયદેસર બાંધવામાં આવેલ ઝુંપડા સંપૂર્ણપણે નાશ પામેલ હોય તો આવા અસરગ્રસ્તો આ જળાશયોના કીનારાથી ૧૦૦

મીટરની દુરની જગ્યાએ ખસી જાય અને નવી જગ્યાએ ઝુંપડા બનાવે તે શરતે સહાય ચૂકવવાની રહેશે.

- (ડ) કાચા / પાકા મકાનો / ઝુંપડા સહાયની ચૂકવણી વખતે ધ્યાનમાં લેવાની બાબતો.
- (અ) આ સહાય જે વ્યક્તિનું મકાન હોય કે જેણે ખર્ચ કરી બાંધેલ હોય તેને જ આપવાની રહેશે.
- (બ) આ સહાય એકાઉન્ટ પેઈ ચેક / ડ્રાફ્ટ દ્વારા ચૂકવવાની રહેશે.
- (ક) સહાય મંજૂર / ચૂકવણી કરતી વખતે કુટુંબની આવક, ધંધો, મકાન પરનો સરકારી વિમો કે અંગત રીતે લીધેલ વિમો, કુટુંબને અન્ય સહાય અથવા કુટુંબના કાયમી વસવાટનું સ્થળ વગેરે બાબતો ધ્યાનમાં લેવાની જરૂર નથી.
- (ડ) સર્વે ટીમ દ્વારા કરેલ આકારણી આખરી ગણાશે તેમાં પુનઃ વિચારણાનો અધિકાર શહેરી વિસ્તાર માટે જિલ્લા કલેક્ટર અને ગ્રામ્ય વિસ્તારમાં જિલ્લા વિકાસ અધિકારીને રહેશે.
- (ગ) સર્વે ટીમ દ્વારા મકાનની મોજણી કરાવ્યા બાદ મકાનની અંદાજવામાં આવેલ નુકશાનની રકમ મુજબની સહાય ચૂકવવાની રહેશે. ગ્રામ્ય / નગરપાલિકા / મહાનગરપાલિકા દ્વારા કરવામાં આવેલ આકારણી રજીસ્ટરમાં કિંમત / ભાડાના દરની જોગવાઈ મકાન ધરાવનાર વ્યક્તિની માલિકી અંગે ખાતરી કરાવવાના આશયથી તેમજ આકારણી વખતે કેટલું ભાડુ ઉપજી શકે તેમ છે તે મૂજબનો મકાન વેરો નક્કી કરવાનો મુખ્ય આશય હોય તે આકારણી ધ્યાનમાં લેવાની નથી પરંતુ સર્વે ટીમ દ્વારા કરેલ નુકશાનની આકારણી ધ્યાનમાં લેવાની છે.
- (ઘ) સીમતળમાં આવેલ કે ગામતળમાં આવેલ ઝુંપડાને નુકશાન અંગે સહાય મંજૂર કરવાની રહેશે.

૬. ઢોર મૃત્યુ સહાય :-

- (૧) દુધાળા ઢોર
- (૨) બિન દુધાળા ઢોર
- (૧) આ સહાય ખરેખર થયેલ નુકશાન, આર્થિક ઉત્પાદન કરતા ત્રણ મોટા દુધાળા ઢોર અથવા ૩૦ નાના દુધાળા ઢોર અથવા ત્રણ મોટા બિન દુધાળા ઢોર અથવા ૬ નાના બિન દુધાળા ઢોર પ્રતિ ઘર દીઠ સહાય સીમીત રહેશે.
- (૨) રાજ્ય સરકારના સક્ષમ સત્તાધિકારીએ પ્રમાણિત કરેલ હશે તો જ આ સહાય મળવાપાત્ર થશે.

૭. મરઘા ઉછેર :-

- (૧) રૂ. ૫૦/- પ્રતિપક્ષી પરંતુ વધુમાં વધુ રૂ. ૫૦૦૦/- સુધી પ્રતિ લાભાર્થીદીઠ સહાય સીમીત રહેશે.
- (૨) પક્ષીનું મૃત્યુ જાહેર કરેલ કુદરતી આપત્તિથી થયેલ હોવું જોઈશે.
- (૩) રાજ્ય સરકારની અન્ય સરકારી યોજના હેઠળ સહાય મળવાપાત્ર થતી હશે તો આ ધોરણો હેઠળ સહાય મળવાપાત્ર થશે નહીં.

૮. કૃષિ : ખેત જમીન નુકસાન :-

(અ) બે હેક્ટર સુધીની જમીન ધરાવતા ખેડૂતોને સહાય :

(૧) જમીન ઘોવાણ માટે :

- (અ) ત્રણ ઈંચ કરતા વધારે ઘોવાણના કિસ્સામાં સહાય મળવા પાત્ર થશે.
- (બ) પર્વતીય વિસ્તારમાં ખેતીની જમીન પર પૂરના કારણે જમા થયેલ ધન કચરો ફટાવવા માટે સહાય મળવા પાત્ર થશે.
- (ક) રાજ્ય સરકારની અન્ય યોજનામાંથી આપત્તિ માટે સહાય લીધેલ ન હોય તો જ આ સહાય મળવાપાત્ર રહેશે.
- (ડ) મહેસુલી રેકર્ડ મુજબ કાયદેસર રીતે જમીનની માલિકી ધરાવતા ખેડૂતોને જ સહાય મળવાપાત્ર થશે.

(૨) પાકને નુકશાન માટે સહાય :

૩૩% અને તે કરતાં વધારે પાક નુકસાનના કિસ્સામાં જ આ સહાય મળવાપાત્ર થશે.

(બ) બે હેક્ટરથી વધારે જમીન ધરાવતા ખેડૂતો માટે :

(૧) માત્ર પાકને નુકશાન માટે.

૩૩% અને તે કરતાં વધારે નુકશાનના કિસ્સામાં જ આ સહાય મળવાપાત્ર થશે.

૯. (અ) માછીમારોને થયેલ નુકશાન માટે :-

- (૧) રાજ્ય સરકાર પાસે રજીસ્ટર કરાવેલી હોડીના કિસ્સામાં જ તેમજ સંપૂર્ણ કે આંશિક નુકશાન રાજ્ય સરકારે જાહેર કરેલ સક્ષમ અધિકારી ધ્વારા પ્રમાણિત કરેલ હોવું જોઈએ અને માછીમારે આ કુદરતી આપત્તિ વખતે અન્ય કોઈ સહાય કે સબસીડી લીધેલ ન હોય તો જ આ સહાય મળવાપાત્ર થશે.

(બ) મત્સ્યબીજ ફાર્મ માટે ઈનપુટ સબસીડી :



(૧) રાજ્ય સરકારની અન્ય કોઈ યોજના હેઠળ કુદરતી આપત્તિ વખતે અન્ય કોઈ સહાય કે સબસીડી લીધેલ ન હોય તો જ આ સહાય મળવાપાત્ર થશે.

૧૦. ગ્રામ્ય કારીગરો :-

પરંપરાગત હાથ કારીગરો માટે રાજ્ય સરકારના સક્ષમ સત્તાધિકારીએ સાધનોને નુકશાન અને સાધનો બદલવા માટે પ્રમાણિત કરેલ હશે તો જ સહાય મળવાપાત્ર થશે.

**ક્રમાંક:- ૯,૧૦ અને ૧૧ માટેની સામાન્ય સૂચનાઓ:-**

- (૧) ખેડૂતોને થયેલ નુકશાન બાબતનો સર્વે જિલ્લા વિકાસ અધિકારીશ્રીએ જ તે જિલ્લાના સંબંધિત જિલ્લા ખેતીવાડી અધિકારી, નાયબ ખેતીવાડી નિયામકશ્રી મારફત કરાવી તેની વ્યાજબી ચકાસણી ખરાઈ કરાવી આ ઠરાવના ધોરણો મુજબ મંજૂરી આપી મળવાપાત્ર સહાય લાભાર્થીઓને ચૂકવવાની રહેશે.
- (૨) માછીમારોને થયેલ નુકશાન બાબતે જિલ્લા વિકાસ અધિકારીશ્રીએ જિલ્લાના મદદનીશ નિયામકશ્રી (મત્સ્ય) અધિકારી મારફત સર્વે કરાવી તેની વ્યાજબી ચકાસણી ખરાઈ કરાવી આ ઠરાવના ધોરણો મુજબ મંજૂરી આપી મળવાપાત્ર સહાય લાભાર્થીઓને ચૂકવવાની રહેશે.
- (૩) ગ્રામ્ય કારીગરોને થયેલ નુકશાન બાબતે જિલ્લા કલેક્ટરશ્રીએ જિલ્લાના જિલ્લા ઉદ્યોગ કેન્દ્ર મારફત સર્વે કરાવી તેની વ્યાજબી ચકાસણી ખરાઈ કરાવી આ ઠરાવના ધોરણો મુજબ મંજૂરી આપી મળવાપાત્ર સહાય લાભાર્થીઓને ચૂકવવાની રહેશે.

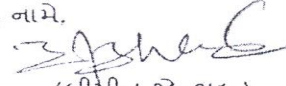
**સામાન્ય સૂચનાઓ:-**

- (૧) પરિશિષ્ટમાં જોડેલ ભારત સરકારના ગૃહ મંત્રાલયના તા. ૦૮/૦૪/૨૦૧૫નાં પત્ર ક્રમાંક ૩૨-૭/૨૦૧૪-NDM-1 ની માર્ગદર્શક સૂચનાઓ લાગુ રહેશે.
- (૨) જમીન ધસી પડવી, સ્થાનિક પ્રકારનું વાવાઝોડ જેવા કેસમાં કોઈ વ્યક્તિનું મૃત્યુ થાય / ઈજા થાય / માલ મિલકતને નુકશાન થાય તો આવા કેસો મંજૂર કરવા માટે મહેસુલ વિભાગની પૂર્વ મંજૂરી મેળવવાની થતી હતી જેના બદલે આ કેસો મંજૂર કરવાની સત્તા જિલ્લા કલેક્ટરશ્રીને આપવામાં આવે છે તેથી આ કેસોની સંપૂર્ણ ચકાસણી કરી આ ઠરાવની સહાયની જોગવાઈઓ ધ્યાને લઈ પોતાની સ્વવિવેકી બુધ્ધિ વાપરીને નિર્ણય કરી કેસો મંજૂર કરવાના રહેશે.
- (૩) આ ઠરાવની જોગવાઈઓ તા. ૦૧/૦૪/૨૦૧૫ ની પાશ્ચાતવર્તી અસરથી અમલમાં આવશે તથા આ તારીખ પહેલાના બનાવાના કેસોમાં રાહત ચૂકવણી અગાઉના ઠરાવોની જોગવાઈઓને આધિન રહીને કરવાની રહેશે.

- (૪) એસ.ડી.આર.એફ.ના નોર્મ્સ મુજબ મળવાપાત્ર સહાયનો ખર્ચ પ્રથમ એસ.ડી.આર.એફ. હેઠળ કરી ત્યારબાદ જો કોઈ વધારાની રકમ ચૂકવવાની થાય તો તે ખર્ચ ચૂકવણી ખર્ચ મુખ્ય સદર-૨૨૪૫ કુદરતી આપત્તિઓ અંગે સહાય પેટા મુખ્ય સદર-૦૨. પુર અને વાવાઝોડા સદર ખાતે ઉધારવાનો રહેશે અને જે તે નાણાકીય વર્ષમાં થયેલ જોગવાઈમાંથી મેળવવાનો રહેશે.
- (૫) જુદીજુદી કુદરતી આપત્તિઓમાં દર્શાવેલ જોગવાઈઓ મૂજબ સહાય મંજૂર કરતી વખતે સ્થાનિક પરિસ્થિતિ, સ્થળ, સમય, સંજોગો જોઈને સહાય મંજૂર કરનાર અધિકારીએ વિવેકબુદ્ધિ વાપરી નિર્ણય લેવાનો રહેશે.
- (૬) શહેરી વિસ્તાર માટે જિલ્લા કલેક્ટર અને ગ્રામ્ય વિસ્તાર માટે જિલ્લા વિકાસ અધિકારીને આવી સહાય મંજૂર કરી ચૂકવવા માટે અધિકૃત કરવામાં આવે છે.
- (૭) આ સહાયના ધોરણોમાં ભારત સરકાર / ગુજરાત સરકાર વખતો વખત સુધારા / વધારા કરે તે આપોઆપ લાગુ પડશે.

આ હુકમો આ વિભાગના સરખા ક્રમાંકની કાંઈલ પર નાણાં વિભાગની તા.૨૨/૦૪/૨૦૧૫ નાં રોજ મળેલ સંમતિ અને માન. મુખ્યમંત્રીશ્રીની સંમતિ મેળવીને બહાર પાડવામાં આવે છે.

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

  
(બીપીન જી. ભટ્ટ)

નાયબ સચિવ (રાહત)

મહેસુલ વિભાગ, ગુજરાત સરકાર.








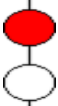














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૧. ભારત સરકારના ગૃહ મંત્રાલયના તા. ૦૮/૦૪/૨૦૧૫ના પત્ર ક્રમાંક: ૩૨-૭/૨૦૧૪/ એન.ડી.એમ.-I ની માર્ગદર્શક સુચનાઓ.

પ્રતિ,

- :- નામદાર રાજ્યપાલશ્રીના સચિવશ્રી, રાજભવન, ગાંધીનગર.
- :- માન. મુખ્યમંત્રીશ્રીના અગ્રસચિવશ્રી, સચિવાલય, ગાંધીનગર.
- :- તમામ માન. મંત્રીશ્રીઓ તથા રાજ્ય કક્ષાના મંત્રીશ્રીઓના રહસ્ય સચિવશ્રીઓ, સચિવાલય, ગાંધીનગર.
- :- સર્વે વિભાગના અધિક મુખ્ય સચિવશ્રી / અગ્રસચિવશ્રી / સચિવશ્રીઓ, સચિવાલય, ગાંધીનગર.
- :- માન. વિરોધપક્ષના નેતાશ્રી, ગુજરાત વિધાનસભા, સચિવાલય, ગાંધીનગર.
- :- મુખ્ય સચિવશ્રીના રહસ્ય સચિવશ્રી, સચિવાલય, ગાંધીનગર.

**Annexure Y Cyclone Warning Signals**

PORT STORM WARNING SIGNAL NO.	DAY SIGNAL	NIGHT SIGNAL	MEANING
1			<i>DISTANT CAUTIONARY (There is a region of squally weather in which a storm may be forming.)</i>
2			<i>DISTANT WARNING ( A storm has formed.)</i>
3			<i>LOCAL CAUTIONARY (The port is threatened by squally weather.)</i>
4			<i>LOCAL WARNING ( The port is threatened by a storm but it does not appear that the danger is as yet sufficiently great to justify extreme measures of precaution. )</i>
5			<i>DANGER (The port will experience severe weather from a cyclone expected to move keeping the port to the left of its track. )</i>
6			<i>DANGER ( The port will experience severe weather from a cyclone expected to move keeping the port to the right of its track. )</i>
7			<i>DANGER ( The port will experience severe weather from a cyclone expected to move over or close to the port. )</i>
8			<i>GREAT DANGER ( The port will experience severe weather from a severe cyclone expected to move keeping the port to the left of its track. )</i>
9			<i>GREAT DANGER ( The port will experience severe weather from a severe cyclone expected to move keeping the port to the right of its track. )</i>
10			<i>GREAT DANGER ( The port will experience severe weather from a severe cyclone expected to move over or close to the port. )</i>
11			<i>FAILURE OF COMMUNICATIONS ( Communications with the Meteorological Warning center have broken down and the local officer considers that there is danger of bad weather. )</i>

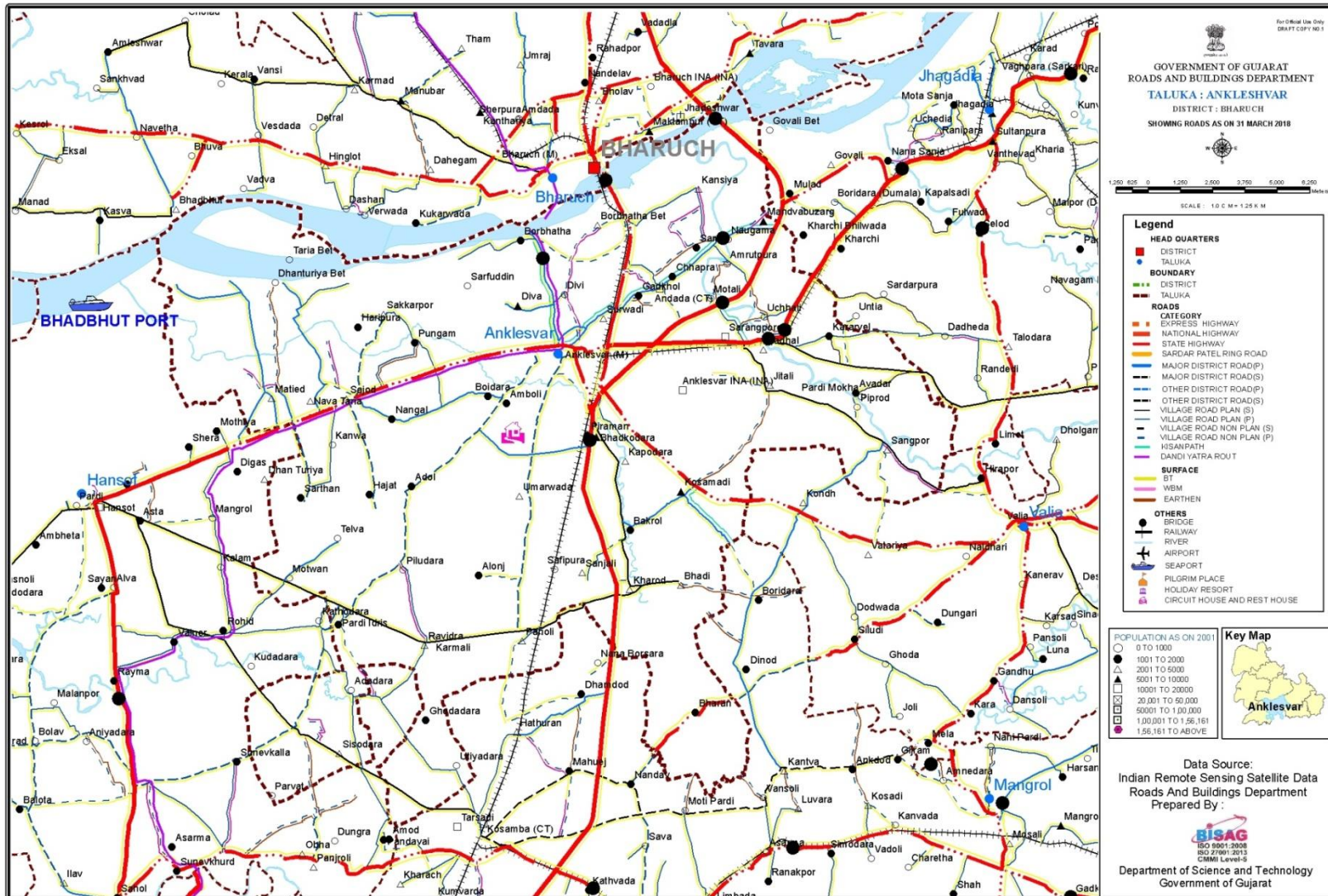


## Annexure Z Bharuch District Taluka Map

### Annexure- Z1 Bharuch Taluka Map

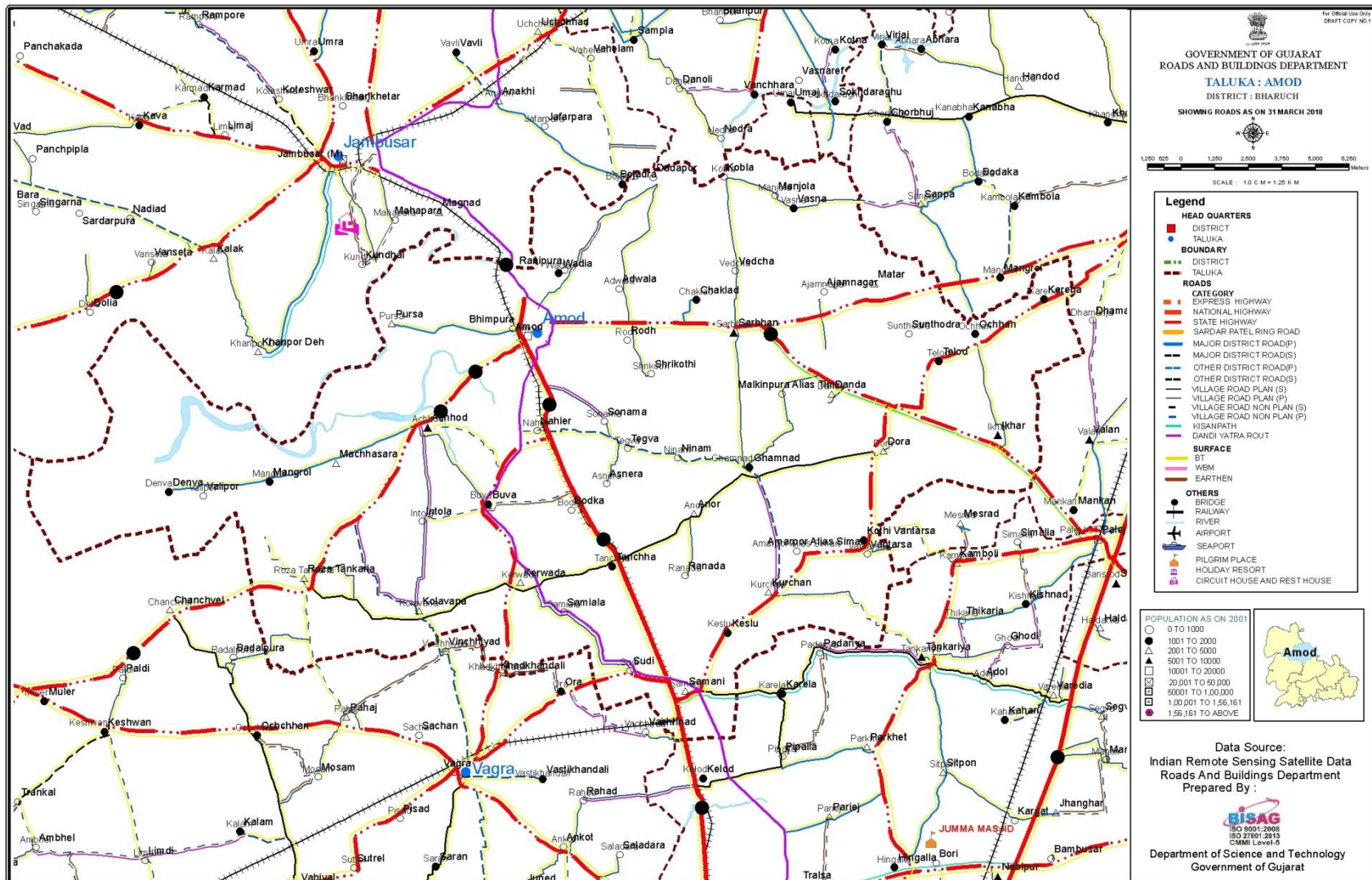


## Annexure- Z2 Anklesvar Taluka Map

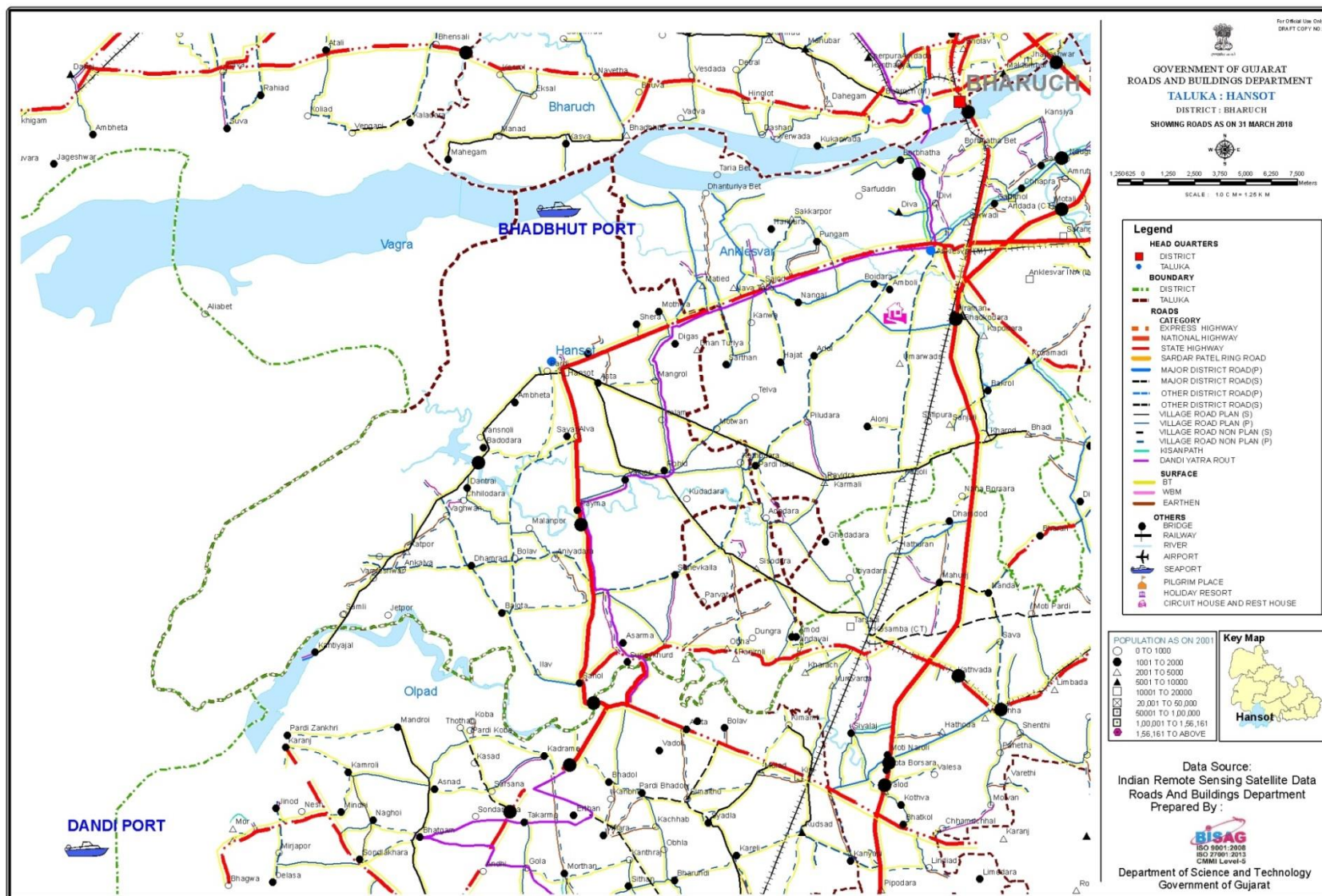




## Annexure- Z3 Amod Taluka Map

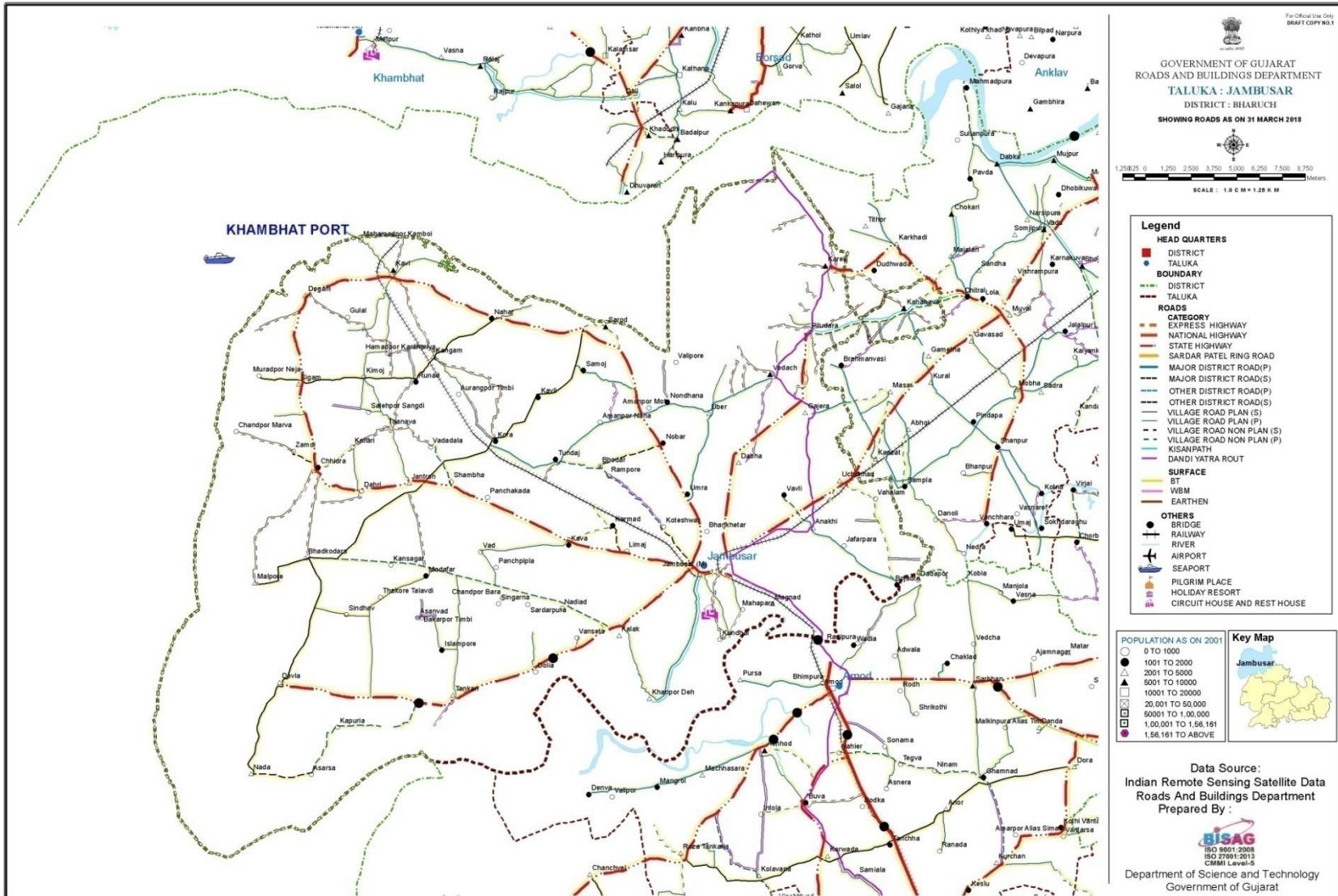


## Annexure-Z4HansotTalukaMap

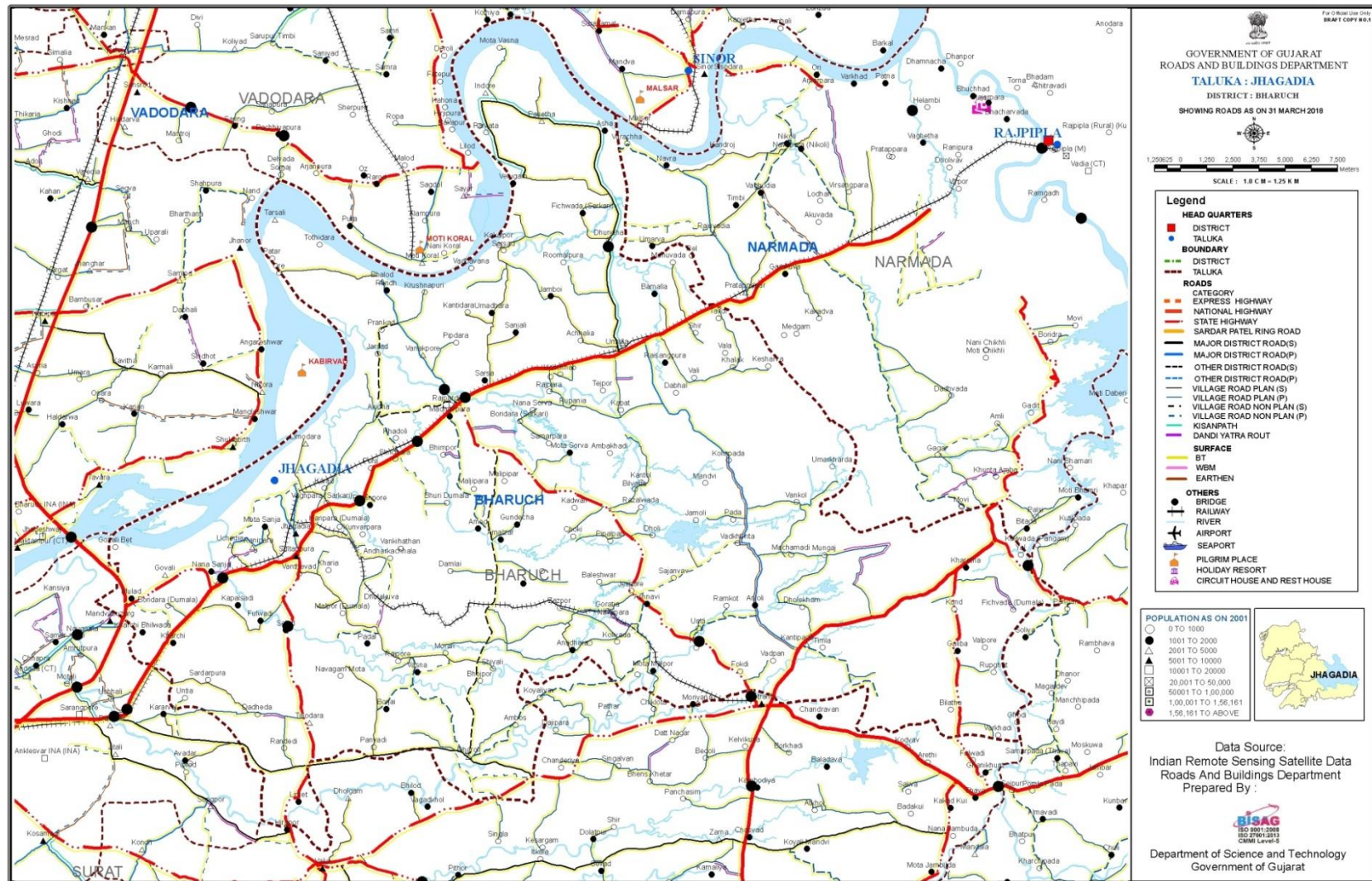




## Annexure-Z5 Jambusar Taluka Map

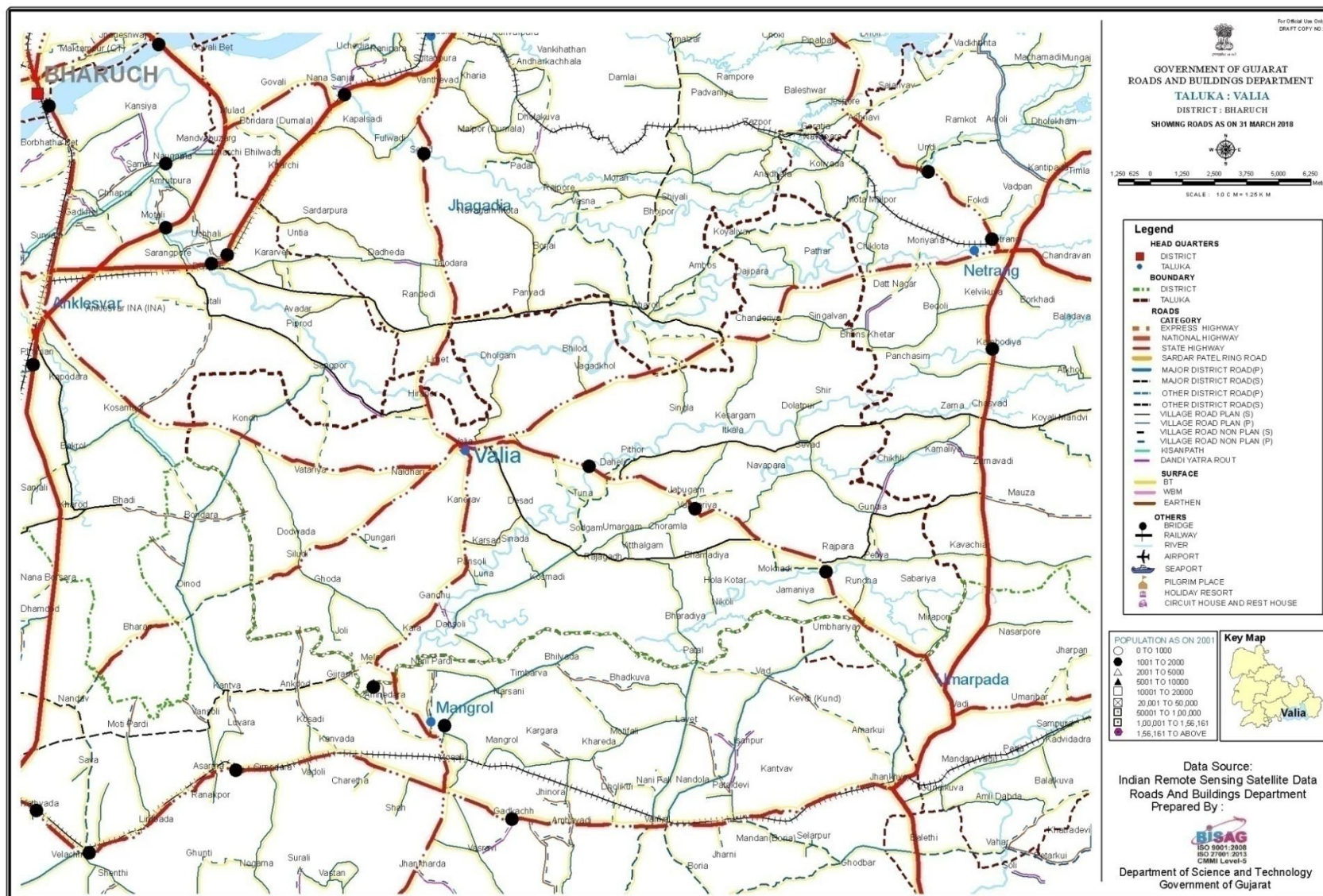


## Annexure- Z6 Jhagadia Taluka Map

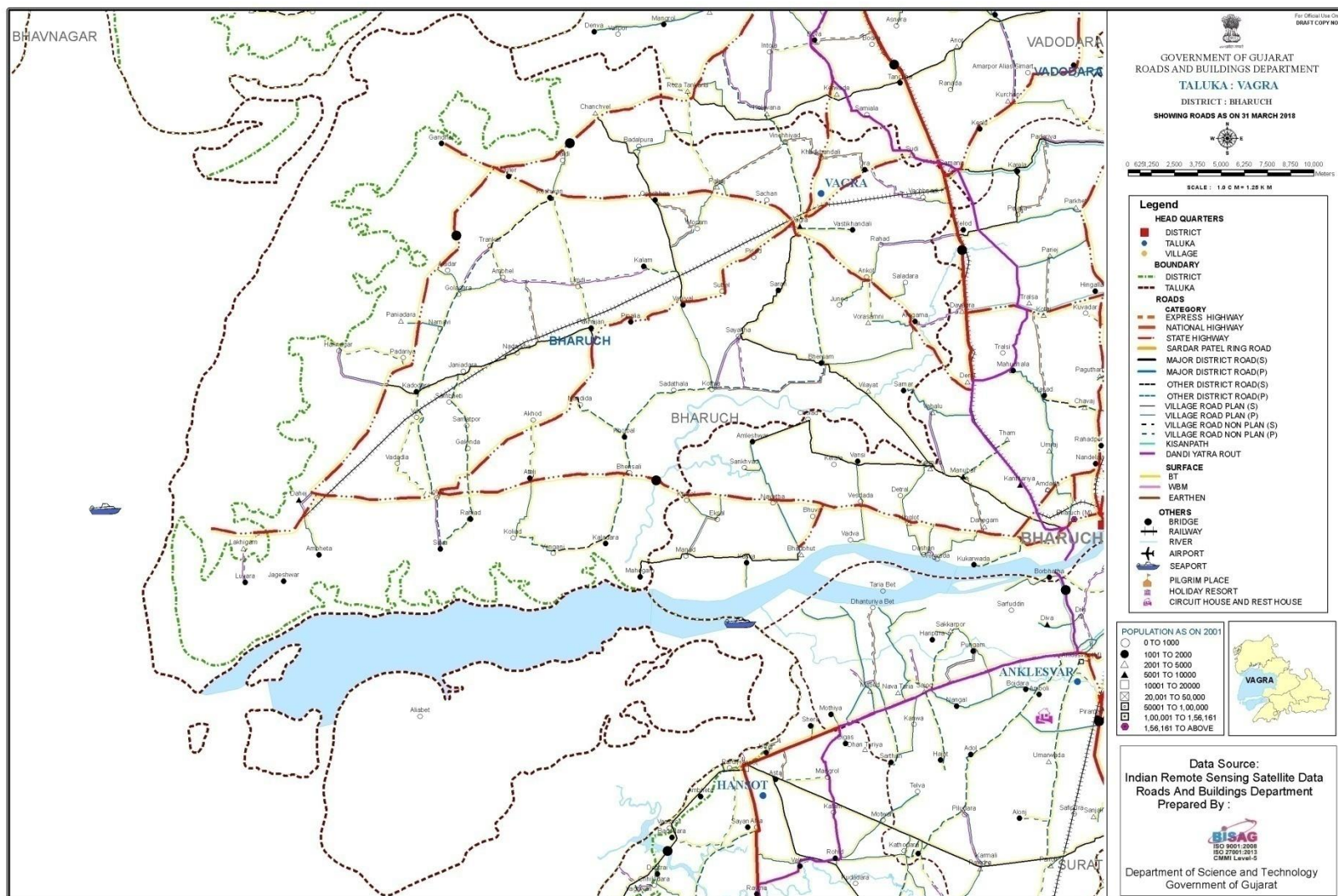




## Annexure- Z7 ValiaTaluka Map

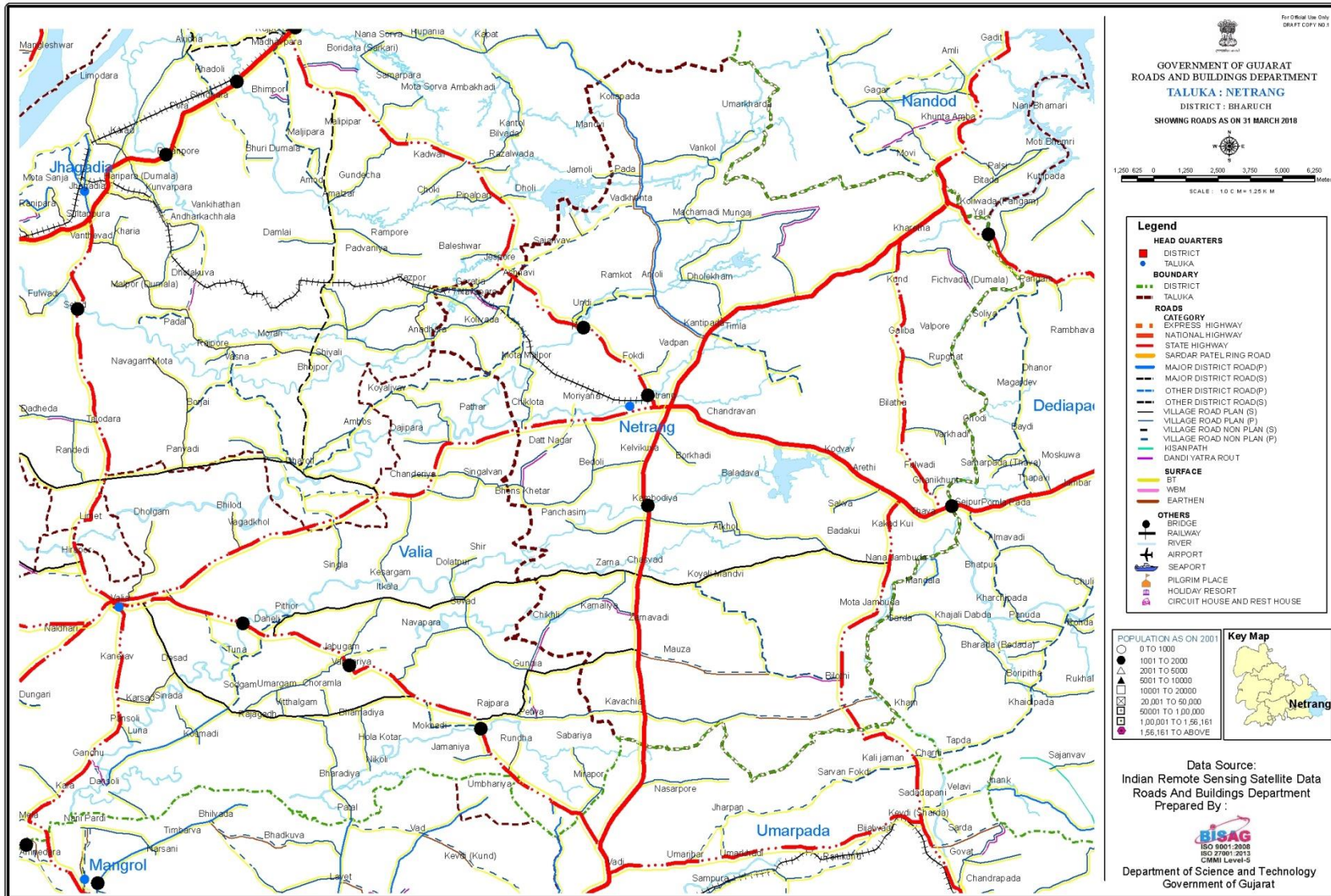


## Annexure- Z8 Vagra Taluka Map





## Annexure- Z9Netrang Taluka Map



NETRANG TALUKA

## **APPENDIX 1**

### **EXERCISES FOR MASS RESCUE OPERATIONS**

Since opportunities to handle actual incidents involving mass rescues are rare and challenging, exercising MRO plans are particularly important. Mass evacuation and rescue operations are difficult and costly, leading to a tendency to use simulation excessively during exercises rather than physically exercising on scene efforts.

MRO exercise objectives need not be addressed in a single large exercise, but may be satisfied in part by routine incorporation into multiple drills, some intended mainly to test other systems. However, realistic drills are necessary and costly, and over 1,000 volunteer ship passengers or hundreds of volunteer aircraft passengers will likely be needed to conduct a realistic exercise.

Separate rooms can be used to simulate command posts that would normally be in separate locations.

MRO exercises should ideally achieve the following objectives:

- Account for:
  - Crew and passenger lists
  - Rescued passengers and crew until they can return to their homes
  - All persons associated with the rescue and aftermath operations
  - Lifeboats, including empty boats or rafts
  - High freeboard issues for likely rescue facilities
- Identify and task available resources:
  - Use of Amver
  - Potential resources ashore and afloat
  - Resources from local agencies (medical personnel, hospital facilities, fire department, general community, transportation resources)
  - National and regional military and other resources
- Evaluate notification processes, resource availability, timeliness of initial response, real-time elements, conference capabilities and overall co-ordination
- Ensure all agency roles are sorted out, understood and properly followed
- Test capabilities of potential OSCs and ability to transfer OSC duties
- Evaluate span of control
- Evacuate a ship or aircraft
- Co-ordinate activities and achieve information exchange



- Information for all concerned (identify, merge, purge, retrieve and transfer to the right place in the right form at the right time)
- New communication and information management technologies
- Media and next-of-kin
- Safely transfer and care for passengers (evacuation, in survival craft, rescue, medical, protection from environment, post-rescue transfers, etc.)
- Test all communication links that may be needed for notification, co-ordination and support
- Conduct medical triage and provide first aid
- Assess ship's safety management system effectiveness
- Exercise co-ordination with local response agencies
- Provide food, water, lifejackets and other protective clothing to survivors
- Test mass rescue plans:
  - SAR services
  - Company (including aircraft and ship plans)
  - Any relevant emergency response organizations, e.g., disaster response, military, firefighting and medical
  - Transportation and accommodations
- Assess how effectively earlier lessons learned have been accounted for in updated plans and how well these lessons were disseminated
- Exercise salvage and pollution abatement capabilities
- Carry out emergency relocation of the disabled craft
- Exercise external affairs, such as international and public relations:
  - Necessary participants involved
  - Joint information **centres** established quickly and properly staffed
  - Press briefings handled effectively, e.g., consistent information from different sources
  - Notification of the next of kin and family briefings
  - Staff and equipment capacity to handle incoming requests for information
  - Rescued persons tracked, kept informed and needs monitored, and reunited with belongings

**The following steps are normally carried out during exercise planning:**

- Agree on the exercise scenario, goals and extent
- Assemble a multi-disciplinary planning team and agree on objectives for each aspect of the exercise
- Develop the main events and associated timetables
- Confirm availability of agencies to be involved, including any media representatives or volunteers
- Confirm availability of transportation, buildings, equipment, aircraft, ships or other needed resources
- Test all communications that will be used, including tests of radio and mobile phones at or near the locations where they will be used
- Identify and brief all participants and people who will facilitate the exercise, and ensure that facilitators have good independent communications with person who will be controlling the exercise
- Ensure that everyone involved knows what to do if an actual emergency should arise during the exercise
- If observers are invited, arrange for their safety, and to keep them informed about the exercise progress
- For longer exercises, arrange for food and toilet facilities
- Use “exercise in progress” signs, advance notifications and other means to help ensure that person not involved in the exercise do not become alarmed
- Schedule times and places for debriefs
- Agree and prepare conclusions and recommendations with the entity responsible for handling each recommendation along with the due date for any actions
- Prepare a clear and concise report and distribute it as appropriate to the participating organizations
- Consider the outcome of this exercise in planning future exercises

## APPENDIX 2

### **INDUSTRY PLANNING AND RESPONSE FOR MASS RESCUE OPERATIONS**

SAR authorities should co-ordinate MRO plans with companies that operate aircraft and ships designed to carry large numbers of persons. Such companies should share in preparations to minimize the chances that MROs will be needed, and to ensure success if they are. This Appendix provides guidance on industry roles, and discusses how companies could arrange for use of company field teams and emergency response centres as possible means of carrying out their MRO responsibilities.

Early notification of potential or developing MROs is critical, due to the level of effort required to mount a very large-scale response. It is much better to begin the response process and abort it should it become unnecessary, than to begin it later than necessary should the actual need exist. Pilots and masters should be advised and trained to notify SAR services at the earliest indication of a potential distress situation. Company response organizations should be able to help SAR services by organizing support, equipment, advice and liaison any of their ships or aircraft.

Companies should be prepared to provide information to preclude the need for multiple sources attempting communications with the aircraft pilot in command or ship captain for information that is unavailable or available from another source. Receiving and handling requests for information aboard the distressed craft can interfere with the pilot's or master's ability to handle the emergency and handle critical on scene leadership needs. Companies operating large aircraft or ships should be advised to be able to field a co-ordinated team that can handle emergency response functions around the clock should the need arise. Such a team might include staff as indicated in the following Table.

#### **Typical company field team**

<b>Team Leader (District Magistrate)</b>	Maintains overview, directs operations and keeps management informed
<b>Communicator (ADM/Nodal Officer)</b>	Maintains open (and possibly sole) line of communications to craft in distress
<b>Co-ordinating Representative (Port Officer)</b>	Usually a pilot or master mariner, who co-ordinates with SAR and other emergency response authorities, organizes tugs, looks at itineraries, arranges to position ships or ground facilities that may be able to assist and organizes security and suitable delivery points for passengers crew when they are delivered to safety
<b>Technical Representative (SDM/Mamlatdar )</b>	Maintains contact with regulatory authorities, classification societies, insurers and investigators and provides liaison and advice for firefighting, damage control, repairs and other specialized or technical matters
<b>Environmental Representative (DISH/GPCB)</b>	Involved with environmental impact and spill response

<b>Medical Representative (CDHO/CDMO)</b>	Gives medical advice, tracks casualties and arranges medical and identification services for survivors
<b>Passenger and Crew Representatives (DEOC/Mamlatdar Disaster)</b>	Provides information and support to whoever is designated to care for next of kin and keep them informed, identifies transportation needs, and may need to deal with various countries, languages and cultures
<b>Media Representative (District Information Center)</b>	Gathers information, co-ordinates public affairs matters with counterparts in other organizations, prepares press releases, briefs spokespersons and arranges availability of information by phone and web sites
<b>Specialists (Technical Experts)</b>	From within or outside the company who may facilitate some special aspect of the response or follow up

The company may operate an Emergency Response Centre (ERC) to maintain communications with the craft in distress, remotely monitor onboard sensors if feasible, and keep emergency information readily available. Such information might include passenger and crew data, aircraft or ship details, incident details, number of survival craft and status of the current situation.

Transportation companies should have readily available contacts with tour companies, shore excursion companies, airlines and cruise lines, hotels, etc., since such resources can be used to address many problems experienced with landing large numbers of survivors into a community.

Contingency plans for co-operation should be developed between SAR authorities and transportation companies, and these plans should be sufficiently exercised to ensure they would be effective should an actual mass rescue situation arise. Such plans should identify contacts, co-ordination procedures, responsibilities, and information sources that will be applicable for MROs. These plans should be kept up to date and readily available to all concerned.

Respective functions of the ERC and RCC should be covered in co-ordinated pre-established plans, and refined as appropriate for an actual incident. These centres must maintain close contact throughout the SAR event, co-ordinating and keeping each other apprised of significant plans and developments.

There are other steps the transportation industry could be urged to undertake to improve preparedness for MROs. The following are some examples:

- Carry SAR plans on board aircraft or ships
- Provide water and thermal protection for evacuees appropriate for the operating area
- Provide a means of rescue to bring people from the water to the deck of ships
- Use preparation checklists provided by SAR authorities

- Conduct an actual physical exercise in addition to simulations
- Provide the capability to retrieve fully loaded lifeboats and rafts
- Enhance lifeboat lifesaving capabilities
- Provide ways to assist persons in lifeboats who are seasick, injured or weak
- Provide on-board helicopter landing areas and helicopters
- Prepare to assist survivors once they have been delivered to a place of safety
- Have aircraft or ship status and specifications readily available, such as inspection records, design plans, communication capabilities, stability calculations, lifesaving appliances, classification society contacts, passenger and cargo manifests, etc., so that such information will not need to be obtained directly from a pilot or master
- Work with SAR authorities to develop and be able to rapidly deploy air droppable equipment or supplies for survivors, maintain strategically located caches for this purpose

Acceptance of certain responsibilities by industry demonstrates commitment to passenger safety and can free SAR services to handle critical arrangements relating to SAR resources, co-ordination and communications.

## APPENDIX 3

### **INCIDENT COMMAND SYSTEM OVERVIEW**

For major incidents, crisis management for the overall response may also be needed. The Incident Command System (ICS), one widely used means of meeting this need, but works best with some advance familiarization and exercising within and among the transportation and emergency response communities. Since SAR and transportation authorities are likely to encounter use of the ICS within emergency response communities, this Appendix provides general information for familiarization with ICS. The following terms are relevant to the ICS:

- **Incident Commander (IC):** the primary person functioning as a part of the incident command system, usually at or near the scene, responsible for decisions, objectives, strategies and priorities relating to emergency response
- **Incident Command Post (ICP):** location at which primary functions are carried out for the Incident Command System
- **Incident Command System (ICS):** on scene emergency management concept that provides an integrated organizational structure adaptable to the complexity and demands of an major incident involving multiple missions, response organizations or jurisdictions
- **Unified Command (UC):** the incident commander role of the incident command system expanded to include a team of representatives that manages a major incident by establishing common objectives and strategies and directing their implementation

The ICS is designed for use when multiple organizations and jurisdictions need to be jointly involved in an emergency response activity and co-ordinate their efforts.

While organizations have their respective systems of command and control or co-ordination, these should be compatible with systems others use so organizations can function well jointly when necessary. Commonality and similarities among crisis management systems locally, regionally and internationally foster effective joint efforts.

The ICS does not take control, responsibility or authority away from SAR services; SAR services remain focused on lifesaving, while the ICS focuses on promoting an effective overall incident response.

The ICS training, advance co-ordination and liaison will be rewarded by better performance and success when a crisis situation arises. As a tool for managing major incidents, the ICS:

- Accommodates all risks and hazards
- Is simple, powerful and flexible
- Can easily expand or contract as the incident warrants

- Relieves the SAR system of co-ordinating non-SAR missions
- Enables SMC to use the ICS contacts to draw on additional resources
- Ensure better communication and co-operation between agencies

The ICS organization can grow or shrink as the situation dictates, and provides a logical process and progression to achieve results. Its organization should be allowed to grow with increased demand and shrink when operations decline, both of which require anticipation.

Advantages of the ICS can be lost when organizations develop their own unique and relatively complex versions of the ICS; it works best when it remains simple, flexible and standardized so everyone on scene from all organizations understands it.

In its basic form a person is designated as the IC to handle overall co-ordination, including setting objectives and priorities.

Support functions (sections supported by one or more persons) can be established *as needed* and on the scale needed to keep the IC informed and assist in certain areas. The four support sections in the ICS organization are as follows:

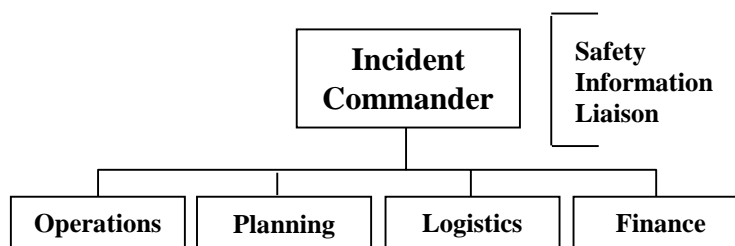
- **Operations Section** - helps manage resources to carry out the operations
- **Planning Section** - helps develop action plans, collect and evaluate information, maintain resource status and arrange to scale up or scale down activities
- **Logistics Section** - helps provide resources and services needed to support the incident response, including personnel, transportation, supplies, facilities and equipment
- **Finance-Administration Section** - assists with monitoring costs, providing accounting and procurements, keeping time records, doing cost analysis and other administrative matters

Other additions to directly assist the IC might include:

- An **Information Officer** - assists the media and others seeking incident information, ensures the IC has appropriate information available, and helps to provide information to the public and families of persons in distress
- A **Safety Officer** - monitors safety conditions and develops measures to ensure safety and reduce risks
- **Liaison Officers** - serve as primary contacts for on scene representatives of their respective organizations



The following Figure illustrates the basic ICS organization.



### Incident Command System Organization

The IC usually establishes an **Incident Command Post (ICP)** as a base for ICS activities.

For particularly demanding incidents, the ICS organization can be expanded. For example, for operations that are particularly large-scale, sustained or complex, the IC can be augmented by establishment of an actual or virtual (without everyone co-located) Unified Command (UC) populated by operational managers representing the primary response organizations involved. If the UC is made up of linked independent command posts, a government post and an industry post for example, ideally there should still be a person from each command post assigned to work at the other post(s) involved.

For a situation like a major passenger aircraft or ship disaster, a Joint Information Centre (JIC) should be established, perhaps in association with the Information Officer position, to facilitate and co-ordinate the vast information that will need to be managed internally and shared with the public.

Whether the ICS should be used depends on the duration and complexity of the incident. If it is used, co-ordination of SAR functions with other functions is usually achieved by assigning a representative of the SAR agency or of the SMC to the Operations Section of the ICS organization. This allows SAR services to be plugged into the ICS and overall operations while still being able to function with relative independence in accordance with normal SAR procedures. The ICS has an overall incident focus, while SAR services must remain focused on lifesaving.

A determination should be made as early as possible on who will be responsible for overall co-ordination, and how the overall response will be organized and managed. Procedures that all involved understand and support should be applied to managing the overall response for mutual support, effort prioritization, and optimal use of available resources, and to enhance on scene safety and effectiveness.

Inter-agency contingency planning should identify who the IC should be for various scenarios. Typically, the IC will be assigned from the government organization with primary responsibility for the type of function most prominent for the particular incident. However, with appropriate access to experts and information from all agencies concerned, a key consideration in selecting the IC should be familiarity and experience with the IC function, i.e., the IC should be a person who can best handle the responsibility.

The IC should be someone good at managing on scene operations, and will usually be located at or near the scene. Everyone involved, regardless of rank or status, will normally be in a support role for the IC, similar to the way the SMC function is carried out.

The IC function can be transferred as the situation warrants, although such transfers should be minimized as is the case for transfers of SMC functions during a mission. It is important to designate an IC early, in contingency plans if possible, and make a transfer later as appropriate, as delay in designating an IC can be quite detrimental.

Except when functions other than SAR are relatively insignificant to the incident response, the IC should normally be someone other than the SMC. The priority mission will always be lifesaving, and the SMC should normally remain unencumbered by additional non-SAR duties.

Similarly, the IC's command post should normally be at a location other than in the RCC, because the RCC needs to remain focused on, and be vigilant and responsive to, its normal SAR responsibilities in addition to handling SAR aspects of the major incident.

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