



## **District Disaster Management Plan-2022**

### **Amreli**



**Gujarat State Disaster Management Authority**  
**and**  
**Collector Office–Amreli**

## PREFACE



Each and every part of the world faces variety of disasters from time to time. Some part of the earth its habitants are attacked with some kind of disaster. Amreli district is a multi hazard prone district, It is affected by natural disasters as well as manmade disasters; Draught, Flood, Cyclone, Earthquake, Fire and Industrial/Chemical disasters.

Experience has shown that pre-planned and practiced procedures for handling an emergency can considerably reduce loss of life and minimize damage too. Gujarat State Disaster Management Authority implemented the Disaster Risk Management Program in the state, the programme has four DRM components; Capacity Building, Awareness Generation, Mock drill and Plan Preparation. Under the programme Collector office, Amreli preparing the communities and Government Officials from grass root level to top level for securing quick response mechanism right from bottom to top level.

District Disaster Management Plan of Amreli is divided in two parts, Part-1 is a comprehensive document covering all possible hazards; with a systematic analysis of risk and vulnerability, element of risk and level of impact through scientific and experience developed by the core team of district administration, it also includes the IRS (Incident Response System). Part-2 is all about informative details of the district.

This plan is a necessary document for reducing risks due to hazards and vulnerability; I hope this great document would be really helpful for protecting life and properties as well as sustainable development in future.

Gaurang Makwana (IAS)  
Collector & District Magistrate  
Amreli

## List Of Abbreviation

APMC	Agricultural Produce Market Committee
AE	Assistant Engineer
AH	Animal Husbandry
ATI	Administrative Training Institute
ATS	Anti Terrorist Squad
ATVT	Apno Taluko Vibrant Taluko
BPL	Below Poverty Line
BRC	Block Resource Centre
CBO	Community Based Organization
CDHO	Chief District Health Officer
CDPO	Child Development Project Officer
CHC	Community Health Center
CRC	Community Resource Centre
CRF	Calamity Relief Fund
CSO	Civil Society Organization
DCMG	District Crisis Management Group
DDMA	District Disaster Management Authority
DDMP	District Disaster Management Plan
DDO	District Development Officer
DEOC	District Emergency Operation Centre
DGVCL	Dakshin Gujarat Vij Company Limited
DISH	Directorate of Industrial Safety and Health
DM	Disaster Management
DPO	District Project Officer
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DSO	District Sports Officer
DSP	Deputy Superintendent of Police
Dy. Eng.	Deputy Engineer
Dy SP	Deputy Superintendent of Police
EMRI	Emergency Management & Research Institute
ESR	Elevated Surface Reservoir
EWS	Early Warning System
Ex. Eng.	Executive Engineer
FCI	Food Corporation of India
FPS	Fair Price Shop
FWP	Food for Work Program
GDCR	General Development Control Regulation
GEB	Gujarat Electricity Board
GIDM	Gujarat Institute of Disaster Management
GLR	Ground Level Reservoir
GMB	Gujarat Maritime Board
GoI	Government of India
GPs	Gram Pranchayats
GSDMA	Gujarat State Disaster Management Authority
GWSSB	Gujarat Water Supply and Sewerage Board

HFA	Hyogo Framework for Action
HHs	Households
HPC	High Powered Committee
HQ	Head Quarter
HRVC	Hazard, Risk, Vulnerability and Capacity
IAY	Indira Aawas Yojana
IMA	Indian Medical Association
ICS	Incident Commander
ICS	Incident Command System
IDNDR	International Decade for Natural Disaster Reduction
IEC	Information Education Communication
IMD	Indian Meteorological Department
ISDR	International Strategy for Disaster Reduction
ISR	Institute for Seismic Research
ITI	Industrial Training Institute
IWMP	Integrated Watershed Management Program
LCMG	Local Crisis Management Group
LO	Liaison Officer
MAH	Major Accident Hazard
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MHA	Ministry of Home Affairs
MLA	Member of Legislative Assembly
Mm	Mili Meter
MP	Member of Parliament
NAPCC	National Action Plan on Climate Change
NCC	National Cadets Corps
NCCF	National Calamity Contingency Fund
NDM	National Disaster Management
NDMA	National Disaster Management Authority
NDRF	National Disaster Response Force
NDRF	National Disaster Response Force
NEC	National Executive Committee
NFSM	National Food Security Mission
NGO	Non Government Organization
NIDM	National Institute of Disaster Management
NRDWP	National Rural Drinking Water Program
NRHM	National Rural Health Mission
NSS	National Service Scheme
NYK	National Yuva Kendra
PCPIR	Petroleum Chemical and Petrochemical Special Investment Region
PDS	Public Distribution System
PHC	Primary Health Center
PI	Police Inspector
PMGY	Pradhan Mantri Gramodyan Yojna
PRIs	Panchayati Raj Institutions
R & R	Recovery & Reconstruction
R&B	Roads & Buildings
RTO	Regional Transport Office



SC	Scheduled Caste
SDM	Sub District Magistrate
SDMA	State Disaster Management Authority
SDRF	State Disaster Response Fund
SDRN	State Disaster Response Network
SE	Superintending Engineer
SEOC	State Emergency Operation Centre
SFO	Sub Focal Officer
SEZ	Special Economic Zone
SHGs	Self Help Groups
SMC	School Management Committee
SMS	Short Message Service
SOP	Standard Operating Procedure
SRPF	State Reserve Police Force
SRT	Special Response Team
SSA	Sarva Shiksha Abhiyan
ST	Scheduled Tribe
S& R	Search and Rescue
Supt. Eng.	Superintendent Engineer
SWO	Social Welfare Officer
TDMA	Taluka Disaster Management Authority
TDMC	Taluka Disaster Management Committee
TDMP	Taluka Disaster Management Plan
TDO	Taluka Development Officer
TEOC	Taluka Emergency Operation Centre
THO	Taluka Health Officer
TNA	Training Needs Assessment
TSC	Total Sanitation Campaign
TSO	Taluka Supply Officer
ULB	Urban Local Body
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VDMP	Village Disaster Management Plan
VIPs	Very Important Persons
VVIPs	Very Very Important Persons
WASMO	Water and Sanitation Management Organization

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# Chapter -1

## ➤ **Introduction:**

The Government of Gujarat has envisaged the development of a holistic approach designed to manage disasters on a more proactive basis. The approach involves formulating a comprehensive policy on all phases of disaster management, and addresses the entire gamut of disasters arising from natural and manmade causes.

District Administration is primarily responsible for disasters/crisis management including prevention and mitigation. The existing Circulars of State Relief Manual guides the entire process of administration for relief and recovery in the State. These Circulars mainly address post-disaster events and the scope is limited to some of the natural hazards – floods, droughts & earthquake.

The Amreli District is prone to many natural and man-made disasters. Natural disaster vulnerability of the District is presented in the Vulnerability Atlas of Gujarat prepared by GSDMA (Gujarat State Disaster Management Authority). The Atlas covers hazard vulnerability of the District to flood, wind and earthquakes.

## ➤ **Aims and Objective:**

The aims and objectives of the Plan is to minimize the loss of lives and social, private and community assets because of natural and manmade disasters –

1. To assess the risks and vulnerabilities associated with various disasters.
2. To develop appropriate disaster prevention and mitigation strategies.
3. To provide clarity on roles and responsibilities for all stakeholders concerned with disaster management so that disasters can be managed more effectively.
4. To develop and maintain arrangements for accessing resources, equipment, supplies and funding in preparation for disasters that might occur.
5. To ensure that arrangements are in place to mobilize the resources and capability for relief, rehabilitation, reconstruction and recovery from disasters.
6. To create awareness and preparedness and provide advice and training to the agencies involved in disaster management and to the community.
7. To strengthen the capacities of the community and establish to maintain effective systems for responding to disasters.
8. To carry out restoration and rehabilitation measures soon after the disaster strikes.

➤ **Evolution of the Plan**

District Administration prepares plan using guidelines & ensures that these are constantly reviewed and updated. Junagadh District prepared in advance, designate evacuation areas for use in emergencies and defines plans for providing essential services to those areas, when in use.

While preparing a District Disaster Management Plan for Amreli District, the data collected at various levels were collated and on top of that was added with the Line department data. All this is made available with the in-house developed IT system 'State Disaster Resource Network [SDRN]'. It gives information access to all the officials at Taluka, District and state Secretariat level.

➤ **How to use the Plan & District Plan Approach**

The aim of the plan is to establish necessary systems, structures, programs, resources, capabilities and guiding principles for reducing disaster risks and preparing for and responding to disasters and threats of disasters in respective district, in order to save lives and property, avoid disruption of economic activity and damage to environment and to ensure the continuity and sustainability of development.

The district disaster management plan has a holistic and integrated approach with emphasis on prevention, mitigation and preparedness by ensuring that Disaster Management receives the highest priority at all levels in the district. It has a paradigm shift, similar to the lines of national and state level, from reactive and relief centric approach to disasters. The approach is aimed to conserve developmental gains and also minimize losses to lives, livelihood and property.

For efficient execution of the District Disaster Management Plan, the Plan has been organized as per these four stages of the Disaster Cycle.

The District Disaster Management Plan can be utilised but not limited for:

1. To integrate disaster risk reduction into sustainable development policies and planning;
2. To develop and strengthen institutional mechanisms and capacities to build resilience to hazards;

3. To systematically incorporate all international, regional, national and local disaster risk reduction strategies and approaches into the implementation of emergency preparedness, response and recovery.
4. To achieve a comprehensive, all hazard, all agencies approach by achieving the right balance of prevention, preparedness, mitigation, response and recovery;
5. Prepare communities to ensure that they are fully equipped to anticipate and respond to disaster events.
6. To promote a transparent, systematic and consistent approach to disaster risk assessment and management.
7. A multi-stakeholder participatory approach including community participation at all levels
8. Develop a database and information exchange system at regional level.

➤ **Authority for the plan**

The Gujarat State Disaster Management Act of 2003 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, which affect a district, with support from GSDMA, the relief commissioner and other public and private parties as, may be needed.

## **1.5 Stakeholders and their responsibilities**

The roles, responsibilities and obligation of the Collector and other Stakeholders are set out in detail in the Act and are considered as part of this plan.

### **Clause 26 of Chapter X. (THE GUJARAT STATE DISASTER MANAGEMENT ACT, 2003)**

- (1) Each department of the Government in a district shall prepare a disaster management plan for the district and the Collector shall ensure that such plans are integrated into the disaster management plan for the whole of the district.
- (3) A department of the Government shall subject to the supervision of the Collector -
  - (a) prepare a disaster management plan setting out the following, namely :-



- (i) the manner in which the concept and principles of disaster management are to be applied in the district;
- (ii) role and responsibilities of the department of Government in terms of the disaster management plan of the State;
- (iii) role and responsibilities of the department of Government regarding emergency relief and post disaster recovery and rehabilitation;
- (iv) capacity of the department of Government to fulfill its roles and responsibilities;
- (v) particulars of disaster management strategies; and
- (vi) contingency strategies and emergency procedures in the event of a disaster, including measures to finance the strategies.

➤ **Approval of the Plan**

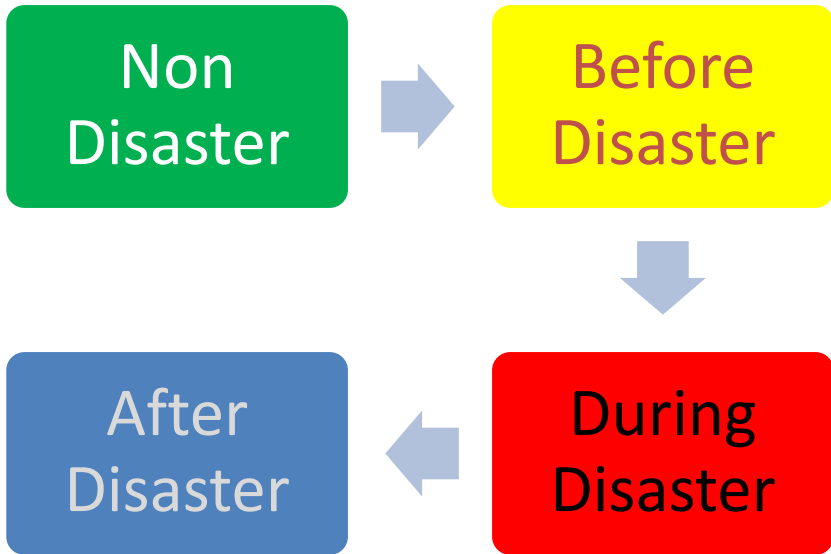
The Line Departments and other Stake Holders of District submits a copy of its disaster management plan, and of any amendment thereto to the Collector for Approval of that Plan.

The Collector shall submit a copy of the district disaster management plan, and of any amendment thereto to the State Disaster Management Authority and the Relief Commissioner for Approval of the Plan.

➤ **Plan review and updation**

The Line Departments and other Stake Holders of District should: regularly review and update the Plan and submit a copy of its disaster management plan, and of any amendment thereto to the Collector. The Same Compiled DDMP document should: regularly update and submits updated copy to Disaster Management Authority and State Relief Commissioner for Review.





Normally, The District Disaster Management Plan of District is updated twice in a year for Review and Updation. It is likely to be prepared in Pre-Monsoon phase in month of May and it is updated in Post Monsoon phase likely to be in month of November every year.



## Chapter 2

- **Hazard Risk Vulnerability Assessment (HRVA) – Authority that carried out HRVA:**
- **TYPES OF HAZARDS THE DISTRICT PRONE TO**

Amreli district is highly prone to multi hazards like Cyclone, Earthquake, flood, Accidents. The history of disasters in the district will provide a clear picture of the vulnerability to which the district is prone.

ΠΡΟΒΑΒΙΛΙΤΥ ΠΕΡΙΟΔ / ΣΕΑΣΟΝΑΛΙΤΥ ΟΦ ΔΙΣΑΣΤΕΡΣ													
Name of Disaster	Month												
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
Flood													
Cyclone													
Drought													
Earthquake													

- **Hazard Risk Vulnerability Assessment (HRVA) – Authority that carried out HRVA:**

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.

The table below summarizes the results of an analysis of hazard, risk and disaster impact in Amreli. This analysis indicates that disaster planning at the Amreli district level should first focus on the functional response to the High winds and Sea surge Costal Taluka for Rajula & Jafrabad Amreli District. The functional responses to these events have links to the response to floods and dam failure. Typical responses to these disaster events also can apply to fire, industrial accidents, failure of critical infrastructure and building collapse etc..

### Risk and Vulnerability Analysis-District Level

<b>Hazard</b>	<b>Probability</b>	<b>Impact</b>	<b>Vulnerability Rating (Probability times Impact)</b>	<b>Specific Locations and populations of concern area</b>
Earthquake (resulting in damage)	2	4	8 (Midimum) Zone 3	Zone- III : Entire District
Wind (cyclone)	4	4	16 (High)	Rajula & Jafrabad 23-Village (Most High)
Sea surge (cyclone)	2	3	6 (Low)	70,806 Rajula & Jafrabad Coastal Areas
Flood	3	3	9 (High)	Amreli, Bagasara, S.Kundla,Lilia,Dhari &Khambha,Babra
Industrial Accident	2	2	4 (Low)	Rajula, Jafrabad, Amreli & Babra
Drought	4	3	2 (Midimum)	Entire District
Heat/cold wave	5	2	10(Midimum)	-
Hail storm	1	1	1 (Low)	-
Landslides/Mudflows	1	1	1 (Low)	-
Dam Failure	1	2	2 (Low)	-
Mine fires/collapse	1	1	1 (Low)	-
Road/rail/air accident	5	3	15 (High)	-
Oil spill (marine)	2	1	2 (Low)	-
Boat sinking	2	2	4 (Low)	-
Building collapse	1	2	2 (Low)	Any Where in District
Human Disease (epidemics)	2	2	4 (Low)	-
Food poisoning	2	2	4 (Low)	-

Animal disease (epidemics)	2	2	4 (Low)	-
Terrorism (consequences)	1	1	1 (Low)	-
Lightninig	3	2	6(Low)	-
Thunderstorme	3	3	9(Low)	-
Critical Infrastructure Failure (e.g. extended power outage)	3	3	9 (Low)	-
Civil Unrest	2	1	2 (Low)	-

➤ **District's Hazard History, Last Impact and Area Affected :**

Amreli has been traditionally vulnerable to natural disasters on account of its unique geo-climatic conditions. Floods, Drought, Cyclones and Earthquake have been recurrent phenomena. Entire District Fall in to Seismic Zone-III . Jafrabad, Rajula 2 Costal Talukas are prone to Cyclone, 6 Taluka are Prone to Flood, and Entire District is also susceptible to drought.

➤ **Tool and methodology used for HRVA:**

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

1. Identify the Hazards of Concern: Complete the hazards column for the above mentioned table. Typical hazards have already been identified, but these should be confirmed at this step and additional hazards added as appropriate.
2. Assign the Probability Ratings: Assess the probability-or "livelihood" of each hazard by reaching a consensus on probability and then assign each hazard a "Probability Level," as indicated in above Table.

3. Assign the Impact Ratings: Assess the potential magnitude or impact of each hazard and assign each "Impact Level" in above table. Enter the impact score for each hazard in the table in Step 1.

4. Assign "Vulnerability" Ranking: Multiply probability and impact scores in table in Step 1. The resulting score indicates the vulnerability ranking. Scores above 12 indicate high vulnerability; score between 6 & 12 indicate medium vulnerability and score below 6 indicate low vulnerability.

5. Identify Areas with Highest Vulnerability: Once vulnerability ranks had identified, the locations and populations considered most vulnerable was identified. This aids in knowing where disaster assistance may be most needed, as well as providing a quick indication of where vulnerability reduction efforts could be most productive.

➤ **List of vulnerable Talukas (hazard-wise): details (Past Disasters):**

Sr.	Type of Disaster	Last Impact Month / Year	Intensity	Affected Area / Taluka
1	Earth Quack	January-2001	Medium	Amreli,Babra,Dhari,Jafrabad,Khambha.S.Kundla
2	Flood	2006-2007	Medium	Amreli,Babra,Dhari,Jafrabad,Khambha.S.Kundla, Bagasara
3	Cyclone	November-1982	Medium	Entire District
4	Drought	1999-2013	Medium	Entire District
5	Fire	2010	Light	Amreli,Dhari,Bagasara,Lathi
6	Heat Wave	May-2010/13	Medium	Entire District
7	Cold Wave	January-2008	Light	Entire District
9	Accident	2009-10-11-12-13	Light	State Highways
10	Food Poisoning	2009-2010-2014	Medium	Rajula, Khambha
11	Boat Sinking	2010	Light	Jafrabad

➤ **List Of Resources Taluka & District**

No.	Name of Taluka Mamlatdar Office	Ring Boya	Artical includeed in each ECRs			Generato s
			Life Saving Jacket	200 ft. Ropes	100 ft. Ropes	
1	Mamlatdar Office – Amreli	50	40	03	05	01
2	Mamlatdar Office – Babra	09	11	01	01	01
3	Mamlatdar Office – Dhari	06	02	01	01	01
4	Mamlatdar Office – Lathi	14	15	01	06	01
5	Mamlatdar Office – Vadiya	10	10	05	00	01
6	Mamlatdar Office – Liliya	11	09	00	02	01
7	Mamlatdar Office – Bagasara	20	20	02	03	01
8	Mamlatdar Office – Khamabha	02	25	02	05	01
9	Mamlatdar Office – Rajula	17	18	03	05	01
10	Mamlatdar Office – Savar Kundla	04	04	02	06	01
11	Mamlatdar Office – Jafrabad	16	10	04	04	01
12	DEOC-Collector Office*	01	20	05	04	01
13	Prant Office-Amreli					01
14	Prant Office-Rajula					01

### **Fire Tender Provided by Govt. at Various Levels**

No	Municipalities Name	Name of Equipment			
		Water Bowser	Mini Fire Tender	Boat	Bullet
1	Nagar Palika-Amreli	2	1		1
2	Nagar Palika -Saver Kundla	1	1	--	1
3	Nagar Palika - Rajula	1	1	01	1
4	Nagar Palika -Bagasara	1	1	--	1
5	Nagar Palika -Jafrabad	1	1	--	1
6	Nagar Palika -Lathi	1	1	--	
7	Nagar Palika-Chalala	-	1		
8	Nagar Palika-Babra		1		
	Total	07	08	01	5

All District level officers, Sub-Divisions and Talukas have been provided with Telephone connection, Fax Machine, Computers with peripherals, Vehicle, emergency lights and Generator.

All Police Stations/Out Posts have Telephone connection or VHF Communication facilities.

All Fire stations of the District are equipped with the basic resources for search and rescue operations. State Government has provided Water Browsers, Boat and also provided Emergency Lighting System and Motorcycle Water Mist to Most of Nagarpalikas of District.

#### **➤ Capacity Analysis:**

In case of Amreli District, considering the potential hazards and existing vulnerabilities, the current capacity of the district is just Medium, in terms of inventory, and the availability of resources (man & material) and utility point of view. The key details of the inventory and resources are in annexure.

Considering the profile of the district it is analyzed that sufficient resources are not available within the district. Material resources, monetary resources and human power are not sufficient to manage any larger calamities



➤ **Outcome & recommendations of hazard, risk, vulnerability and capacity analysis.**

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

- **Hazard analysis:**

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

**Primary Hazards:**

a) **Floods:**

River flooding is a regular hazard faced by the State. All the major river systems in the State are vulnerable to flooding, as captured in the Vulnerability Atlas. The urban areas face flooding primarily due to drainage failures and increased run-off loads in hard surfaces. The flood hazard of the State will be assessed comprehensively by way of analysis of flood return periods, topographic mapping and height contouring around river systems together with estimates of capacity of hydrology system and catchment area, analysis of precipitation records to estimate probability of overload and other scientific methods. An analysis of the flood proofing methods currently in place and their lacunae will also be carried out for identification of flood hazard.

b) Earthquakes:

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

c) Drought:

Low rainfall coupled with erratic behavior of the monsoon in the state make Gujarat the most vulnerable to drought. Of all the natural disasters, drought can have the greatest impact and affect the largest number of people. Drought invariably have a direct and significant impact on food production and the overall economy. Drought, however, differs from other natural hazards. Because of its slow onset, its effects may accumulate over time and may linger for many years. The impact is less obvious than for events such as earthquakes or flood but may be spread over a larger geographic area. Because of the pervasive effects of drought, assessing their impact and planning assistance becomes more difficult than with other natural hazards.

D) Fire:

Fires may be caused due to earthquakes, explosions, electrical malfunctioning and various other causes. The State shall take up detailed assessment of fire hazards like preparation of inventories/maps of storage locations of toxic/hazardous substances, provision and regular maintenance of firefighting equipment, identification of evacuation routes, fail-safe design and operating procedures, planning inputs, transportation corridors etc.

E) Cyclone:

In meteorology, a cyclone is an area of closed, circular fluid motion rotating in the same direction as the Earth. This is usually characterized by inward spiralling winds that rotate counter clockwise and clockwise of the Earth. Most large-scale cyclonic circulations are centred on areas

of low atmospheric pressure. The largest low-pressure systems are cold-core polar cyclones and extra tropical cyclones which lie on the synoptic scale.

At a community level, the GSDMA has proposed to provide temporary cyclone shelter.

There are 11 identified sites to construct Cyclone Shelter on Coastal Belt of Amreli District Jafrabad Block. These shelters will be, with built-in safety against high wind velocity and heavy rainfall and within easy reach of the people most affected. Educational buildings or places of worship may also be designed as cyclone shelters, for evacuation and temporary occupation.

A number of special programs are in operation for mitigating the impact of natural disasters and local communities have developed their own indigenous coping mechanisms. In the event of an emergency, the mobilization of community action supported by NGOs, add strength to the national disaster management capacity.

#### F) Thunderstorm And Lightning

Thunderstorm, a violent, short-lived weather disturbance that is almost always associated with lightning, thunder, dense clouds, heavy rain or hail, and strong, gusty winds. Thunderstorms arise when layers of warm, moist air rise in a large, swift updraft to cooler regions of the atmosphere. There the moisture contained in the updraft condenses to form towering cumulonimbus clouds and, eventually, precipitation. Columns of cooled air then sink earthward, striking the ground with strong downdrafts and horizontal winds. At the same time, electrical charges accumulate on cloud particles (water droplets and ice). Lightning discharges occur when the accumulated electric charge becomes sufficiently large. Lightning heats the air it passes through so intensely and quickly that shock waves are produced; these shock waves are heard as claps and rolls of thunder. On occasion, severe thunderstorms are accompanied by swirling vortices of air that become concentrated and powerful enough to form tornadoes.

## Chapter 3

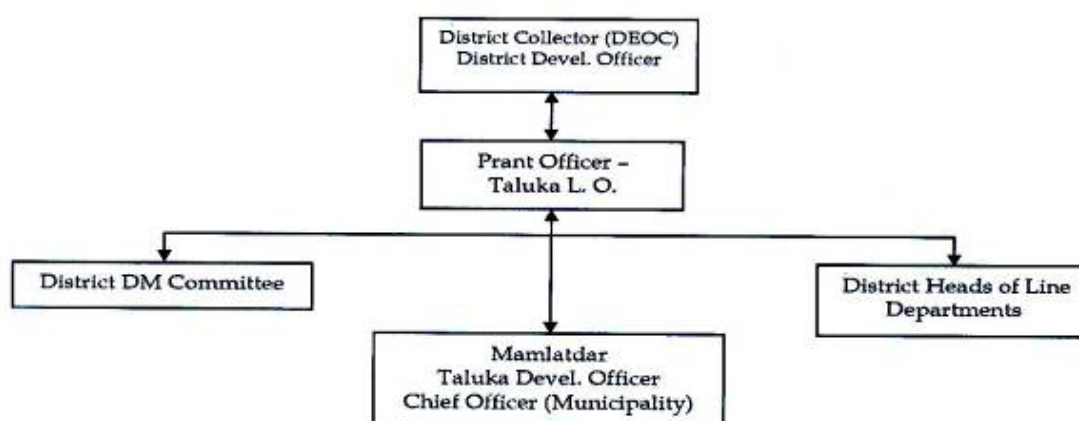
### Institutional Arrangements:

#### Institutional Arrangement/Response

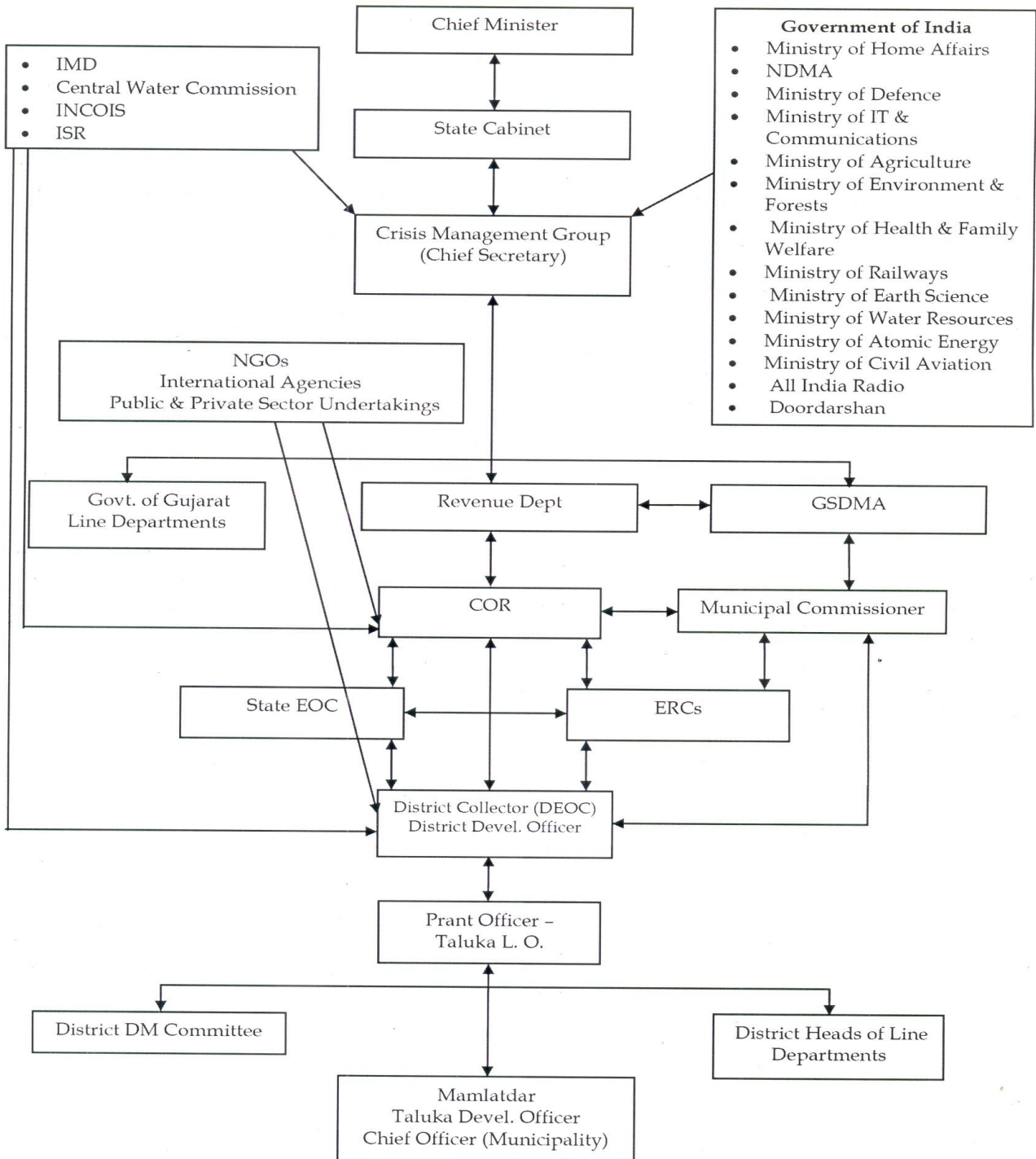
The plan incorporate multi level institutional as well as response planning mechanism at district level. that is.....

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

#### D.M. organizational structure in the district.

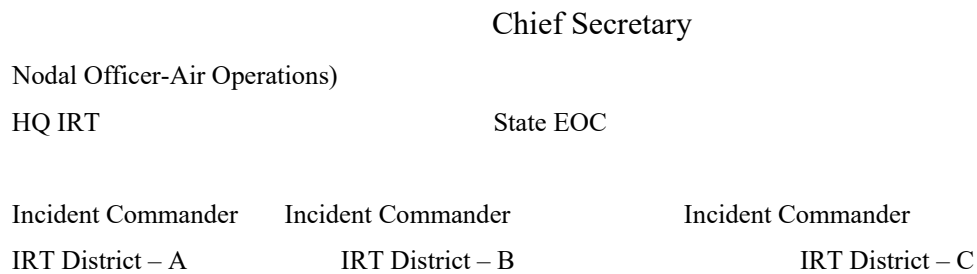


### 1.10 DM Structure in the State



## Incident Response at the State Level

In any disaster response, the initial efforts would always be taken by the District Administration. However, when Districts are overwhelmed in any situation, the support necessarily has to come from the State and National level. While the IRS is mainly relevant at the basic functional level, it is absolutely necessary that the support functionaries from the State and the National level also conform to the principles of IRS in the emergency support duties. This will be greatly beneficial for the proper coordination of the various response efforts at the National and State level with that of the District. It is therefore necessary to clearly understand the structure of the IRS in the context of State response. The hierarchical representation of RO with State EOC, Headquarters IRT and its lower level of IRTs at District levels are shown in Fig. 4.



**B. DDMC: -District Disaster Management Committee:**

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

Sr. No.	Detail
1	Collector
2	DDO
3	SP
4	District supply officer
5	Exe. Engineer-R&B State
6	Exe. Engineer-R&B Panchayat
7	Exe. Engineer-R&B State Irrigation
8	Superintending Engineer- PGVCL
9	District Home guard commandant
10	Superintendent .Hospital
11	Port Officer-GMB
12	District forest Officer
13	Dy. Director-Information Department
14	Chief fire officer
15	Regional Officer-GPCB
16	District Agriculture Officer
17	SDM
18	Regional Transport officer
19	Divisional Controller-State transport
20	Dy. Controller –Civil Defense
21	District Education Officer
22	District Primary Education officer
23	NGO Member
24	Media Person

C. TDMC: - Taluka Disaster Management Committee:

TDMC		
Liason Officer (LO)		
TDO	Mamlatdar	Line Department (State)
Assistant TDO	Dy. Mamlatdar( Revenue)	Irrigation
Extension Officer	Dy. Mamlatdar(Civil Supply)	Road & Building (State & Panchayat)
Gram Sevak/Talati	Dy. Mamlatdar (Mid Day Meal)	Forest
Kelavani Nirikshak	Dy. Mamlatdar ( e Dhara)	DGVCL
Veterinary Offier	Circle Officers	Taluka Health Officer
Agriculture Officer	Talati (Revenue)	Water Supply
Social Welfare Officer		Transportation
Child Development Project Officer		Police
		Central Govt.Department
		Western Railway
		NHAI
		Port Authority
		Post & telecommiunication

Block/Taluka level Disaster Management Committees will be constituted and will be headed by Mamlatdar as the case may be Officers from different departments and representatives of local panchayat body will be members of this Committee. The Committee will look into all the aspects of disaster management including mitigation preparedness, response and relief. Following member is club in TDMC.



Sr. No.	Detail
1	Dy.Collector/ Dy.D.D.O.
2	Mamlatdar
3	Taluka Development Officer
4	Dy. Executive Engineer- R & B (State)
5	Dy. Executive Engineer- R & B (Panchayat)
6	Dy. Executive Engineer – Irrigation
7	Dy. Executive Engineer –GEB
8	Dy.Executive Engineer – Water Supply
9	Junior Engineer-Telecom
10	<u>Μεδιγαλ Οφφίγερ (Μοτηερ ΠΗΧ)</u>
11	Police Inspector/ Police Sub Inspector
12	Taluka Home Guard Commandant
13	Taluka Kelvani Nirikshak
14	Godown Manager- Civil Supply Corporation
15	Depot Manager – S.T.
16	<u>Πορτ Οφφίγερ</u>
17	Range Forest Officer (Head Quarter)
❖ <u>Non- Government Members</u>	
18	Present-Taluka Panchayat
19	M.P.
20	M.L.A.
21	<u>Χηαιρμαν– Σογιαλ θυστιχε Χομμιττεε (Ταλuka Πανχηαψατ)</u>
22	Woman Member - Taluka Panchayat
23	NGO Representative

#### D. CDMC: -City Disaster Management Committee:

In each City / Nagarpalika, there shall be a Disaster Management Committee which will oversee all activities in disaster management. The ULB will also constitute a City Disaster Management Team consisting of officials and non-officials and organize training for them to be able to discharge their duties properly.

Sr. No.	Department
1	Dy.Collector/SDM/Dy.DDO
2	Chief Officer
3	Chief fire officer
4	Mamlatdar
5	Town planning Head
6	Dy.Exe.Engineer-R&B state
7	Dy.Exe.Engineer-state-Irrigation
8	Dy.Exe.Engineer- PGVCL
9	Dy.Exe.Engineer-GWSSB
10	Junior Engineer Telecom
11	Medival Officer-C.H.C.
12	Medical Officer Municipality Health Centre
13	Head Transport committee
14	PI/PSI
15	Taluka Homeguard Commandant
16	Education Officer Municipality Education committee
17	Project Coordinator-UCD
18	Port officer
19	Range forest officer-Extension
`Non Governmental Member	
20	President Municipality
21	Member of Parliament

22	Member of Legislative assembly
23	Chairman- Standing Committee committee
24	Chairman-Water Supply committee
25	Chairman City planning committee
26	Chairman Construction Committee
27	Women Member of Municipality
28	Scheduled caste Member of municipality
29	Local N.G.O.
30	Other-Decide By CDMC

#### **E. VDMC: - Village Disaster Management committee**

Each village shall have a Disaster Management Committee consisting of officials and nonofficials. The Committee will be constituted to oversee by the gram sabha. The Committee will be responsible for awareness generation, warning dissemination, community preparedness plan, adoption of safe housing practices and organizing and cooperating relief in post disastersituations. The member is..

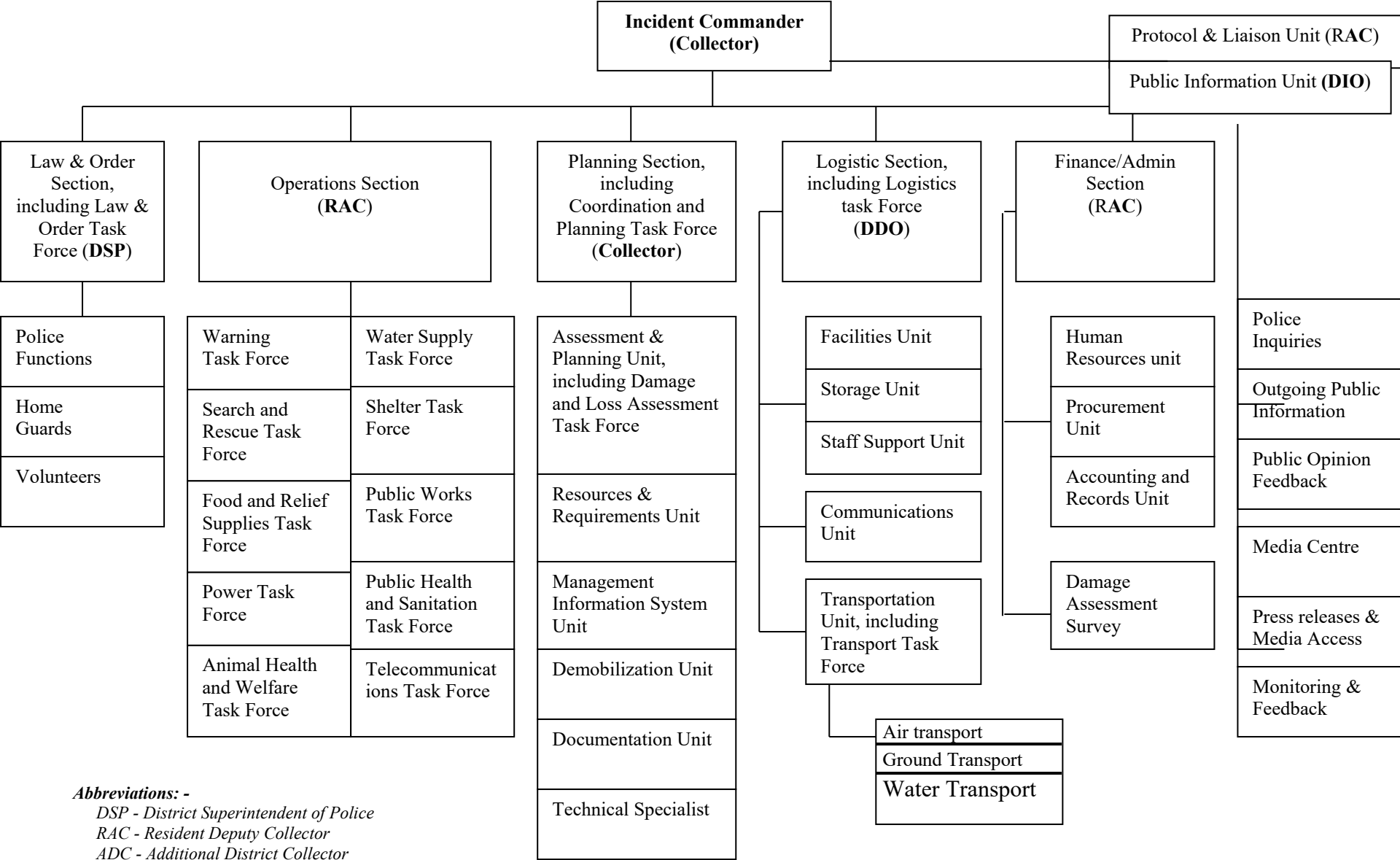
Sr. No.	Detail
1	Sarpanch-Chair Person
2	Talati cum Mantri
3	Primary Principal
4	Health Worker
5	Anganwadi Worker
6	President Seva Co operative
7	President Milk cooperative
8	Community Representative
9	Community Representative
10	Community Representative
11	Fair price shop holder

**Crisis Groups : Member Details : Amreli District**

<b>Sr No</b>	<b>Member Details</b>
1	District Collector & Magistrate (Chairman)
2	Executive Engineer ( Member)
3	Dy. Information Officer (Member)
4	District Homeguard Officer(Member)
5	District Police Officer(Member)
6	Regional Officer(Member)
7	Factory Manager(Member)
8	Regional Transport Officer(Member)
9	Chairman of Local Crisis Group (Member) Dy. Collector
10	Civil Surgeon(Member)
11	District Health Officer (Member)
12	Additional Magistrate & Additional Collector (Member)
13	Asst. Director, Industrial Safety & Health(Member Secretary)
14	Fire Officer(Member) Amreli
15	Dy. Chief Controller of Explosive (Member)
16	President, Bharatiya Majoor Sangh,(Member)
17	Chief Officer(Member) Nagarpalika, Amreli
18	District Agriculture Officer (Member)
19	Member SHV Energy North West (I) Pvt. Ltd. Amreli
20	Manager(Member) Shell Gas (LPG) (I) Pvt. Ltd. Pipavav Amreli
21	Dy. General Manager(Member) Gujarat Cement Works Ltd. Koyava, Amreli
22	District Development Officer(Member)
24	Port Safety Manager, Pipavav, Rajula( Member)
25	Subdivisional Magistrate(Member)

	Deputy Collector, Amreli
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IRS Incident Response System in Amreli District



**Abbreviations: -**  
DSP - District Superintendent of Police  
RAC - Resident Deputy Collector  
ADC - Additional District Collector  
DDO - District Development Officer  
DIO - District Information Officer

➤ EOC Setup and Facilities available with the Location:

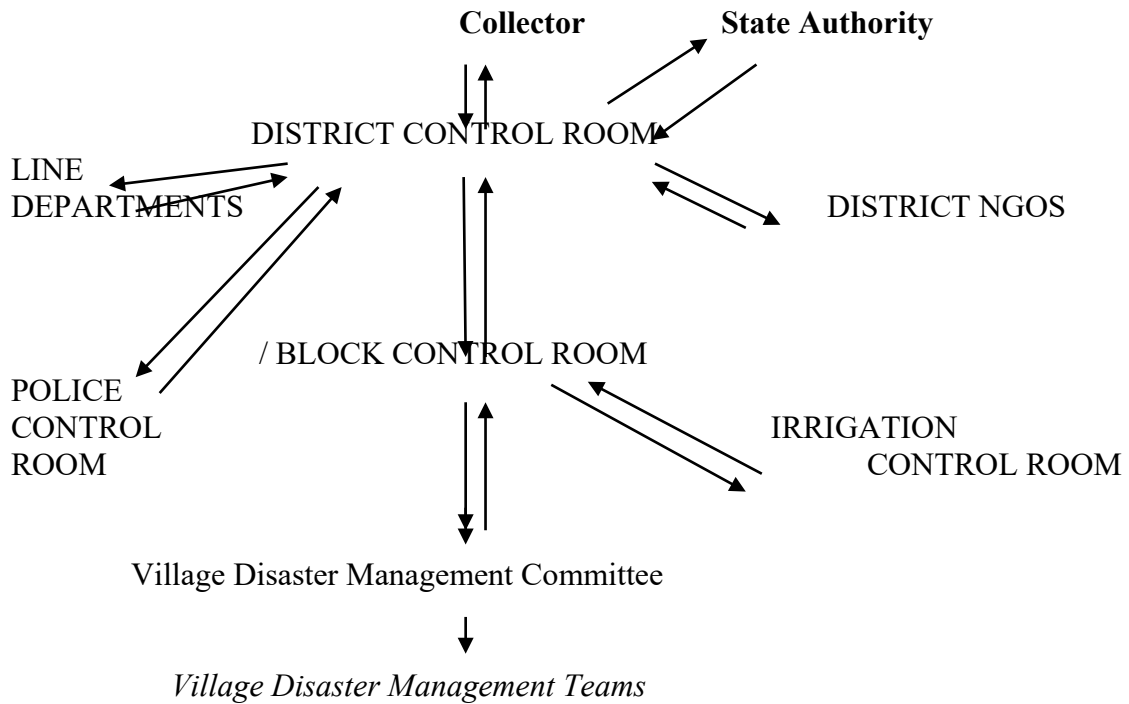
Equipments allotted by GSDMA Gandhinagar for the District EOCs under the Gol-UNDP DRM Programme

No.	List of Equipment for Emergency Operation Center	Quantity
1	Mobile Phone Nokia – 3120 Mobile Phone Nokia --	1 1
2	Handset Held Walkie Talkie (No. Two)	2
3	AO-170LSD - Dell Optipex 170E Small Desktop PCs	1
4	Diesel Generating Set with Accessories	1
5	Satellite Phone	1
6	Computer	2
7	U.P.S.	1
8	Projector	1
9	Portable Light	3

➤ **District Disaster Information Management System**

Any disaster related information flow happens in both the directions, from nodal authorities to concerned stakeholders, and from the stakeholders to the nodal authorities/ departments as well, stage wise. And for each stage, there should be a designated nodal officer, and also should be dedicated control room, to be used exclusively for the disaster related information dissemination purpose. Control room is a nodal centre in terms of disaster Management which performs the function of collecting and transmitting information to the appropriate places and people. Therefore Control room has to be equipped with the latest telecom communication facilities. All the important information of the district administration in case of emergency is also available in the control rooms. The control room is connected to all the line departments, collectorate, NGOs, police control room, and block control room which is connected to village task force and irrigation control room. Collector controls all the information flow through control room

in the district and with the state authority. The enclosed schematic diagram is self explanatory, and it addresses the linkages of the flow at district and sub district level.





### ➤ **Forecasting and warning agencies:**

On the receipt of warning of alert from any such agency which is competent to issue such a warning, or on the basis of reports from Divisional Commissioner/ District Collector of the occurrence of a disaster, all community preparedness measures including counter-disaster measures will be put into operation. The Chief Secretary/ Relief Commissioner will assume the role of the Chief of Operations for Disaster Management.

It is assumed that the district administration would be one of the key organizations for issuing warnings and alert. Additionally, the following agencies competent for issuing warning or alert are given below.

<b><u>Disaster</u></b>	<b><u>Agencies</u></b>
Earthquakes	IMD
Floods	Meteorological Department, Irrigation Department.
Cyclones	IMD
Epidemics	Public Health Department
Road Accidents	Police
Industrial and Chemical Accidents	Industry, Police, District Collector
Fire	Fire Brigade, Police, Collector
Rail Accident	Railways, Police, Collector
Air Accident	Police, Collector, Airlines
Ammunition Depot-Fire	Army, Police, Collector.

➤ **The occurrence of the disaster will be communicated to :**

Governor, Chief Minister, Home Minister, Relief Minister and non-officials namely MPs and MLAs from the affected district. Chief Secretary, Principal Secretary, Disaster Management & Relief Department, Secretary, Disaster Management & Relief Department, Cabinet Secretary, Secretary, Home and Defense, Government of India. Secretary, Agriculture, and Joint Secretary, NDM, Ministry of Agriculture, GOI Local Area Commander of the Army.

➤ **The Occurrence of the Disaster would essentially bring into force the following :**

The Emergency Operations Centre will be put on full alert and expanded to include Branch arrangements, with responsibilities for specific tasks, depending on the nature of disaster and extent of its impact. The number of branches to be activated will be decided by the Chief of Operations.

All Branch Officers and Nodal Officers will work under the overall supervision and administrative control of the Chief of Operations. All the decision taken in the EOC have to be approved by the Chief of Operations.

- ❖ Immediate access to the disaster site.
- ❖ Telephonic and VSAT, wireless communication and hotline contact with the Divisional Commissioner, and Collector/s of the affected district/s will be activated.

The EOC in its expanded form will continue to operate as long as the need for emergency relief and operations continue and the long-term plans for rehabilitation are finalized for managing long-term rehabilitation programmes, such as construction of houses, restoration of infrastructure etc. the responsibilities will be that of respective line departments. This will enable EOC to attend to other disaster situation, if the need be.

## Chapter 4

### Prevention and Mitigation Measures

#### ➤ Preventive measure (for all disasters)

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

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

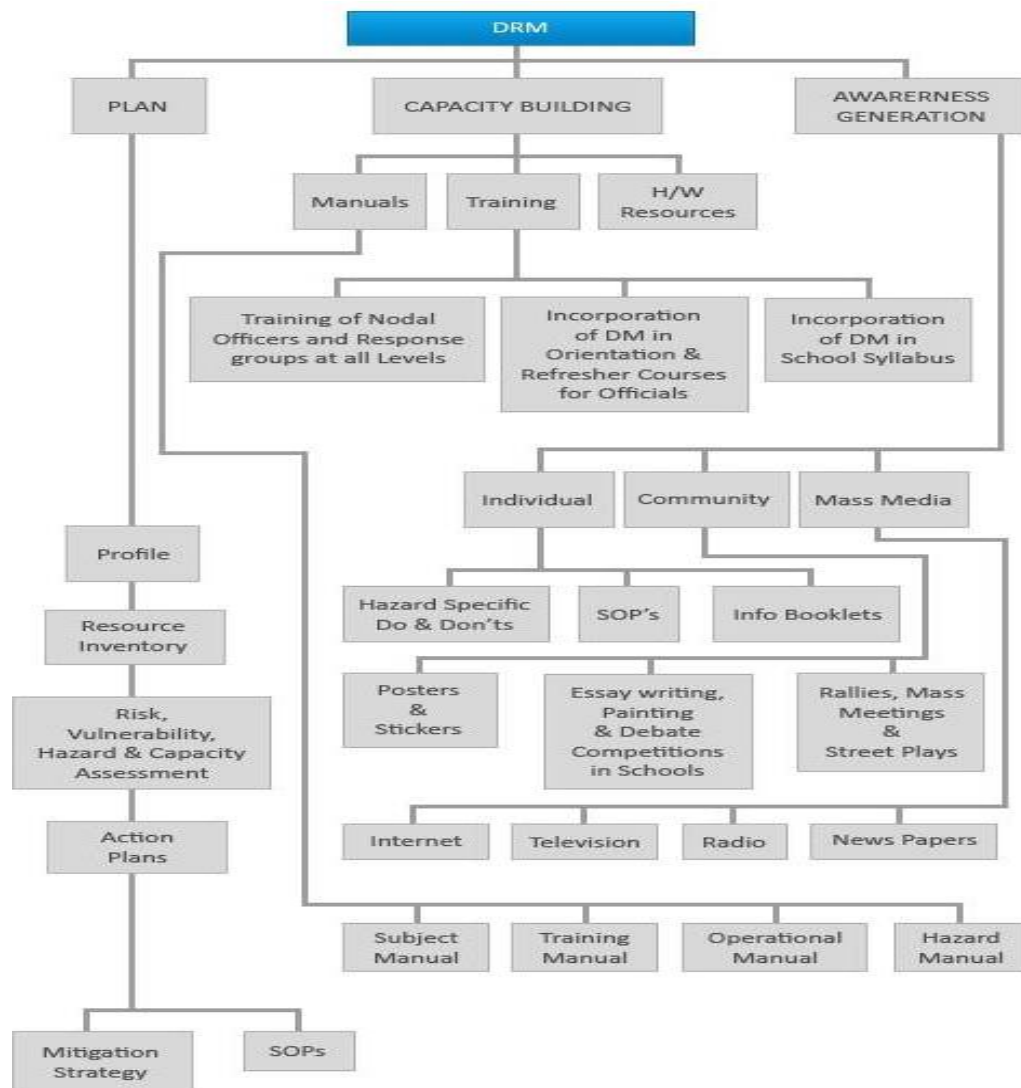
The Collector, assisted by the District Development Officer, is responsible for developing plans and activities to effect mitigation, preparedness and prevention using the mechanism noted above. Based on the interim assessment of risk and vulnerabilities, the Amreli District will focus on the following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

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

➤ **Special projects proposed for preventing the disasters.**

- **DRM**

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



- **NCRMP:**

Gujarat being prone to cyclones, it is the topmost priority of the State Government to reduce the effect of cyclone and minimize the loss to property and lives in the coastal regions of the State through creation of suitable infrastructure. Gujarat has therefore been included in the NCRMP initiated by the National Disaster Management Authority and funded by the World Bank. **In Amreli District total 11 villages GSDMA Identified for Cyclone Shelter**

Two important components i.e. construction of Multi Purpose Cyclone Shelters (MPCS) and construction and repair of missing roads will be implemented as part of NCRMP. The process of preparing the Detailed Project Proposals has been initiated by GSDMA through the concerned line department and the same will be submitted to NDMA before the project is operational zed.

- **School Safety Programme:**

Gujarat School Safety Initiative (GSSI) – I & II. The pilot programs were designed for promoting a culture of disaster safety in schools and reduce risk through structural and non-structural measures in the schools.

#### Gujarat School Safety Initiative – I

One hundred and fifty schools were selected from the cities of Ahmadabad (100), Jamnagar (15) and Vadodara (35) cities on basis of the school's disaster vulnerability, number of students and willingness to implement the suggested measures. The following activities were conducted in each of the project schools:

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

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

### **Gujarat School Safety Initiative – II**

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

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

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

## ➤ **Hazard-Wise Mitigation Measures**

Mitigation Measures- This section would describe the strategies and interventions that the District Disaster Management Authority (DDMA) and other stakeholders will implement in order to reduce disaster risks. This may include both structural and non-structural kind of strategies. There should be strategy for Information, Education and Communication (IEC) activities under the Non structural measures.

- Mitigation measure (for all disasters)

### **i) Town and Country Planning Acts and their related provisions:**

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

### **Zoning Regulations and their related provisions:**

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

### ➤ **Development Control regulations:**

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

### ➤ **Government-sponsored programmes and schemes:**

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

➤ **Building Bye-laws and their implementation:**

Proper conceptualization, risk evaluation, proper designing, construction and maintenance of houses and building are all disaster reduction measures. Compliance to building guidelines and codes covering all aspects of disasters needs to be addressed by building codes and bye-laws and these need to be uniform as far as possible. The situation warrants a high degree of coordination between the organizations involved in the formulation of the building codes. The State Urban Development Department/Urban Local Bodies will put in place appropriate techno legal regime and take steps to enhance the capacity of Urban Local Bodies to enforce the compliance of techno-legal regimes. The Urban Local Bodies will ensure stringent implementation of BIS codes and disaster resistant construction practices. Disaster resistant codes and standards will be made a part of the building byelaws and regulations and enforced by the ULBs. The Department of Urban Development will identify a competent authority to certify the disaster resistant components in public buildings.

➤ **Capacity Building for Mitigation:**

Recognizing the importance of human resource development and capacity building for effective disaster mitigation, the State will take appropriate steps to develop training curriculum for officials in all sectors at all levels. The SPIPA in collaboration with the Gujarat Institute of Disaster Management and training institutes in related sectors like health etc will develop the required modules and capsules for conducting training at all levels. Efforts will be made by the state government to effectively train engineers, architects, masons etc on disaster mitigation and also create a pool of master trainers for training of the DMC's and DMTs in the state. The District Level Training Institutes, DEOC, BRCs, CHCs etc. will be utilized for training of district, taluka and village level officials in disaster management.

➤ **Awareness generation on disaster mitigation:**



Creating awareness among the community through disaster education, training and information dissemination and thus empowering them to cope with hazards are all mitigation strategies. The Disaster Management Cell will develop a Mass Media Campaign for taking up large-scale awareness generation bringing out specific do's and don'ts through audio, video and print media as well as publicity through pamphlets, posters, bus back panels at all levels. The District Project Officer will ensure that all these publicity materials are prominently displayed at buildings like PHCs, Community Centres, Schools and such other common places where villagers normally congregate for community activities.

➤ **Role of local self-governments in mitigation:**

Local self-government institutions like PRIs and ULBs will be the focal points for mitigation at the village and city levels. Members of the PRIs and ULBs will be involved in all preparedness and mitigation measures. Members of the PRIs and ULBs will coordinate the functioning of the DMCs and the DMTs in DM plan preparation, preparation and maintenance of resource inventory, conducting mock drills etc. During disasters also, they will coordinate with the district and taluka administration for evacuation, response, relief distribution etc.

➤ **Hazard-Wise Non –Structural Mitigation Measures:**

**Structural: Structural Mitigation Measures**

- a. **Retrofitting of Buildings:** In Amreli region maximum buildings are non-engineered or kuchcha, having lower seismic resistant capacity. There are mainly four major types of constructions:

Category A: Adobe, fieldstone Masonry Buildings

Category B: Brick Construction Masonry Buildings

Category C: R. C. C. Construction

Category X: Traditional & Conventional Construction

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

.After assessment of vulnerability of buildings the priority for structural mitigation has to be defined. Generally public buildings are given first priority because they are lesser in number and at the time of disaster people can take shelter in these public buildings. Some examples of

important buildings are hospitals, clinics, communication buildings, fire and police stations, water supply, cinema halls, meeting halls, schools and cultural buildings such as museums, monuments and temples. The second priority goes to other type of buildings like housing, hostels, offices, warehouses and factories.

**b. Construction control:** The best protection against earthquake is a strong built environment. The quality of buildings, measured by their seismic resistance is of fundamental importance. Minimum design and construction standards for earthquake and flood resistant structures legislated nationally, are an important step in establishing future minimum levels of protection for important structures. India now has building codes and regulations for seismic and flood resistant design. These codes are in constant review by the experts. The below mentioned building codes are generally practiced in India:

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

#### **NON STRUCTURAL:**

**Land use planning:** Damage to a building depends primarily upon the soil conditions and topology of the area. Amreli district comes under moderate risk zone in terms of earthquake (Zone 3) and flood disaster. But a part of it is also recommended by DMI to be included under zone 4 of earthquake as it lies on a cross fault Junagadh region.

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

#### **Mitigation strategies**

The mitigation strategy for Amreli district involves the following elements:

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

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

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

4. Construction of check dams and embankments and drainage systems to prevent flooding of those areas.

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

**Sarva Shiksha Abhiyan:**

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

**NRHM:**

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

**Mukhyamantri Avas yojana:**

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

**Jal- Abhishekh Abhiyan:**

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

**Samagra Swachta Abhiyan:**

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

**Madhyanah Bhojan Karyakram:**

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

**JNNURM** Localization and Project Uday Institutionalization with replication

➤ Training & Capacity Building

The capacity of a community to withstand disasters is a function of-

- Awareness of the risks associated with disasters
- Understanding of appropriate responses to disasters
- Possessing the capacity to respond (training, research, availability of resources, skilled cadres)
- Setting up emergency response mechanism that mobilize and deploy these trained resources in a quick, efficient and systematic manner.

The above can be achieved with the help of MPSDMA and the relevant government departments. They can ensure that personnel in specialized areas (medical care, relief, etc) are adequately trained and available for deployment in emergency situations. The basic concepts relating to disaster management and the role of the community therein shall be included in the curriculum of schools. All this shall have a special thrust on empowering women towards long term disaster mitigation. It should enhance the existing capacity to limit damage by improving surveillance and early warning system. MPSDMA should stimulate the active involvement of the community, local groups, women and disabled people in disaster management programs with a view to facilitating the capacity of the community to deal with disasters. Promote and support research, development and the use of local knowledge in measures that are aimed at supporting risk reduction and relate to disaster management activities.

### C 1.1.3 Community Initiatives

Communities are always the first responders and hence the DDMA / District. Authority will ensure Community participation through initiatives like Community Based Disaster Management (CBDM) to promote local ownership, address local needs, and promote volunteerism.

Aim of CBDRM is to reduce vulnerabilities, and increase capacities of households and communities to withstand damaging effects of any disaster. It enhances people's participation and empowers them in achieving sustainable development and sharing its benefits. With the help of outsiders they can address issues of situational analysis, planning and implementation of risk reduction and preparedness measures. Through a thorough assessment of communities' hazard exposure and analysis of specifics of the vulnerabilities as well as capacities, CBDRM forms the basis for activities, project and programs required to reduce disaster risk. Since they are one of the primary actors and should be actively involved in the preparation of plan.

### C 1.1.4 Risk Management Funding

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

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

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

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

Short term funding: RBC again.

Long term: Fire equipments should be purchased as required and as per new technology. For eg: multistoried buildings (masks aren't available), equipments for fire extinguishing in slum areas where fire brigade cannot enter.

Eco friendly watershed interventions to deal with drought situations, check dams for mitigating soil erosion should be established.

Planting trees on banks of rivers to prevent soil erosion and act as shelter belts.

## **Chapter-5**

# Preparedness Measures

preparedness measures go hand in hand for vulnerability reduction and rapid professional response to disasters. Experience has shown that destruction from natural hazards can be minimized by the presence of a well functioning warning system, combined with preparedness on the part of the vulnerable community. A community that is prepared to face disasters, receives and understands warnings of impending hazards and has taken precautionary and mitigation measures will be able to cope better and resume their normal life sooner.

The State will make concerted efforts to put in place a mechanism focused towards preparedness at all levels, for all disasters that the State is vulnerable to. The effort will be to reduce loss of lives, livelihood and property to the extent possible in the event of a disaster.

## **a) State Level :**

At the state level, Search & Rescue teams will be constituted from the State Police and will be provided with state-of-the-art equipment for immediate response. The State Home Department will designate the units for conversion into Specialist Response Teams (SRTs). The State will also designate training centres for training the SRTs and nominate key personnel within the Police Training Colleges and Fire Training Institutes as trainers and train them at the national level. These trainers will then impart training to the SRTs.

## **b) District Level:**

Subsequently, Specialized Response Teams at the district level will be designated from the district level Police and Fire Service personnel and equipped for immediate response in any disaster within the district. In the event of a request from a neighboring district these teams will be authorized to operate under the direction of the Collector of that district.

## **c) On-site teams:**

Disaster Management Teams (DMTs) at the village level will operate as Incident Management Teams and will be trained to perform immediate rescue and first-aid operations in a disaster situation. A systematic approach should be evolved to ensure proper coordination between the SRTs and DMTs.

## **d) Emergency Operations Centre (EOC):**

In a disaster situation, variable factors of intensity, affected population and severity of damage need to be quickly assessed based on which government agencies can allocate and deploy relief. Therefore, in the event of failure of the normal management mechanism, an Emergency Operations Centre becomes a nodal point for overall coordination and control of relief work.

The EOC at the State and District will be activated immediately on the event of a disaster or a disaster warning. The primary function of these EOC is to facilitate the smooth inflow and out flow of relief and other disaster response related activities. These EOC act as bridges between the centre, state and district. The EOC have to be equipped with state of the art communication technology and GIS enabled systems for quick and effective decision making. The structure in which EOC are housed must also be disaster resistant. The EOC In charge who has had substantial expertise in the area of disaster management and is familiar with the area of disaster should head the EOC. Since the EOC functions and activities require quick and spot decisions, the EOC equipment as well as manpower is required to be periodically evaluated and tested. Therefore the core nucleus of the EOC will remain functional throughout the year.

#### **E) Emergency Management Contact Directory:**

An Emergency Management Contact Directory will be prepared and maintained, containing contact numbers of all the nodal officials in disaster management along with those of prominent NGOs. The Collector will supervise and coordinate the preparation and regular updating of this directory at the district level and send a copy to the State Department of Disaster Management.

#### **f) Mock drills:**



The district police department, Home guards, Civil Defence personnel, Fire Service officials, SRTs, QRTs, DMCs and DMTs will undergo periodic mock drills for different disasters, coordinated by the District Collector at the district level and by the Relief Commissioner at the State level. It is mandatory to have mock-drills at least twice in a year for fire and earthquake.

**g) Role of local-self governments in disaster preparedness:**

The Chairpersons of the PRIs and ULBs will ensure necessary measures for warning dissemination, community awareness generation, evacuation drills and capacity building of their functionaries to be involved in disaster management.

**h) GSDMA DRM activities**

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

**i) Awareness Generation: -**

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

- Community Warning System

**j) Indian Disaster Resource Network [State database]:**

A web-enabled centralized database for the IDRN is operational. The network will enable quick access to resources to minimize response time in emergencies. The system gives the location of specific equipments/specialist resources as well as the controlling authority for that resource so that it can be mobilized for response in the shortest possible time. The database will be made available at the district, state and national levels and will be used for all emergencies and day-to-day operations. However, the District Collector will take proactive steps to verify and update the dataset regularly. The Department of Disaster Management will update the database on a quarterly basis. All District Collectors will provide the updated information to the Department of Disaster Management regularly.

**k) Search & rescue**

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

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

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

### **Search & rescue Team**

#### **S.No. designation of trained S&R Team member**

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

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

#### **L) Early Warning:**

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

The State acknowledges the crucial importance of quick dissemination of early warning of impending disasters and every possible measure will be taken to utilize the lead-time provided for preparedness measures. As soon as the warning of an impending calamity is received, the EOCs at the State, District and Block levels will be on a state of alert. The Incident Commander will take charge of the EOC and oversee the dissemination of warning to the

community. The District Collector will inform the District Disaster Management Committees who will alert the block and Village level DMCs and DMTs to disseminate the warning to the community. On the basis of assessment of the severity of the disaster, the State Relief Commissioner (Incident Commander) shall issue appropriate instructions on actions to be taken including evacuation to the District Collector, who will then supervise evacuation. In situations of emergency, the District Collector will use his own discretion on the preparedness measures for facing the impending disaster.

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

**i) Evacuation:**

**Temporary Shelter:**

- ❖ For temporary shifting of affected persons ,temporary shelter are used during the effect of Cyclone.
- ❖ In city area,Amreli District decided ward wise primary schools , Secondary/Higher secondary schools , Community hall , Colleges etc .. as temporary shelter for Cyclone affected persons and incorporated the same with their DM Plan which are used at the time of Cyclone. Sasnadhikari is the focal person for temporary shelter for corporation area.
- ❖ Primary/secondary/Higher secondary schools , Colleges , Community hall etc. of taluka and villages are used as temporary shelter and the focal officer for the same is DEO and DPEO.

Evacuation is a risk management strategy, which may be used as a means of mitigating the effects of an emergency or disaster on a community. It involves the movement of people to a safer location. However, to be effective, it must be correctly planned and executed. The process of evacuation is usually considered to include the return of the affected community. Shelter provides for the temporary respite to evacuees. It may be limited in facilities, but must provide protection from the elements as well as accommodate the basic personal needs, which arise at an individual level in an emergency.

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

- Identification of appropriate shelter areas based on safety, availability of facilities, capacity and number of victims.
- Approaches to the shelter location in light of disruption due to hazard impact and traffic blockades.
- Temporary accommodation
- Provision of essential facilities like drinking water, food, clothing, communication, medical, electrical and feeding arrangements, etc.
- Security
- Financial and immediate assistance
- First-aid and counseling

### **Types of evacuation**

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

(a) Immediate evacuation, which allows little or no warning and limited preparation time as in the case of earthquakes and air accident.

(b) Pre-warned evacuation resulting from an event that provides adequate warning and does not unduly limit preparation time as in the case of flood and cyclones.

### **Principles of Evacuation Planning**

- Establishment of a management structure for organization, implementation, coordination and monitoring of the plan.
- Determination of legal or other authority to evacuate.
- Clear definition of rules and responsibilities.
- Development of appropriate and flexible plans.
- Effective warning and information system.
- Promoting awareness and encouraging self-evacuation.
- Assurance of movement capability.
- Building confidence measures and seeking cooperation of the affected community.
- Availability of space for establishment of relief camps having requisite capacity and facilities.

- Priority in evacuation to be accorded to special need groups like women, old and sick, handicapped and children.
- For effective evacuation, organization and running of relief centers, cooperation and involvement of all agencies viz. Community, volunteers, NGOs, NCC / NSS, Home guards and civil defense, district and village bodies be ensured.
- Security arrangement and protection of lives and property.
- Preparation and updating of resource inventories.
- Appropriate welfare measures throughout all stages
- Test exercise of prepared plans and recording of lessons learnt
- Documentation.

### **Stages of Evacuation**

There are five stages of evacuation as under:

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

### **Decision to Evacuate**

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

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

### **Basic consideration for Evacuation**

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

victims, viz. manpower, transport, supplies equipments, communications and security of the evacuated area.

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

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

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

### **Evacuation Warning**

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

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

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

- On the basis of assessment of the severity of the disaster, the State Relief Commissioner (Incident Commander) shall issue appropriate instructions on actions to be taken including evacuation to the District Collector, who will then supervise evacuation. At the village level, members of the VDMCs and DMTs or village level will coordinate the evacuation procedures to the pre-designated relief centers, taking special care of the vulnerable groups of women, children, old people etc. All Taluka Level Evacuation Plan Prepared by DEOC..

## ➤ **Damage & Loss Assessment**

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

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

### **Rapid Damage Assessment (RDA):**

Rapid Damage Assessment shall emphasize on a rapid appraisal of the situation and extent of damage to provide resources for effective relief and rescue. Rapid Damage Assessment (RDA) will be conducted at the local level, where the disaster has occurred. The RDA team will be headed by the local Incident Commander and will comprise of the Talti, CMO of the Sub-Division Hospital, Junior Engineer PWD, and some prominent local persons may be involved at the discretion of the local Incident Commander. The RDA team will report to the District Collector its assessment of the damage. The RDA will be conducted according to a proforma/format developed by the State Disaster Management Authority.

### **Detailed Damage Assessment (DDA):**

Detailed Damage Assessment will be done at the district level during the recovery stage involving skilled personnel. The aim of this assessment is to estimate economical and financial aspects of damage, the detailed building damage, agricultural damage, and property damage and also to propose retrofitting or strengthening. The DDA team will be headed by the District Collector and will comprise of the District Relief Officer, Executive Engineer PWD, Chief Medical Officer of the affected district, members of prominent NGOs working in the district and any other expert at the discretion of the District Collector. The DDA team will also have two external observers from the State Disaster Management Authority and DMC



Cell of the State ATI respectively. The team will assess the damage on the basis of the format developed in advance by the State Disaster Management Authority in consultation with the DMC Cell of the State ATI and eminent experts in the field.

The other issues of disaster response including relief (entitlement, disbursement and monitoring), recovery and rehabilitation are comprehensively addressed in the New Relief Manuals (Drought, Flood & Earthquake) issued by the Disaster Management & Relief Department. All functions pertaining to relief will be performed according to the provisions of these Relief Manuals.

### **Training, need analysis:**

Task	Activity	Responsibility
Training	1. Training to civil defence personal in various aspect of disaster management  2. Training to home Guards personal in various aspect of disaster management including search and rescue	<input type="checkbox"/> Home Dept.  <input type="checkbox"/> District Home Guards Commandant  <input type="checkbox"/> Dy.Controller Civil Defence
3. Training to NCC and NSS personal in various aspect of disaster management	<input type="checkbox"/> Education Dep.  <input type="checkbox"/> NCC  <input type="checkbox"/> Collector Office	
4. Training to educational and training institutions personal in various aspect of disaster management	DDMC	
5. Training to civil society, CBOs and corporate entities in various aspect of disaster management	DDMC	
6. Training to fire and emergency service personal in various aspect of disaster management	Fire Dept DDMC	
7. Training to police and traffic personal in various aspect of disaster management	DDMC  Police Dept.	
8. Training to media in various aspect of disaster management	DDMC  Information Dept.	

9. Training to govt. officials in various aspect of disaster management	DDMC
10. Training to engineers, architects, structural engineers, builders and masons in various aspect of disaster management	DDMC

### ***Awareness***

<b>Task</b>	<b>Activity</b>	<b>Responsibility</b>
Information education And communication	<p>1. Advertisement, hording, booklets, leaflets, banners, shake-table, demonstration, folk dancing and music, jokes, street play, exhibition, TV Spot, radio spot, audio-visual and documentary, school campaign,</p> <p>- Planning and Design - Execution and Dissemination</p>	<p><input type="checkbox"/> Information Dept.</p> <p><input type="checkbox"/> Education Dept.</p> <p><input type="checkbox"/> All line dept.</p> <p><input type="checkbox"/> Dist. Collectors</p> <p><input type="checkbox"/> Municipal Commissioners</p> <p><input type="checkbox"/> Other Dist. Authorities</p>

### ➤ **Activation of Incident Response System in the District & Identification of quick response teams**

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

- Public Information Officer – the single media point of contact
- Safety Officer – Responsible for identifying safety issues and fixing them, he has the authority to halt an operation if needed.
- Liaison Officer – Point of contact for agency to agency issues.

1. **Operations:** this section carries out the response activities described in the IAP along with coordinating and managing the activities taken the responding agencies and officials that are directed at reducing the immediate hazard, protecting lives and properties. This section manages the tactical fieldwork and assigns most of the resources used to respond to the incident. Within operations, separate sections are established to perform different functions, such as emergency services, law enforcement, public works...etc.
2. **Planning:** this section supports the disaster management effort by collecting, evaluating, disseminating, and uses information about the development of the emergency and status of all available resources. This section creates the action plan, often called “Incident Action Plan” (IAP), which shall guide emergency operations/response by objectives. Followings are the six primary activities performed by the planning section, including,
  - Collecting, evaluating, and displaying incident intelligence and information
  - Preparing and documenting IAPs
  - Conducting long-range and contingency planning
  - Developing plans for demobilization
  - Maintaining incident documentation
  - Tracking resources documentation
3. **Logistics:** the process of response includes personnel, equipments, vehicles, facilities...etc, all of which will depend upon the acquisition, transport, and distribution of resources, the provision of food and water, and proper medical attention. The Logistic section is responsible for the mentioned process.
4. **Finance And Administration:** this section is responsible for tracking all costs associated with the response and beginning the process for reimbursement. The finance and administration section becomes very important when the national government provides emergency funds in place that guarantee local and regional response agencies that their activities, supply use, and expenditures will be covered.

A traditional command structure exists in the administrative hierarchy which manages disasters in India. It has been planned to strengthen and professionalise the same by drawing upon the principles of the ICS with suitable modifications. The ICS is essentially a management system to organise various emergency functions in a standardised manner while responding to any disaster. It will provide for specialist incident management teams with an incident commander and officers trained in different aspects of incident management, such as logistics, operations, planning, safety, media management, etc. It also aims to put in place

such teams in each district by imparting training in different facets of incident management to district level functionaries. The emphasis will be on the use of technologies and contemporary systems of planning and execution with connectivity to the joint operations room at all levels. The local authorities do not have the capacity to play an efficient role at local level to support the DEOC's requirements for field information and coordination. The DEOC will therefore need to send its own field teams and through them establish an Incident Command System. The system will comprise:

- Field command
- Field information collection
- Inter agency coordination at field level
- Management of field operations, planning, logistics, finance and administration

Rapid Assessment Teams and Quick Response Teams described below will be fielded by the DDMA through the DEOC as part of the Incident Command System.

➤ **Seasonal preparedness: -**

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

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

**Identifying Risks:**

A prudent first step is to list geographic and climatic hazards and other risks that could jeopardize the building and collections. These might include geographical susceptibility to hurricanes, tornadoes, flash flooding, earthquakes, or forest fires, and even the possibility of unusual hazards such as volcanic eruptions. Consider man-made disasters such as power outages, sprinkler discharges, fuel or water supply failures, chemical spills, arson, bomb threats, or other such problems. Take note of the environmental risks that surround you.

Chemical industries, shipping routes for hazardous materials, and adjacent construction projects all expose you to damage. Any event that is a real possibility should be covered under your Emergency Preparedness Plan.

It is also important to determine the vulnerability of the objects within the collections. What types of materials are included? Are they easily damaged? Are they particularly susceptible to certain types of damage such as moisture, fire, breakage, and the like? How and where are collections stored? Are they protected by boxes or other enclosures? Is shelving anchored to structural elements of the building? Is it stable? Are any artifacts stored directly on the floor where they could be damaged by leaks or flooding? All items should be raised at least four inches from the floor on waterproof shelves or pallets.

Are materials stored under or near water sources? Analyze your security and housekeeping procedures. Do they expose collections to the dangers of theft, vandalism, or insect infestation? Consider vulnerabilities. Are your collections insured? Is there a complete and accurate inventory? Is a duplicate of the inventory located at another site? Although there may be a wide range of disaster scenarios, the most common are water, fire, physical or chemical damage, or some combination of these. The specific procedures of a disaster plan focus on the prevention and mitigation of these types of damage.

### **Decreasing Risks;**

Once your hazards are specified, the disaster planner should devise a program with concrete goals, identifiable resources, and a schedule of activities for eliminating as many risks as possible. While water damage is the most common form of disaster for collections, everyone needs a good fire-protection system. Wherever possible, collections should also be protected by a firesuppression system. Preservation professionals now recommend wet-pipe sprinklers for most collections.

In addition, water misting suppression systems have become available within the last several years; these can provide fire suppression using much less water than conventional sprinkler systems. Before choosing a fire-protection system, be sure to contact a preservation professional or a fire-protection consultant for information about the latest developments in fire protection and for advice appropriate to your collections and situation. An inventory will provide a basic list of holdings, and will be essential for insurance purposes. Improved collection storage, such as boxing and raising materials above the floor level, will reduce or eliminate damage when emergencies occur.

Comprehensive security and housekeeping procedures will ward off emergencies such as theft, vandalism, and insect infestation. They will also ensure that fire exits are kept clear and fire hazards eliminated.

## ➤ Identifying Resources

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

\*NGO- SDRN-UP Dation Proses

## ➤ Community Warning system-Early Warning System (EWS)

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

### Early Warning Action Plan

Type of Action	Flood	Cyclone	Chemical and industrial accidents	Tsunami
Existing EWS	Irrigation department /dam authority/ IMD ↓ Collector ↓ Mamlatdar/TDO ↓ Villages	IMD ↓ Collector ↓ Mamlatdar/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	Contact of communities in remote locations (fisherfolk, saltpan workers, Maldharis etc)			

outreach (For example, voice enabled SMS)	
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### **During and Post Disaster Advisory Action Plan**

Type of Hazard	Flood	Cyclone	Earthquake	Drought	Chemical and industrial accidents	Tsunami
Responsible Agency	DDMC, Mamlatdar office & TDO					
Villages covered	All risk prone villages					
Villages/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)					

#### **➤ Procurement: -**

Providing logistical support to government and agencies for procurement of relief goods, transportation etc, and monitoring illegal price escalations, stocking etc. during crisis.

#### **➤ SDRN/IDRN data updation: -**

State disaster Resource network and India Disaster Resource Network is a crucial database for response any disaster. SDRN, a decision support tool, is layered using the existing IT Wide Area Network (WAN) of the State - GSWAN. SDRN uses the map-based Geospatial Information Systems developed by the Gujarat based organization Bhaskaracharya Institute for Space Applications and Geo-Informatics (BISAG). Currently, the SDRN network is being integrated with the GIS based Decision Support System using Java, MS-Access, Visual Studio 2005 with Database SQL Server 2005. The GIS Visualizer does not require any GIS software. The GIS visualize contains multi layered options depicting roads-highways, taluka, district boundaries, rivers, ports, airways, etc.

#### ***Protocol and arrangement for VIP Visit:***

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 will liaise with the government press officer to keep their number to minimum.

➤ **Media Management / information dissemination**

1. Preparedness
<p><b>External</b></p> <ul style="list-style-type: none"> <li>• Broadcast programs to raise people's awareness of disaster prevention measures</li> <li>• Develop news sources in emergency situation</li> <li>• Liaison with community leaders</li> <li>• Publicize station frequency</li> <li>• Broadcast public planning meetings</li> <li>• Outreach to the elderly, women, children, mentally and physically disabled people, as well as other marginalized and other vulnerable groups</li> <li>• Encourage stockpiling of (hand –powered) radio receivers</li> <li>• Compile local knowledge on signs of impending disaster and share it with community</li> </ul> <p><b>Internal</b></p> <ul style="list-style-type: none"> <li>• Back up important documents and files (including audio content) and store in a safe location</li> <li>• If possible, place a set of minimum broadcast equipment such as a microphone, tape/CD player, transmitter and antennae in a safe location</li> <li>• Plan radio programs to raise people's awareness of disaster prevention</li> <li>• First aid training for station personnel</li> <li>• Technical preparedness (generator, APS, securing, transmitter)</li> <li>• Guidelines for managing staff and volunteers</li> <li>• Arrange emergency drills in the station</li> <li>• Develop a contact list and post in station</li> <li>• Map community (ethnicity, religion, race, culture, vulnerability)</li> <li>• Prepare pre-recorded Emergency Response</li> <li>• Announcements and scripts and post in the studio</li> </ul>
2. Mitigation
<ul style="list-style-type: none"> <li>• Develop networks with local Disaster Management and Response (DMR) NGOs, local government and key stakeholders: hold regular meeting with them</li> <li>• Arrange emergency drills in the community</li> <li>• Training of on-air personnel - what and how to broadcast</li> </ul>
3. Response
<p><b>External-on air</b></p> <ul style="list-style-type: none"> <li>• Broadcast pre-prepared announcements</li> <li>• Broadcast emergency public meetings</li> <li>• Broadcast emergency evacuation announcements</li> <li>• All announcements broadcast in a reassuring and calm manner</li> <li>• Dispel myths and rumours and provide timely and accurate updates</li> </ul>



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

#### **Internal-behind the scenes**

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

#### **4. Relief**

- Establish Information Support Centre for information sharing and logistic distribution

#### **5. Rehabilitation**

##### **External – Networking and Support**

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

##### **Internal – Evaluation and Review**

- Decentralize and copy important documents
- Call meeting of all personnel to debrief
- Monitor all official announcements and activities of national
- government, local government and aid agencies(NGOs)
- Evaluate response and update guidelines
- Check physical infrastructure and repair damage
- Log all communications for reference
- Update preparedness and response manuals as required

➤ **Documentation**

Documentation of all response/relief and recovery measures should be done with –

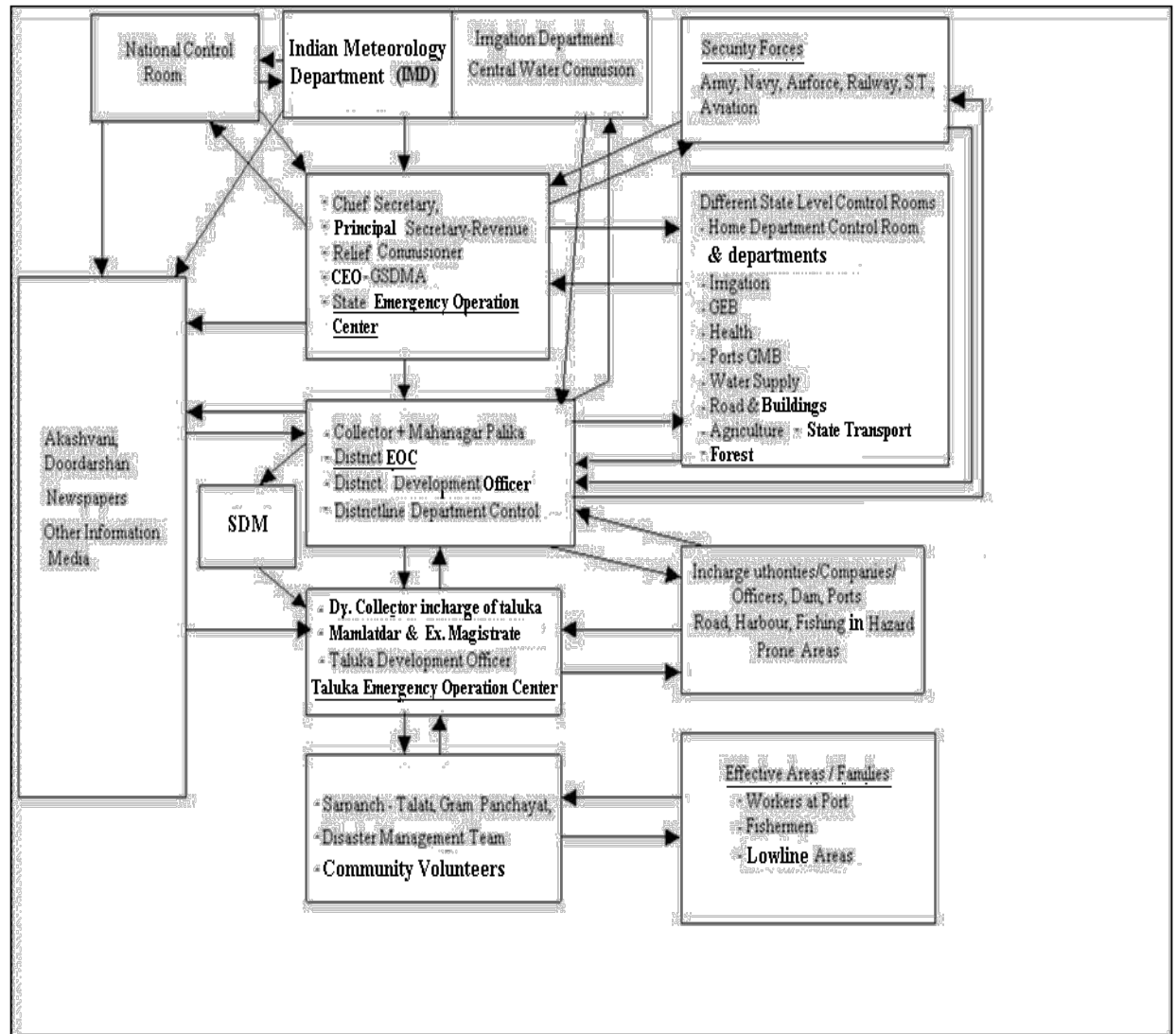
- Documentation of disasters and to make it available in easy accessible format
- Undertake research studies and application of outcomes in disaster management practices
- Documenting field data, experience and indigenous technological knowledge from local community
- Development of plan by using available resources like SDRN, IDRN, etc.
- Assimilate all reports and transaction of information during the disaster for easy documentation

**Telephone Numbers for Disaster Information**

1.	State Control Room	079-1070
2.	District Control Room	District STD Code + 1077

## Chapter 6

### Response Measures (Multi-Hazard)



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

hazards, its consequences and actions that need to be taken in the event of it. The Revenue Department of the State is the Nodal Department for controlling, monitoring and directing measures for organizing rescue, relief and rehabilitation. All other concerned line departments should extend full cooperation in all matters pertaining to the response management of the disaster whenever it occurs. The District EOC, ERCs and other control rooms at the District level should be activated with full strength.

#### **Activation of EOC:**

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

The EOC is a nodal point for the overall coordination and control of relief work. In case of an L1 Disaster the Local Control room will be activated, in case of an L2 disaster DEOC will be activated along with the SEOC.

#### **Media Management: -**

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

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

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

➤ **Response Planning (Framework):**

➤ TDMC-: Taluka Disaster Management Committee

- Taluka In charge Dy. Collector/Dy. District Development Officer
- Mamlatdar
- Ταλυκα Δεπελοπμεντ Οφφιχερ
- Dy. Executive Engineer- R & B (State)
- Dy. Executive Engineer- R & B (Panchayat)
- Dy. Executive Engineer – Irrigation
- Dy. Executive Engineer –GEB
- Dy.Executive Engineer – Water Supply
- Junior Engineer-Telecom
- Μεδιχαλ Οφφιχερ (Μοτηερ ΠΗΧ)
- Police Inspector/ Police Sub Inspector
- Taluka Home Guard Commandant
- Taluka Kelvani Nirikshak
- Godown Manager- Civil Supply Corporation
- Depot Manager – S.T.
- Πορτ Οφφιχερ
- Range Forest Officer (Head Quarter)

**Non- Government Members**

- Pramukhshri-Taluka Panchayat.
- MLA
- Χηαιρμαν- Σογιαλ Θυστιχε Χομμιττεε (Ταλυκα Πανχηαψατ)
- Woman Member - Taluka Panchayat
- NGO Representative

**CDMC-: City Disaster Management Committee**

- Dy. Collector/SDM/Dy.DDO
- Chief Officer
- Chief fire officer
- Mamlatdar
- Town planning Head
- Dy.Exe.Engineer-R&B state
- Dy.Exe.Engineer-state-Irrigation
- Dy.Exe.Engineer- PGVCL
- Dy.Exe.Engineer-GWSSB
- Junior Engineer Telecom
- Medical Officer-C.H.C.
- Medical Officer Municipality Health Centre
- Head Transport committee
- PI/PSI

- Taluka Homegard Commandment
- Education Officer Municipality Education committee
- Project Coordinator-UCD
- Port officer
- Range forest officer-Extension

**Non Governmental Member**

- President Municipality
- Member of Parliament
- Member of Legislative assembly
- Chairman- Standing Committee committee
- Chairman-Water Supply committee
- Chairman City planning committee
- Chairman Construction Committee
- Women Member of Municipality
- Scheduled caste Member of municipality
- Local N.G.O.
- Other-Decide By CDMC

**Village Disaster Management Committee**

- Sarpanch
- Talati
- School Master
- PHC Doctor/Health Worker
- Chairmen Milk Cooperative
- Chairman Seva Cooperative
- Gram Sewak
- Anganwadi Worker
- Community Rep 1
- Community Rep 2
- Community Rep 3
- Fair Price shop holder

Standard damage assessment form:

Application form for Government help for to Repair / Rebuilt House/Huts  
damaged during the Natural calamities of Earthquake on date 26.01.2001

:: **APPLICATION FORM** ::

1. Name of Applicant
2. Name of Village & Location of House / Hut
3. a. Ward No.                      Block No.              House No.  
b. Area  
c. Valuation Register No.

1. Total No. of Family Member of Applicant

Sr. No.	Name	Age	Relation
1			
2			
3			

2. Annual Income of Applicant family
3. (A) Ownership of House :  
House owner / House Tenant Name and Address :
4. House / Hut Party damage or fully damage
5. Damage estimate cost (In Rupees)

6. Amount Damaged for to Repair / Rebuilt House / Hut.
7. Fully damage House/ Hut is on official place or not ? If not then Rebuilt House / Hut is on official place ?

Place :

Date :

Signature of Applicant

## **Rojkam**

Shri .....resident of Amreli has residential building / Hut which is demolished heavy damage during the .....(type of Calamities). Which has seen by us and the estimated damage cost is Rs..... is true for that we punch sign under this .

- 1.
- 2
- 3

In presence of Team leader

### **Agreement**

I shri ..... living in village ..... Taluka  
..... Agree to write agreement that in referce to my application what over the help given to me by Government according to his rules, I spend it for rebuilt house / hut. If I fail to do so I repaid the help to Government .

Witness :

Name :

Dates :

Applicant Signature

In presence of Ten leaders.

In accordance with the Application of Shri..... for to repair / rebuilt residential building / kacha / packa / Hut. I personally verified the damage. In accordance with damage of ..... situation of applicant . I agree to give him help according to rule. His valuation register No. is .....

Date:

Team Leader : Signagture

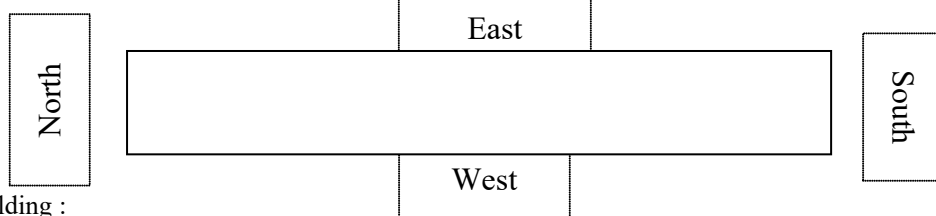
Shri..... Residence..... house / hut

damage details

Ward No.....

House No.....

Type of House : Kacha / Packa / Hut



Height of building :

Plinth Area :

Walls :

Cellar :

Roof detail : Tiles / Slash

Approximate damage :

(Repairing cost )

Categon of Damage :

% damage :

Engineer's Sign / Officer's Sign

Name :

-----Looking to the  
above detail Rs. ....is sranted as a help for to repair / rebuilt . House / Hut.

Date :

Mamlatdar

Place :



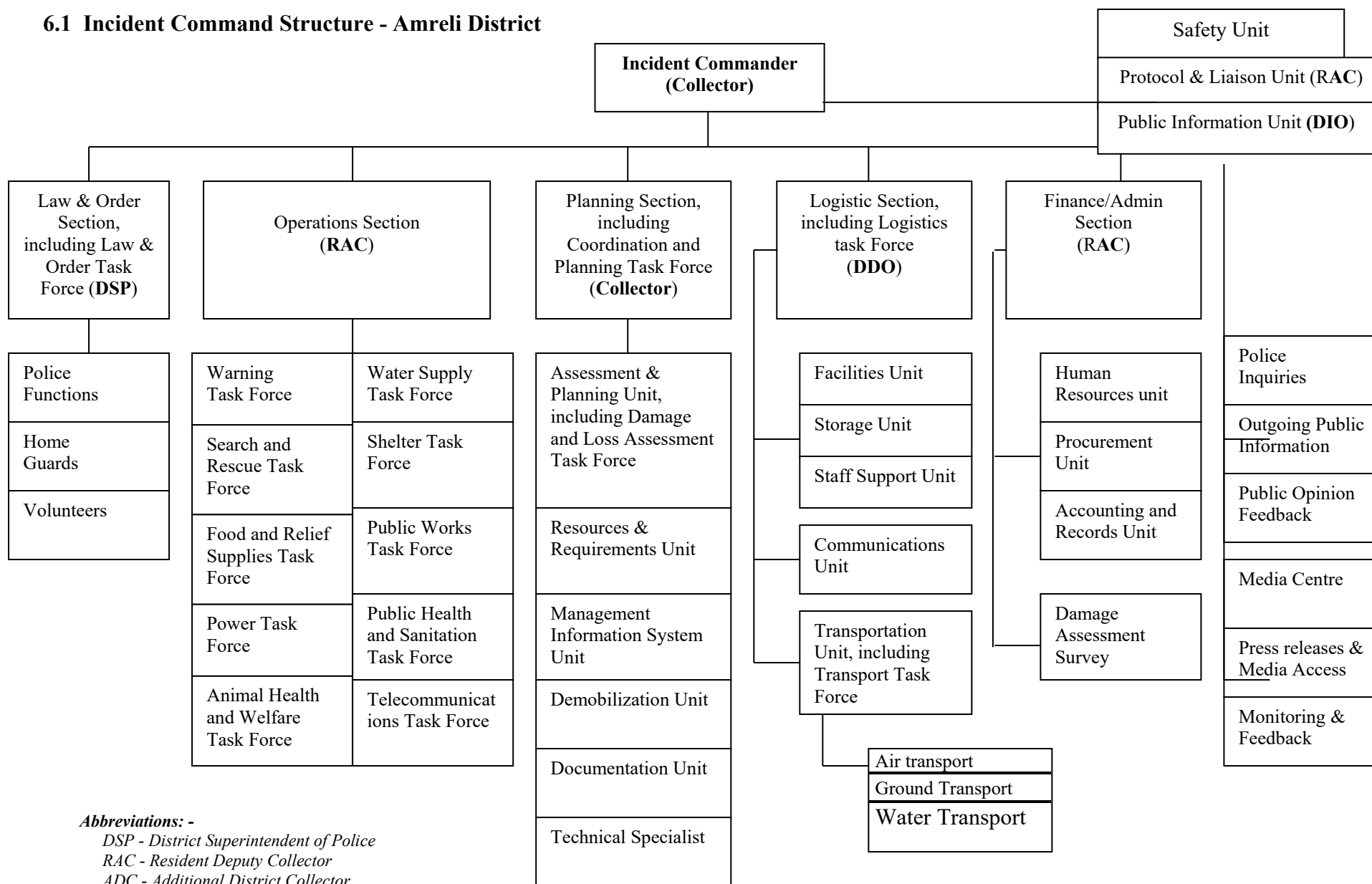
### **Disaster Response and District Incident Command System:**

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

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

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

## 6.1 Incident Command Structure - Amreli District



### Abbreviations: -

DSP - District Superintendent of Police

RAC - Resident Deputy Collector

ADC - Additional District Collector

DDO - District Development Officer

DIO - District Information Officer

## ΙΧΣ-Βασικ Φυνχτιονσ

The basic functional descriptions for key elements in the district Incident command System are described below. Not all these functions need to be filled (activated) in every disaster. But the ensemble of these functions represents all the key tasks which need to be accomplished in a well planned manner and executed in effective and cost efficient disaster response effort.

**I. Incident Command:** responsible for overall management of an incident based on clearly stated mandate from higher authority and based on focused objectives responding to the immediate impact of the incident.

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

### **II. Command Staff Units**

#### **Safety unit:**

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

#### **Protocol and Liaison unit:**

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

#### **Public Information Unit:**

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

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

### **III. Law and Order Section**

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

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

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

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

#### IV. Operation Section

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

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

Emergency Taskforce	Operation	Functions
1. Coordination and Planning		Coordinate early warning, Response & Recovery Operations
2. Administration and Protocol		Support Disaster Operations by efficiently completing the paper work and other Administrative tasks needed to ensure effective and timely relief assistance
3. Warning		Collection and dissemination of warnings of potential disasters
4. Law and Order		Assure the execution of all laws and maintenance of order in the area affected by the incident.
5. Search and Rescue (including Evacuation)		Provide human and material resources needed to support local evacuation, search and rescue efforts.
6. Public Works		Provide the personnel and resources needed to support local efforts to reestablish normally operating infrastructure.
7. Water		Assure the provision of sufficient potable water for human and animal consumption (priority), and water for industrial and agricultural uses as appropriate.
8. Food and Relief Supplies		Assure the provision of basic food and other relief needs in the affected communities.
9. Power		Provide the resources to reestablish normal power supplies and systems in affected communities.
10. Public Health and sanitation (including First		Provide personnel and resources to address pressing public health problems and re-establish normal health care systems.

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

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

## **V. Planning Section**

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

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

## **VI. Logistic section**

Responsible for all task and functions related to provision of material and other resources needed for operations and the physical and material support and operation of the incident management team. This section includes transportation taskforce established to support disaster operations. Logistics tasks are through the following units:

1. storage and supply
2. Facilities
3. staff support
4. communications
5. transportation (include ground, air water):

## **VII. Finance and Administration**

Responsible for managing all financial and administrative tasks related to incident field operations. These tasks may, but would not usually include disbursement of financial aid to those affected by an incident. The task of this section are accomplished through following units: 1. Human resources; 2. procurement; and 3. accounting and records

## 6.2 Cross-Task Force Action Matrix

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

[illegible]

### 6.3 TASK FORCE, SUPPORTING ORGANIZATIONS VIS-A VIS ICS/GS SECTION MATRIX

A) The COMPOSITION of the TASKFORCES is given in the table below:

S. No.	Task Force	Taskforce Leader	Supporting members / Organizations	ICS/GS Section / Unit
1.	Planning and Coordination	Collector	DDO, DSP, Commissioner JMC, RAC and Mamlatdar	Planning
2.	Administration & Protocol	RAC	DDO, DSP, Commissioner JMC, RAC and Mamlatdar	Finance & Admin.
3	Damage Assessment/Survey	RAC	DIC, Dy. DDO, Ex. Engr., R&B, DAO, Fisheries	Planning
4	Warning	RAC	RAC, Dy. Mamlatdar, Control Room, District Information Officer (DIO)	Operation
5	Communications	RAC	Dy. Mamlatdars, Mobile Operators, TV, Radio, Post Office GMB, Police, Forests	Logistics
6	Media	District Information Officer	Information Department, Print, Media, TV, Journalists, NGOs	Public Information
7	Logistics	DDO	RTO, DSO, FPS, Private & Public sector, Municipal water supply board, Mamlatdar, Dist. Supply Mamlatdar	Logistics
8	Law & Order	DSP	Dy. SP, Home Guards Commandant, NGOs, Para-military and Armed Forces	Law & Order
9	Search & Rescue	Dy. Collector Civil Defence	Mamlatdar, TDO, Police, Executive Engr., JMC Fire Brigade, RTO, State Transport, Health Deptt.	Operation
10	Public Works	Ex. Engr. R&B (State)	Irrigation, Ex. Engr., Panchayat, NGOs, Water Supply Board, Municipalities, Home Guards, Police	Operation
11	Shelter	Dist. Primary Education Officer	School Principal, Teachers, Health, PHC, State Transport, Water Supply, RTO, Mamlatdar, TDO.	Operation



12	Water Supply	Ex. Engr. GWSDB / Ex. Engr. Water Works JMC	Dy. Ex. Engr., Talati, Mamlatdar, TDO, Health, Dy. Engr. JMC	Operation
13	Food & Relief Supplies	Dist. Supply Officer	FPS, PDS, Mamlatdar, NGO, RTO, State Transport, Municipality, DRDA, Police, Home guard	Logistics
14	Power	Supt. Engr. GEB	Ex. Engr., Dy. Engr. Technical, GEB, Transport	Operation
15	Public Health & sanitation	Chief district health Officer (CDHO)	Supt. GG Hospital, JMC PHCs, CHCS, Municipality, Red Cross, Fire Brigade JMC, Civil Defence, R&B, NGOs, Doctors, TDO, Mamlatdar	Operation
16	Animal Health & Welfare	Dy. Director Animal Husbandry	Veterinary Inspector, NGOs	Operations

**DISTRICT INCIDENT COMMAND STRUCTURE-KEY OFFICERS**

<b>Sr.No.</b>	<b>EOCs/ Control rooms</b>	<b>Contact Numbers</b>
1	State EOC	079-23251914 / 23251912 23251900/23251902/23251916
2	Relief Commissioner	(O) 23251509 No : 1070
3	Director of Relief	079-23251611/23251916
4.	Additional CEO-GSDMA	91-79-23259303 Fax :+91-79-23259302
5	Amreli District EOC	02792-230735, Tall Free No.1077 Fax-02792-221600
6	TASKFORCE Operation Room	
	1. Warning and Communications	R.A.C.O. 02792-228903
	2. Law & Order	DSP/02792-222333
	3. Search & Rescue	Dy. S.P.02792-222797
	4. Public Works	Ex. Engr, R&B- 02792-223100/222776
	5. Shelter	District Pri. Edn. Officer/02792-222109
	6. Water Supply	Ex. Engr. GWSDB/ 02792-222470/221798/223302
	7. Food & Relief supplies	District Supply Officer 02792-222807
	8. Public Health & Sanitation	02792-222587 02792-222587
	9. Power	Sup. Engr. GEB/02792-222282/222188
	10. Logistics	DDO 02792-222313
	11. Animal Health & Welfare	Dy. Director, A&H 02792-223058/223500
	12. Damage assessment/Survey	Resi. Addl.Collector. 02792-228903
	13. Media/public Information	DY. District Info Officer. 02792-223404
	14. Planning and coordination	Resi. Addl.Collector. 02792-228903
	15. Finance/ Administration/ protocol	Resi. Addl.Collector. 02792-228903

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

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

- **District Level Control Room (DCR)**

The District Control Room 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.

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

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

- **Taluka Level Control Room (TLCR)**

The Taluka Level Control Room shall be located at the Office of Tahasildar. 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/DCR.

- **Facilities at District Control Room**

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

- Telephones
- Facsimile:
- Handheld Radios and Base Stations
- Satellite Telephone
- One PC with e-mail, Internet and web site facilities
- Marker board - 2 Nos. with adequate markers
- Conference table with Chairs(16)
- A copy of Disaster Management Plan
- Drawings showing safe assembly points
- Other relevant documents, if any

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

The following facilities are maintained inside TFCR:

- Telephones
- Facsimile
- Satellite Phone (no immediately)- it is desirable.
- Hand held Radios/Base Stations
- Marker board (1)
- A copy each of Disaster Management Plan and Task Force Plan
- Other relevant documents, if any

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

The following facilities are maintained inside TFCR:

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

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

DCR : 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.

## 6.6 Emergency Communication Systems

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

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

### Synthesized Radio Communication

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

S. No.	Task Force / Functional Area	Channel #
1.	DCR	1
2.	Law & Order & its TFOR	2
3.	Search & Rescue & its TFOR	3
4.	Public Works & its TFOR	4
5.	Shelter & its TFOR	5
6.	Water Supply & its TFOR	6
7.	Food & Social Service & its TFOR	7
8.	Power & its TFOR	8
9.	Public Health & Sanitation & its TFOR	9
10.	Logistics & its TFOR	10
11.	Animal Health & Welfare & its TFOR	11
12.	Relief Supplies & its TFOR	12
13.	Communication & its TFOR	13

14.	Survey & its TFOR	14
15	Taluka Level Control Room (TLCR)	1

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

### **Telephones**

Telephones are provided at all the Control Rooms.

### **Alternate Communication System**

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

### **Satellite Communication System**

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

### **Messengers**

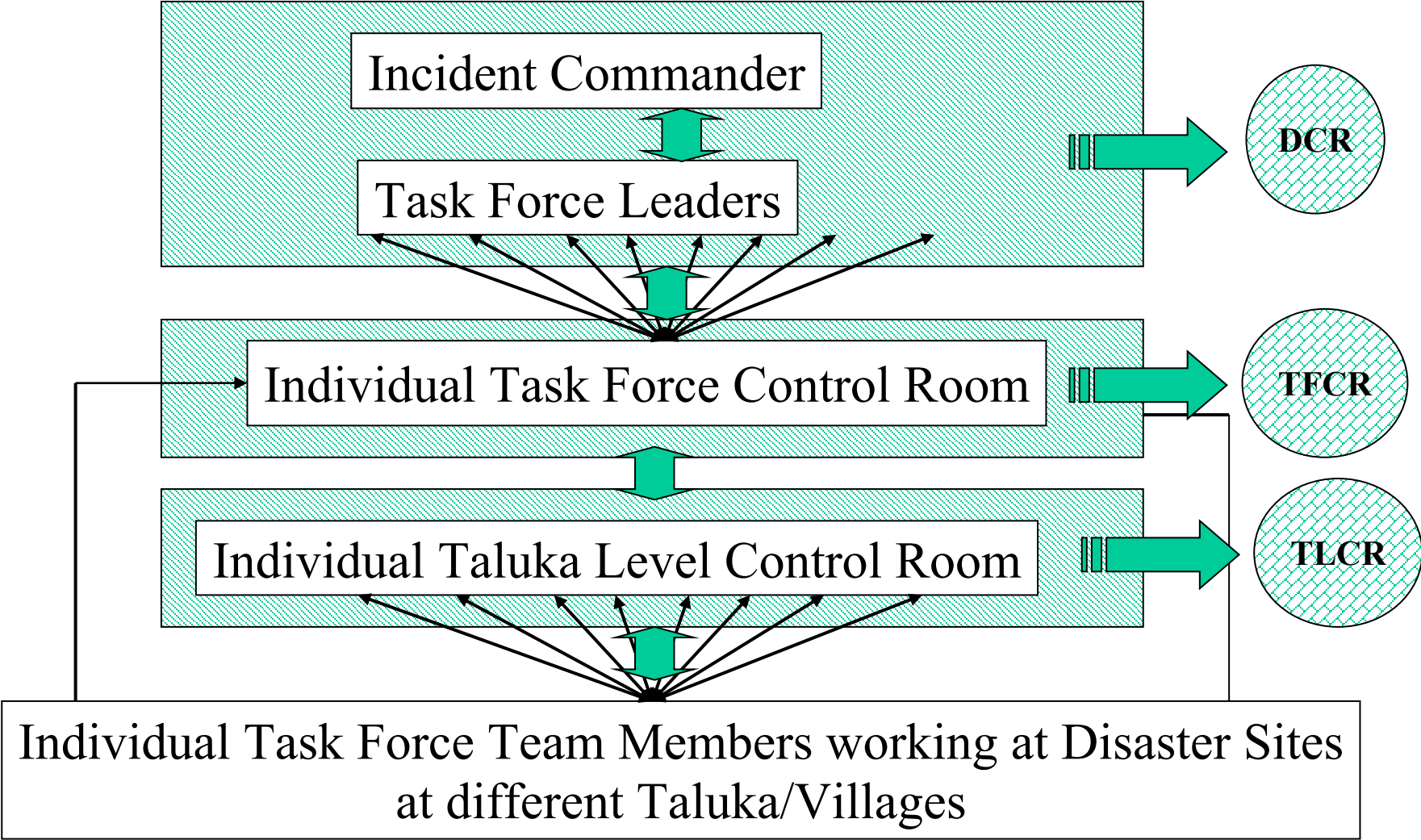
- Use of messengers as a last resort to carry the hand written messages to persons concerned in dealing with the disaster.
- A dedicated vehicle shall be made available by the Transport Task Force Leader upon request.

### **Right use of Communication facility**

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

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

Communication Flow Chart during Disaster Management



## ***Roles and Responsibilities of Taskforces***

The actual plans and SOPs developed by prime and supporting organizations for each disaster may result in a variation in the actual composition of each taskforce.

Once activated, these lead and supporting organizations create taskforces to accomplish the task as directed by the incident commander and appropriate section or unit leader. In addition, each taskforce lead organization will provide a report detailing activities undertaken and lessons learned during any disaster response operations. This report will be in addition to any purpose – specific reporting during the operation.

The tables below describe the taskforce action plans are intended to identify key actions:

- Before a disaster
- At the time of warning
- As the disaster occurs and
- In periods from:
  - 12 to 48 hours
  - 48 to 72 hours
  - 72 hours and beyond after a disaster

The action plans serve as quick reference guide to individual task force members, the coordination and planning taskforce and Authorities at the state level; as to what specific taskforces expect to be doing at specific stages before and after a disaster. This information will improve coordination within and between taskforces and with authorities outside Amreli district.

To facilitate coordination of actions between task forces a cross taskforce action matrix (fig-3.2) also included. This matrix can be used by

- Individual taskforces to identify actions by other taskforces in which they are involved
- The coordination and planning taskforce as an aid in coordinating activities across the response to a disaster.

## TASKFORCE ACTION PLANS

**Coordination and Planning:** Coordinate early warning, response and recovery operations.

### Task Force Leader: Collector

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

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>Disaster</b>		
Start Search, Rescue and Evacuation activities. (CMC)	SAR Task Force operational.	Immediately
Begin Collecting Information on extent of damage and areas affected. (CMC)	Assessment teams have communications and transport.	Started in 4 hours.
Start plan development and provide instructions on where Task Forces should go and what they should do. (CMC, Collector)	Information on damage and areas affected.	Started in 4 hours.
Mobilize outside resources (CMC)	Information on damage and needs.	Started in 5 hours.



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

**Warning:** Collection and dissemination of warnings of potential disasters.

**Task Force Leader: Resident District Collector**

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

**Law and Order:** Assure the execution of all laws and maintenance of order in the area affected by the incident.

**Task Force Leader: District Superintendent of Police**

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>Before a Disaster</b>		
Evaluate expected disaster needs verses normal resources. (Task Force)		Completed in 8 days.
Estimate personnel and resources needed for disasters. (Task Force)	Based on standard for number of security personnel per population depending on severity of disaster.	Completed in one week.
Planning and coordination with Revenue Dept. (Task Force)		
Conduct drills, including public awareness raising. (Task Force)	Includes participation of Media Task Force	Every 45 days.
<b>Warning</b>		
Verify communications system. (Wireless Inspector)		1-2 hours of warning.
Alert police and other Task Force members. (Superintendent of Police)		1-2 hours of warning.
Implement duty distribution SOP for personnel and other resources.		1-2 hours of

(Superintendent of Police)		warning.
Develop preliminary estimate of requirements to support other Task Forces. (Superintendent of Police)		1-2 hours of warning.
<b>Disaster</b>		
Get orders on deploying personnel from Control Room. (Superintendent of Police)	Operating communications system.	Immediately
Determine status of staff and facilities. (Superintendent of Police)	Operating communications system.	1-2 hours of disaster.
Deploy additional staff. (Superintendent of Police)	Transport available.	2-3 hours of disaster.
Monitor resources. (Superintendent of Police)		1 hour of disaster
<b>Action and (Who Should Take It)</b>	<b>Requirements or Conditions to be met for the action can occur.</b>	<b>Timeframe</b>
Establish VVIP unit. (Superintendent of Police)		Immediately.
Request additional resources, if needed. (Superintendent of Police)	Operating communications system.	4 hours of disaster.
<b>12 hours</b>		
Institute regular reporting. (Task Force)	Operating communications systems.	At start of period.
Begin staff rotation. (Task Force)		At start of period.
Address crowd control problems. (Task Force)		As needed.
Implement anti-looting/anti-theft SOP. (Task Force)		As needed.
Establish rumor control. (Task Force)	Involves Collector, Media Task Force, NGOs, and local eminent persons.	As needed.
Provide information to public, e.g., road status. (Task Force)	Involves Control Room, Media Task Force, and Deputy Magistrate.	As needed.
<b>48 hours</b>		
Implement a Force Management Plan (increase, reduction, redeployment, of forces). (Superintendent of Police)		From start of period.
Plan for return to normal ((Superintendent of Police, Task Force, Control Room)		From 72 hours after the disaster.
Conduct Lessons Learned Session (Task Force with input from other parties.)		1 week after the disaster.

Final Report		2 weeks after the disaster.
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**Search and Rescue (including evacuation):** Provide human and material resources to support local evacuation, search and rescue efforts.

**Task Force Leader: Chief Fire Officer**

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>Before a Disaster</b>		
Risk assessment and vulnerability mapping. (Task Force)		Before warning.
Develop inventory of personnel and material resources. (Task Force)		Before warning.
Training. (Task Force)	Input and support from GSDMA, UNDP project.	Before warning.
Establish public education program. (Task Force)	Media Task Force	
Establish adequate communications system. (Task Force)	Additional equipment required.	
Drills. (Task Force).		Before warning.
Establish transport arrangements for likely SAR operations. (Task Force)	With Logistics Task Force.	Before warning.
Develop Rescue SOP. (Task Force)		Before warning.
<b>Warning</b>		
Mobilize Task Force and SAR teams. (Task Force).		On warning.
Verify equipment is ready. (Task Force).		On team activation.
Confirm transport is ready. (Task Force)	Logistics Task Force.	On warning.
Undertake precautionary evacuation. (Task Force)	Logistics and Shelter Task Forces	As directed.
Re-deploy teams and resources, if safe. (Task Force)	Logistics Task Force	Based on conditions.
Start public awareness patrols. (Task Force)	Media, Law and Order and Logistics Task Forces.	As required.
<b>Action and (Who Should Take It)</b>	<b>Requirements or Conditions to</b>	<b>Timeframe</b>

	<b>be met for the action can occur.</b>	
<b>Disaster</b>		
Assure safety of staff.		Immediately.
Restore own communications. (Task Force)		Immediately.
Dispatch rescue/evacuation teams based on assessments. (Task Force)	Input from Control Room.	Immediately.
Call for additional resources if needed. (Task Force)	Communications systems in operation.	3-4 hours of disaster.
Provide reports on operations. (Task Force)		Starting at 3-4 hours.
Begin handling of deceased per SOP. (Task Force)	Various Revenue officers and Police involved.	Starting at 3-4 hours.
<b>12 Hours</b>		
Begin staff rotation system. (Task Force).		Starter at 12 hours.
Begin specialized rescue (may begin earlier). (Task Force)	May require outside resources, coordination with Logistics Task Force.	Started at 12 hours.
Begin debris removal in cooperation with Public Works Task Force.	Focus on critical infrastructure. Liaison with Control Room.	Start at 12 hours.
Secure additional resources (e.g., fuel, personnel) for continued operations. (Task Force).		Start at 12 hours.
<b>48 hours</b>		
Demolish/Stabilize damaged buildings in cooperation with Public Works Task Force.	Logistics Task Force, workers, equipment.	Starting at 48 hours.
Demobilization, reconditioning, repair and replace equipment and other resources. (Task Force)		Based on nature of disaster.
Remain on stand-by for additional operations, particularly related to safety of recovery work. (Task Force).		As needed.
<b>72 hours</b>		
Lessons Learned meeting. (Task Force and others)		After 2 weeks.

Final Report. (Task Force)		After major activities completed.
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**Public Works:** Provide the personnel and resources needed to support local efforts to re-establish normally operating infrastructure.

**Task Force Leader: Executive Engineer, Roads and Buildings**

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>Before a Disaster</b>		
Inventory of personnel, equipment and status of infrastructure. (Task force)	Link to UNDP project data based development.	One week before warning.
Identify critical infrastructure. (Task Force)	Need to define what is critical infrastructure.	Before warning.
Identify alternate transport routes and publish map. (Task Force)		Before warning.
Plan for prioritized post-disaster inspection of infrastructure. (Task Force)		
Establish and maintain a resources and staffing plan. (Task Force)		
Plan to provide sanitation and other facilities for shelters. (Task Force)		
<b>Warning</b>		
Establish Control Room. (Task Force)		No later than 6 hours from warning.
<b>Action and (Who Should Take It)</b>	<b>Requirements or Conditions to be met for the action can occur.</b>	<b>Timeframe</b>
Mobilize Task Force and personnel.	Requires communications.	No later than 6 hours from warning.
Liaise with District Control Room. (Task Force)		No later than 6 hours from warning.
Verify status and availability of equipment and re-deploy if appropriate and safe. (Task Force)	Coordination with Logistics Task Force and Control Room.	24 hours from warning.
Review plans. (Task Force)		No later than 6 hours from warning.
<b>Disaster</b>		
Begin damage assessment and inspections. (Task Force)	Coordination with Damage Assessment Task Force.	Within 12 hours of disaster.
Develop operations plan and communicate to Control Room.		Within 12 hours of disaster.

Mobilize and dispatch teams based on priorities. Teams will (1) repair, (2) replace, (3) Build temporary structures (e.g., rest facilities, shelters).	Coordination with Logistics, Water, Power Task Forces and Control Room.	Within 12 hours of disaster.
Collaborate with other Task Forces.		Continuous.
<b>12 Hours</b>		
Begin staff rotation system and manpower planning. (Task Force).		Starter at 12 hours.
Mobilize additional resources based on expected duration of operations. (Task Force).	Coordination with Logistics Task Force, Contractors. May need additional funding.	Started at 12 hours.
Assure safety. (Task Force)		Start at 12 hours.
Establish security arrangements. (Task Force)	Law and Order Task Force.	Start at 12 hours.
Provide public information on roads, access and infrastructure. (Media Task Force)	Coordination with Control Room	Start at 12 hours.
<b>48 hours</b>		
Start detailed survey. (Task Force)	In cooperation with Damage Assessment Task Force.	Starting at 48 hours.
Begin reporting on operations (Task Force)		Starting at 3 days.
Reconditioning, repair and replace equipment and other resources. (Task Force)		Based on nature of disaster.
Plan and start demobilization. (Task Force)		Starting at 3 days.
<b>72 hours</b>		
Develop long term restoration plan and start activities. (Task Force)		From 72 hours.
Lessons Learned meeting. (Task Force and others)		After 2 weeks.
Final Report. (Task Force)		After major activities completed.

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

### Task Force Leader: Executive Engineer, Gujarat Water Supply Board

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>Before a Disaster</b>		
Establish water availability, capacities, reliabilities and potability. (Task Force)	Standard of 20 liters of drinking water per person per day.	3 months before warning.
Plan for alternate water delivery and storage (Task Force)	May need tankers, tanks, generator set.	3 months before warning.
Secure new and additional equipment. (Task Force)	Requires funding.	
Secure extra stocks of chemicals, expendable supplies and equipment. (Task Force)	May require additional funding.	3 months before warning.
Open Water Control Room in Monsoon. (Task Force)		Done.
<b>Warning</b>		
Establish staff rotation and shift system. (Task Force)		No later than 24 hours from warning.
Provide public awareness on use of water. (Task Force)	Media Task Force.	No later than 24 hours from warning.
Provide instructions to government and private sectors on protection of water supplies. (Task Force)		No later than 24 hours from warning.
Mobilize Task Force members.		24 hours from warning.
<b>Action and (Who Should Take It)</b>	<b>Requirements or Conditions to be met for the action can occur.</b>	<b>Timeframe</b>
Mobilize additional personnel and vehicles. (Logistics Task Force)	May be difficult to locate additional personnel locally. Recourse to outside or contractor sources may be required.	24 hours from warning.
Coordinate activities with Power and other Task Forces.	Involves District Control Room.	24 hours from warning.
Verify water source status and protection. (Task Force).		No later than 24 hours from warning.
<b>Disaster</b>		
Plan and prioritize supply of water to users. (Task Force)	Requires information on needs, damage and demand.	Completed by 24 hours into disaster.
Assess status and damage to water systems. (Task Force)	Coordination with Damage Assessment Task Force.	Completed by 24 hours into disaster.



Mobilize water tankers. (Task Force)	Coordination with Logistics Task Force and Control Room.	Started by 24 hours into disaster.
Repair/restore water systems, based on plan. (Task Force)	Coordination with Power and Logistics Task Forces.	Started by 24 hours into disaster.
Assure supply point/distribution security. (Law and Order Task Force)		Started as soon as distributions begin.
Coordinate distribution of water and storage and provision of information on safe water use. (Task Force).	Coordination with Media Task Force and Control Room	Started by 24 hours into disaster.
<b>12 Hours</b>		
Establish temporary water systems. (Task Force)		Up to 72 hours from disaster.
Move toward permanent water supply system. (Task Force)		After 72 hours.
Complete long term recovery plan and needs. (Task Force)		After 72 hours.
Begin reporting and documentation. (Task Force)		From 48 hours.
Begin demobilization. (Task Force)	Coordinated with Control Room.	From 48 hours.
Lessons Learned meeting. (Task Force and others)		After 2 weeks.
Final Report. (Task Force)		After major activities completed.

**Food and Relief Supplies:** Assure the provision of basic food and other relied needs in the affected communities.

### **Task Force Leader: District Supply Officer**

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

Identify food preparation locations. (Task Force)		Done.
Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>Warning</b>		
Pass on warning. (Task Force)		Within 12 hours of receipt of warning.
Alert NGOs to prepare food. (Task Force)	Contact with NGOs.	Within 12 hours of receipt of warning.
Verify stock levels and make distribution plan. (Task Force)	Possible cooperation with Logistics Task Force.	Within 48 hours of receipt of warning.
Alert transport contractors to prepare for transport. (Task Force)	Coordinate with Logistics Task Force.	Within 5 hours of receipt of warning.
Mobilize staff. (Task Force)		Within 6 hours of receipt of warning.
<b>Disaster</b>		
Receive and respond to instructions from Control Room. (Task Force)		As received.
Monitor conditions of stocks and facilities. (Task Force)	Need for communications.	
Develop distribution plan. (Task Force)	Need information on needs and locations.	As requested by Control Room.
Order food packets and provide supplies as needed. (Task Force)	Coordination with Logistics Task Force.	Per distribution plan.
Establish relief supplies receptions centers. (Task Force)	Coordinate with Control Room and Logistics Task Force.	As required.

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>12 Hours</b>		
Start distribution operations. (Task Force)	In coordination with Logistics and Shelter Task Forces.	At beginning of period.
Formalize reporting, communications and monitoring. (Task Force)		Completed by 48 hours.
Start staff rotation system. (Task Force)		At beginning of period.
Begin mobilizing and managing additional supplies.	Coordination with Logistics and, Control Room.	Underway in 48 hours.
Establish security for all sites. (Law and Order Task Force)		At beginning of period.
Begin public announcement of distribution plan and standards. (Media Task Force)		Underway in 48 hours.
<b>48 Hours</b>		

Shift to normal operations. (Task Force)		Within 1 week.
Reconcile receipts and distribution records. (Task Force)		Within 30 days.
Continue providing relief to special areas/populations. (Task Force)		For 15 days from the disaster
<b>72 Hours</b>		
Restore Public Distribution System. (Task Force)		From 1 week after the disaster.
Lessons Learned meeting.		Within 14 days

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

### **Task Force Leader: Superintending Engineer, Gujarat Electricity Board**

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>Before a Disaster and Warning Phases</b>		
Develop inventory of current status of power system and resources. (Gujarat Electricity Board – GEB)		
Establish minimum stock levels and procure necessary additional stocks. (GEB)		
Conduct monthly meetings. (GEB)		On-going
Develop contact lists. (GEB)		
Conduct informal hazard and risk assessment. (GEB)		Completed.
Develop disaster plan. (GEB)		
<b>Disaster</b>		
Assess impact according to SOP. (GEB)	Coordinate with Control Room and Damage Assessment Task Force.	
Prioritize response actions. (GEB)	Need to establish priorities.	
Collect more information. (GEB)		
Mobilize additional resources. (GEB)	Coordination with Control Room and other Task Forces.	
Check for unforeseen contingencies.		
<b>12 Hours</b>		
Revise plans based on feedback and assessments. (GEB)		Continuous
Monitor status of actions. (GEB)		Continuous
Begin staff rotation plan. (GEB)		At beginning of period.

Disseminate public information. (Media Task Force)		At beginning of period.
Secure support for staff (food, lodging) from NGOs. (GEB)		
Assure security as needed. (Law and Order Task Force)	Coordinate with Control Room.	
Establish constant communications on needs, requirements and resources with Control Room and GEB/HQ.		
<b>48 Hours</b>		
Look for improvements in efforts. (GEB)		
Reinforce central coordination. (GEB)		
Conduct regular coordination meetings with other actors. (GEB)		
Begin formal documentation of efforts. (GEB)		
<b>72 Hours</b>		
Review shift plan for safety. (GEB)		
Plan for return to normal, including additional security if needed. (GEB)	Involvement of Law and Order Task Force.	

**Public Health and Sanitation** (including first aid and all medical care): Provide personnel and resources to address pressing public health problems and re-establish normal health care systems.

**Task Force Leader: Chief District Health Officer**

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>Before a Disaster</b>		
Develop inventory of personnel, resources and facilities. (Task Force)		1 week.
Training. (Task Force)	Coordination with GSDMA.	6 months.
Establish Control Room.		Completed.
Prepare for specific diseases by season (e.g., monsoon)		Completed.
Establish Epidemiological Reporting System (ERS). (Task Force)		Completed.
Identify disease vulnerable areas. (CDHO)		Completed.
Improve public awareness. (Media Task Force)		
<b>Warning</b>		
Send out warning to health facilities. (Task Force)		As received.
Mobilize health teams to possible disaster areas. (Task Force)	In coordination with Control Room.	As needed.
Activate Task Force for whole district. (DHO)		On warning.
<b>Disaster</b>		
Begin first aid efforts. (Task Force)		Within 1 hour of disaster.

Establish status of health care system. (Task Force)	Requires communications.	Within 6 hours of disaster.
Begin referral of injured to upper-level facilities. (Task Force)		Within 1 hour of disaster.
Implement SOP for management of deceased. (Task Force)	Involves cooperation with Law and Order and SAR Task Force.	Within 1 hour of disaster.
Coordinate efforts with Control Room and other Task Forces.		Within 2-3 hours of disaster.
<b>12 Hours</b>		
Begin to call in outside resources. (Task Force)	Involves Telecommunications and Logistics Task Forces and Control Room.	Within 3 hours.
Establish temporary medical facilities where needed. (Task Force)	Coordination with Public Works, Power, Water, and Law and Order Task Forces.	Within 24 hours.
Expand surveillance of health status. (Task Force)		Within 24 hours.
Establish shift system for staff. (Task Force)		At beginning of period.
Visit and review health status in shelters. (Task Force)		Within 24 hours.
Develop health care system recovery plan. (Task Force)	In coordination with Control Room.	2-3 hours.
<b>Action and (Who Should Take It)</b>	<b>Requirements or Conditions to be met for the action can occur.</b>	<b>Timeframe</b>
<b>48 Hours</b>		
Establish formal health care system reporting. (Task Force)		At beginning of period.
Start solid waste and vector control management SOP. (Task Force)		At beginning of period.
Start waste water management SOP. (Task Force)		At beginning of period.
Focus health status surveillance on children 0 to 5 years.		Implements in one week.
Establish public awareness and IEC efforts. (Task Force and Media Task Force)		At beginning of period.
<b>72 Hours</b>		
Develop demobilization plan.		By beginning of

		period.
Lessons Learned meeting.		Within 14 days of disaster.
Final Report		Within 14 days of disaster.

**Animal Health and Welfare:** Provision of health and other care to animals affected by a disaster.

**Task Force Leader: Deputy Director, Veterinary and Animal Husbandry**

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

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

### Task Force Leader: District Primary Education Officer

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>Before a Disaster</b>		
Develop shelter operating procedures. (Task Force)		
Develop inventory of shelters (location, capacity,). (Task Force)	UNDP project inventory.	
Provide information to other Task Forces on location of shelters. (Task Force)	Logistics, Water, Power, SAR, Food/Relief Supplies Task Forces and Control Room	
Training for shelter managers. (Task Force)	Need training module.	
<b>Warning</b>		
Mobilize shelter managers. (Task Force)		Within 6 hours of warning.
Review shelter locations for operating status. (Task Force)	Communications needed.	Within 6 hours of warning.
Open shelters as instructed.	Coordination with Control Room.	Within 6 hours of warning.
Mobilize additional resources for shelters and camps. (Task Force)	Cooperation with Logistics, Food and Relief Supplies, Water and Power Task Forces.	Within 6 hours of warning.
Provide public announcements on locations and status of shelters. (Media Task Force)		Within 6 hours of warning.
<b>Disaster</b>		
Beginning logging-in of occupants. (Shelter managers).		Immediately.
Report on status of shelters. (Task Force)	To Control Room.	As needed.
Plan for prioritization of shelter use. (Task Force)	Coordination with evacuation operations and Control Room.	Immediately.
Coordinate with other Task Forces on water, power, food, health, security. (Task Forces)		Immediately.
Provide support and assistance to occupants. (Task Force)	Liaise with Animal Task Force on management of animal and with Health Task Force on health care.	
<b>12 Hours</b>		
Continue operations. (Task Force)		Continuously
Monitor shelter status and movement of people. (Task Force)		Continuously
Mobilize additional resources. (Task Force)	Coordinate with Control Room and	Continuous.

	Logistics Task Force.	
<b>48 Hours and Beyond</b>		
Begin Demobilization as appropriate. (Task Force)		
Begin reconditioning/repairs to shelters. (Task Force)	In cooperation with Public Works Task Force.	As needed.
Lessons Learned session. (Task Force)	Involvement of other Task Forces and evacuees.	14 days after completion of operations.
Final Report. (Task Force)		1 month after completion of activities.

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

#### **Task Force Leader: District Development Officer**

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



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

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

### Task Force Leader: Resident Additional Collector

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

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

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

#### **Task Force Leader: Resident Additional Collector**

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

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

# Chapter 7

## Recovery Measures:

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

### ➤ General Policy Guidelines:

A plan of recovery will help better coordination between various development agencies. Damage Assessment and Needs Assessment shall be the basis of recovery planning. Various Sectors for recovery process may be -

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

Basic services such as power, water supply, sanitation, wastewater disposal etc. should be restored in shortest possible time. Alternate arrangement of water supply, temporary sanitation facilities can be sought with help of special agencies. Special arrangements for provision of essential services should be ensured. It can include creating temporary infrastructure for storage and distribution of water supply, running tankers, power supply and sanitation facilities.

The approach to re-construction and recovery is guided by the National Disaster Management Policy 2009 of which salient clauses / sections are stated in the following para.

Section 9.1.1 of the NPDM states that - the approach to the reconstruction process has to be comprehensive so as to convert adversity into opportunity. Incorporating disaster resilient features to 'build back better' will be the guiding principle. The appropriate choice of technology and project impact assessment needs to be carried out to establish that the projects contemplated do not create any side effects on the physical, socio-cultural or economic environment of the communities in the affected areas or in their neighborhood. Systems for providing psycho-social support and trauma counseling need to be developed for implementation during reconstruction and recovery phase.

Section 9.2.1 of NPDM states that - Reconstruction plans and designing of houses need to be a participatory process involving the government, affected community, NGOs and the corporate sector. After the planning process is over, while owner driven construction is a preferred option, contribution of the NGOs

and corporate sector will be encouraged. Reconstruction programme will be within the confines and qualitative specifications laid down by the Government.

Section 9.3.1 states - Essential services, social infrastructure and intermediate shelters/camps will be established in the shortest possible time. For permanent reconstruction, ideally, the work including the construction of houses must be completed within two to three years. Concerned Central Ministries/Departments and the State Governments should create dedicated project teams to speed up the reconstruction process.

Section 9.3.2 of NDMP states - that - Contingency plans for reconstruction in highly disaster prone areas need to be drawn out during the period of normalcy, which may include architectural and structural designs in consultation with the various stakeholders.

As per the section 9.5.1 of NPDM – the State governments will have to lay emphasis on the restoration of permanent livelihood of those affected by disasters and special attention to the needs of women-headed households, artisans, farmers and people belonging to marginalised and vulnerable sections.

➤ **Detailed damage and loss assessment**

The moment an emergency condition subsides, rapid and thorough Detailed damage and loss assessment is to be conducted to know the overall damage to critical public facilities, homes, businesses and other services within the affected area(s); and to determine whether those damages are sufficient to warrant emergency assistance.

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.

The assessment teams are to report the following information to the Disaster Management Department in the Office of Collectorate for further action.

- |   |   |
|---|---|
| <input type="checkbox"/> Boundaries of the disaster(s).                                   | <input type="checkbox"/> Access point(s) to the disaster area(s).       |
| <input type="checkbox"/> Status of the transportation system.                             | <input type="checkbox"/> Status of communication system                 |
| <input type="checkbox"/> Disaster casualty information                                    | <input type="checkbox"/> Status of medical systems                      |
| <input type="checkbox"/> Shelter / mass care information                                  | <input type="checkbox"/> Damage to utility system                       |
| <input type="checkbox"/> Status of critical facilities                                    | <input type="checkbox"/> Status of security within the affected area(s) |
| <input type="checkbox"/> Information on the humanitarian organisations within the area(s) |   |

Conducting Detailed damage and loss assessment in the aftermath of severe incident includes, Individual damage assessment as well as Public Damage assessment which includes (but not limited to) 1. Damage to road, streets and bridges, 2. Damage to water control facilities such as drainage system, water

channel etc., 3. Damage to public buildings and equipment, 4. Damage to public utilities, 5. Damage to parks and recreational sites and 6. Managing Debris.

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.

➤ **Short-term recovery program**

Short-term recovery phase starts during the first hours and days after an emergency event. The principal objectives are to restore the necessary structural [facilities, critical systems/ infrastructure, roadways and grounds] and non-structural, (power, water, sanitation, telecommunications).

The Short-term recovery with urgent measures to be undertaken includes the following:

- a) Roads and Bridges: This covers construction of all critical roads and bridges necessary to provide connectivity with immediate effect.
- 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.
- c) Electricity: Restoration of power supply is also critical to immediate recovery.
- d) Communication Network: After 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.
- e) Reconstruction & Repair of Lifeline Buildings: Lifeline buildings are those necessary to keep the administrative machinery functioning despite the damage by disaster have to be repaired on priority.
- 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. 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. During this period, the number of victims must be identified for whom construction of houses under Indira Aawas Yojna & Sardar Awas 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: Removal of debris or trees from transportation routes for effective rescue and relief measures.

- 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. Mobile Medical Units have to be pushed into action for immediately health care close to the community.

➤ **Long-term recovery program**

Long term recovery efforts must focus on redeveloping and restoring the socio-economic viability of the disaster area(s). The reconstruction phase requires a substantial commitment of time and resources by government and non-governmental organisations. Important to note here is that much of this commitment would be beyond the scope of traditional emergency management activity programmes. The activities involved would most often be the result of a catastrophic event that has caused substantial, long term damage over a very large area. These efforts include:

1. Long term reconstruction of public infrastructures and social services damaged by the disaster.
2. Re-establishment of adequate housing to replace that which has been destroyed.
3. Restoration of jobs that was lost.
4. Restoration of the economic base of the disaster area(s)



## Chapter 8

### Financial Arrangement

#### 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 publiccontribution 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, cashpayment 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 alsoprovided to meet unforeseen expenditure in connection with the natural calamities and other allied purposes.

## ➤ 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.

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

Name	Purpose	Finance Arrangements	Activities that can be taken under scheme	Nodal Agency
State Fund	Disaster Management	100% State Govt.	Disaster preparedness and Mitigation	GSDMA
NDRF (NCCF)	Relief Assistance	100% Central Govt.	Cash and kind relief	Revenue Department
SDRF (CRF)	Relief Assistance	75% Centre, 25% State	Cash and kind relief	Revenue Department
Planning Commission (13 Finance commission) Year 2011-15	Capacity Building	100% Centre	Trainings Awareness Generation IEC material Mock drills	Revenue Department
Line department funds	Preparedness and mitigation	Line department budgetary allocation	Activities falling in purview of departments for DRR, preparedness and mitigation	Line Departments
District Planning Fund	Any public works	MP and MLA aid and grants	Preparedness, Mitigation capacity building, recovery	Local Bodies, 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	3% of profit	Any	Charity Commissioner and Corporate
Appeal	Immediate relief	Fully or partially external funds	Immediate relief, reconstruction	DDMA/TDMA

At Taluka level, the budgeting for various activities should be planned and incorporated in TDMP, aligning with respective activities of line departments and other agencies. The activities that are proposed in various sections of this plan (mitigation, capacity building, recovery, etc.) needs to be budgeted and reflected in the following format. The Budget source columns 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, equipment and plants)**

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

## **Chapter 9**

### **Maintenance of Plan**

#### **Maintenance of Plan:**

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.

#### **9.1 Authority for maintaining and reviewing the plan:**

(According to ACT No. 31 of 2005 – The Disaster Management Act, 2003, Chapter IV, District Plan.) the District Plan.-

- (1) There shall be a plan for disaster management for every district of the State.
- (2) The District Plan shall be prepared by the District Authority, after consultation with the local authorities and having regard to the National Plan and the State Plan, to be approved by the State Authority.
- (4) The District Plan shall be reviewed and updated annually.
- (5) The copies of the District Plan referred to in sub-sections (2) and (4) shall be made available to the Departments of the Government in the district.
- (6) The District Authority shall send a copy of the District Plan to the State Authority which shall forward it to the State Government.
- (7) The District Authority shall, review from time to time, the implementation of the Plan and issue such instructions to different departments of the Government in the district as it may deem necessary for the implementation thereof.

The Plan should be maintained and reviewed 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...

**(i) Schedule for updation & revision of plan,**

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

Schedule for updation of plan: Every year as a part of pre monsoon, DDMC will update plan in the month of May-June and will revise in the month of October-November every year.

**(ii) Schedule for Mock Drills**

The district police department, Home guards, Civil Defence personnel, Fire Service officials, SRTs, QRTs, DMCs and DMTs will undergo periodic mock drills for different disasters, coordinated by the District Collector at the district level and by the Relief Commissioner at the State level. It is mandatory to have mock-drills at least twice in a year for fire and earthquake.

## **Chapter 10**

### **IRS (Incident Response System):**

#### **Preamble**

The Guidelines on the Incident Response System (IRS) are issued by the National Disaster Management Authority (NDMA ) under Section 6 of the DM Act, 2005 for effective, efficient and comprehensive management of disasters in India. The vision is to minimize loss of life and property by strengthening and standardizing the disaster response mechanism in the country.

Though India has been successfully managing disasters in the past, there are still a number of shortcomings which need to be addressed. The response today has to be far more comprehensive, effective, swift and well planned based on a well conceived response mechanism.

Realization of certain shortcomings in our response system and a desire to address the critical gaps led the Government of India (GoI) to look at the world's best practices. The GoI found that the system evolved for fire- fighting in California is very comprehensive and thus decided to adopt Incident Command System (ICS).

In view of the provisions of the DM Act, 2005, NDMA felt that authoritative Guidelines on the subject, with necessary modifications to suit the Indian administrative setup, were essential. To meet this need, a core group of experts was constituted and four regional consultation workshops were conducted. It was ensured that representatives of the State Governments and MHA participate and their views given due consideration. Training Institutes like the LBSNAA, NIDM and various RTIs / ATIs along with National core trainers also participated. The adaptation of ICS by other countries was also examined. The draft prepared was again sent to all States, UTs and their final comments were obtained and incorporated. A comprehensive set of Guidelines has thus been prepared and is called the Incident Response System (IRS)

#### **Definition and Context:**

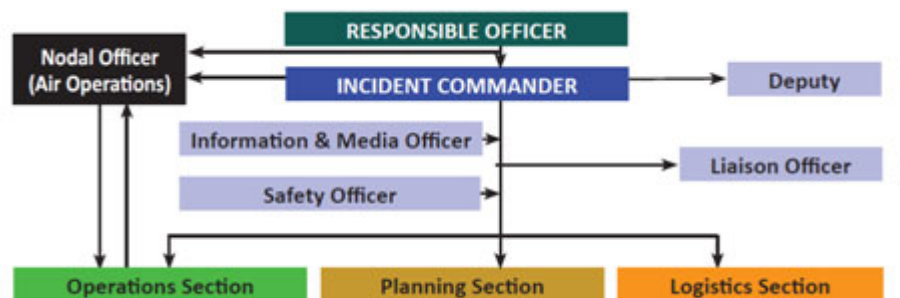
The Incident Response System (IRS) is an effective mechanism for reducing the scope for ad-hoc measures in response. It incorporates all the tasks that may be performed during DM irrespective of their level of complexity. It envisages a composite team with various Sections to attend to all the possible response requirements. The IRS identifies and designates officers to perform various duties and get them trained in their respective roles. If IRS is put in place and stakeholders trained and made aware of their roles, it will greatly help in reducing chaos and confusion during the response phase. Everyone will know what needs to be done, who will do it and who is in command, etc. IRS is a flexible system and all the Sections, Branches and Units need not be activated at the same time. Various Sections, Branches and Units need to be activated only as and when they are required.

The main purpose of these Guidelines is to lay down the roles and responsibilities of different functionaries and stakeholders, at State and District levels and how coordination with the multi-tiered institutional mechanisms at the National, State and District level will be done. It also emphasises the need for proper documentation of various activities for better planning, accountability and analysis. It will also help new responders to immediately get a comprehensive picture of the situation and go in for immediate action.

## IRS Organisation:

The IRS organisation functions through Incident Response Teams (IRTs) in the field. In line with our administrative structure and DM Act 2005, Responsible Officers (ROs) have been designated at the State and District level as overall in charge of the incident response management. The RO may however delegate responsibilities to the Incident Commander (IC), who in turn will manage the incident through IRTs. The IRTs will be pre-designated at all levels; State, District, Sub-Division and Tehsil/Block. On receipt of Early Warning, the RO will activate them. In case a disaster occurs without any warning, the local IRT will respond and contact RO for further support, if required. A Nodal Officer (NO) has to be designated for proper coordination between the District, State and National level in activating air support for response.

Apart from the RO and Nodal Officer (NO), the IRS has two main components; a) Command Staff and b) General Staff as shown in this Fig.



## Command Staff:

The Command Staff consists of Incident Commander (IC), Information & Media Officer (IMO), Safety Officer (SO) and Liaison Officer (LO). They report directly to the IC and may have assistants. The Command Staff may or may not have supporting organisations under them. The main function of the Command Staff is to assist the IC in the discharge of his functions.

## General Staff:

The General Staff has three components which are as follows;

### Operations Section (OS):

The OS is responsible for directing the required tactical actions to meet incident objectives. Management of disaster may not immediately require activation of Branch, Division and Group. Expansion of the OS depends on the enormity of the situation and number of different types and kinds of functional Groups required in the response management.

### Planning Section (PS):

The PS is responsible for collection, evaluation and display of incident information, maintaining and tracking resources, preparing the Incident Action Plan (IAP) and other necessary incident related documentation. They will assess the requirement of additional resources, propose from where it can be mobilised and keep IC informed. This Section also prepares the demobilisation plan.

### **Logistics & Finance Section (L&FS):**

The L&FS is responsible for providing facilities, services, materials, equipment and other resources in support of the incident response. The Section Chief participates in development and implementation of the IAP, activates and supervises Branches and Units of his section. In order to ensure prompt and smooth procurement and supply of resources as per financial rules, the Finance Branch has been included in the LS.

- **Incident Response System in the State**

In any disaster response, the initial efforts would always be taken by the District Administration. However, when Districts are overwhelmed in any situation, the support necessarily has to come from the State level. There is a formal Incident Response System in the State. The GSDMA Act 2003 empowers Commissioner of Relief to be the Incident Commander in the State and District Collector in the respective districts.

- **Incident Response System in the District.**

The District Magistrate is the chairman of the DDMA as per the Act. The roles and responsibilities of the members of the DDMA have decided in advance in consultation with the concerned members. The roles of other line departments also have clearly described in DDMP and circulated the copy of same to all.

The IRS however depend on the nature of the disaster. In case of flood and earthquakes reaching the affected area, rescuing the affected people and providing relief to them is the main task of the responders. People have to leave their home in a hurry and they are not able to take away their valuables. These abandoned houses become vulnerable. The relief materials while being transported also become prone to loot. In such cases, Police and the Armed Forces are the best suited to handle and lead the operations section. In case of fire at Corporation and Nagarpalika level, it has the Fire Officer who are appropriate officer to handle the situation. In case of health related disaster, it would be the District Chief Medical Officer and so on. Some of the natural hazards have a well-established early warning system.

District also has a functional 24 x 7 EOC / Control Room. On receipt of information regarding the impending disaster, the EOC informs the District Collector, who in turn will activate the required IRT and mobilise resources. The scale of their deployment will depend on the magnitude of the incident.

In case of Sub-Division, Taluka, the respective heads, i.e. TDO, Mamlatdar and BHO will function as the IC in their respective IRTs. During the pre-disaster period, the Collector has ensure capacity building of IRT members in their respective roles and responsibilities.

In case when central teams (NDRF, Armed Forces) are deployed, the DM will ensure resolution of all conflicts. For this purpose he may attach a representative of such agencies in the



DEOC where all conflicts can easily be resolved at the highest level. The DM works in close coordination with DEOC and report to State Relief Commissioner and CEO-GSDMA.

- EOC setup and facilities available with the location

The District Control Room (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 **No-1**

- Facilities at District Control Room

**The District Control Room (DEOC) is equipped with but not limited to the following items:**

- 2 Telephones Lines and Fax
- 2 Walky Talky Sets and 1 VHF Set
- Satellite phone
- Three PCs with GSWAN based e-mail, web site facilities and Printers
- Conference table with Chairs in Conference Hall
- District Disaster Management Plan and District's Communication Plan
- 3 TVs for updated News telecasts.
- Projector with Screen and 3 Portable Emergency Lightning Systems.

- Alternate EOC if available and its location

The Taluka Level Control Rooms are located at the Office of Mamlatdar. The Liaison Officers of the respective Talukas takes charge of the Control Room in any emergency. The respective Liaison Officers coordinates between the task group members working at disaster sites and TEOC for mobilization of resources and dissemination of instructions received from DEOC.

- Public and private emergency service facilities available in the district

Following Public and Private Emergency Services Facilities is available in Amreli:

1. 108 EMRI Ambulance have their Spot in every Taluka Hq. and all City..
2. 8 Nagarpalika have their Fire Fighting Equipments.
3. R&B, S.T., Forest, Health, Irrigation and Police Department have their limited Emergency Services to co-ordinate during Emergency Situation in District.

(GSDMA) has also provided fire & emergency equipment to Municipal Corporations, Municipalities and the Emergency Response Centers to respond immediately after a disaster.

- Forecasting and warning agencies

The meteorological department undertakes observations, communications, forecasting and

weather services. During the cyclone and flood seasons, the State Government keeps close contact with the IMD – Ahmadabad office for weather related forecasts.

Earthquakes occurring in the State which are of magnitude 3.0 and above on Richter scale are also reported by the IMD and ISR to the District Authority immediately. Initially the District Control Room based at DEOC plays an active role on disseminating of Forecast and Warnings to line departments, Taluka-City level control Rooms and also ensures to reach with widely spread mass public through Local Media.

DEOC Personnel are well trained on observing IMD weather Satellite images, animated movement of Clouds, Weather Predications, Hourly Predictions and Coastal advisories on daily basis. If certain critical warning issued by metrology department then it is immediate forwarded toSDMs, Mamlatdars, TDOs and COs for further actions.

## IRTs

Position of IRT	District	Remarks
<b>INCIDENT COMMANDER</b>	<b>Resident Additional Collector</b>	
Deputy IC	As Appointed by District	
Information &Media Officer	Info. Officer	
Liasion Officer	Dy. Collector & District Class-1 Officer	
Safety Officer	Disaster specification/(fire-fire officer, flood-health, earthquake -civil engineer )	
<b>OPERATIONS SECTION CHIEF</b>	Dy. Director of factory and health in case of fire in case of chemical disaster-factory inspector	
Staging area manger	District Education Officer Master primary/secondary, Gram-Sevak, Civil Supply	
<b>Response Branch Director</b>	Dy. SP, Police Department Dy. Collector	
Division Supervisor/Group-incharge	Police Inspector, Police Station, ABC-Division & Disaster Mamlatdar	
Task Force /Strike Team	Police Inspector, Police Station, ABC-Division	
Single Resources		
<b>Transportation Branch Director</b>	ARTO-Amreli	
<b>Road Group</b>		
Group in-charge		
Vehicle Coordinator	Sub inspector, RTO,Amreli	
Loading-in-charge/Unloading – in-charge	All Depo Manager, Bus Station	
<b>Rail Group</b>	Station Master-Railway	
Group in-charge	As appointed by Station Master-Railway Station	

Vehicle Coordinator	As appointed by Station Master-Railway Station	
Loading-in-charge/Unloading – in-charge	As appointed by Station Master-Railway Station	
<b>Air Operations Group</b>	As Appointed by District	
Group in-charge-Air operations		
Helibase/Helipad-in-charge	Ex.Engineer R and B State	
Loading/Unloading –in-charge		
<b>PLANNING SECTION CHIEF</b>	Resident Additional Collector	
<b>Resource Unit</b>	DEOC Staff & District Project Officer-GSDMA	
Chief –in-status Recorder	Dy. Mamlatdar, Recode cell	
<b>Situation Unit</b>	PRIs/NHRM EMPLOYEE/ VDMC Members	
Display Processor	Public Relation officer, Collector Amreli	
Field Observer	Sarpanch, Talati, /NHRM Employee/ VDMP Members	
Weather Observer	Director of IMD & DEOC Staff	
<b>Documentation Unit</b>	DEOC Staff & District Project Officer-GSDMA	
<b>Demobilisation Unit</b>	DEOC Staff & District Project Officer-GSDMA (	
<b>Technical Specialist</b>		
<b>LOGISTIC/ FINANCE SECTION CHIEF</b>	Dy. DDO	
<b>Service Branch Director</b>		
Communication Unit	Ex. Eng. GEB/R&B, General Manager BSNL	
Medical Unit	CDHO	
Food Unit	DSO	
<b>Support Branch Director</b>	Dy. District Development Officer, Revenue, Amreli	
Resource Provisioning Unit	DSM (District Supply Mamlatdar)	
Facilities Unit	DPEO/DEO, Ex. ENG.R&B Panchayat and State	
Ground Support Unit	ARTO, DSO	
<b>Finance Branch Director</b>	District Trejary officer	
Time Unit	Dy. Mamlatdar, Human Resource, Collector Office- Amreli	
Claim Unit	Chitnish to Collector (PRO)	
Compensation	Dy. DDO (Revenue) &Team	
Procurement Unit	Chitnish to Collector	
Cost Unit	Sub Divisional Magistrate- District Treasury Officer, Amreli	

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

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

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

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

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

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

## **District CMG meeting**

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

## **Activation of EOC**

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

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

## **Resource Mobilization**

Any disaster happens in district so resources are very important for response disaster. Resource mobilization is one of most important crucial activity. As mansion above about IDRN and SDRN portal are have information regarding which kind of resource are available and location of its. IDRN and SDRN should use for resource mobilization. DDMC, TDMC, CDMC and VDMC should be update regularly.

## **Media Management**

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

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

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

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

### **Emergency Response Functions:**

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

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

#### **Emergency Operation Taskforce Functions**

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

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

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

### **Each Department and Government agency involved in Disaster Management and Mitigation will:**

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

## **Other Departmental plan**

### **Agriculture**

#### **Prevention Activities:**

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

#### **Preparedness Activities before disaster seasons**

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

#### **Response Activities:**

- 1 Management of control activities following crop damage, pest infestation and crop disease to minimize losses
1. Collection, laboratory testing and analysis of viruses to ensure their control and eradication



2. Pre-positioning of seeds and other agro inputs in strategic points so that stocks are readily available to replace damage caused by natural calamities.
3. Rapid assessment of damage to soil, crop, plantation, irrigation systems, drainage, embankment, other water bodies and storage facilities and the requirements to salvage, replant, or to compensate and report the same for ensuring early supply of seeds and other agro inputs necessary for re-initiating agricultural activities where crops have been damaged.
4. Establishment of public information centers with appropriate and modern means of communication, to assist farmers in providing information regarding insurance, compensation, repair of agro equipments and restarting of agricultural activities at the earliest.

### **Recovery Activities**

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

## **Health Department**

### **Disaster Events**

#### **Prevention Activities:**

- Assess preparedness levels at State, District and Block levels.
- Identification of areas endemic to epidemics and natural disasters
- Identification of appropriate locations for testing laboratories
- Listing and networking with private health facilities
- Developing a network of volunteers for blood donation with blood grouping data
- Strengthening of disease surveillance, ensuring regular reporting from the field level workers (ANMs / LHV etc) and its compilation and analysis at the PHC and District levels, on a weekly basis (daily basis in case of an epidemic or during natural disasters), forwarding the same to the State Disease Surveillance Cell and monthly feedback from the State to the district and from the District to the PHC
- Formation of adequate number of mobile units with trained personnel, testing facilities, communication systems and emergency treatment facilities
- Identification of locations in probable disaster sites for emergency operation camps
- Awareness generation about various infectious diseases and their prevention
- Training and IEC activities

- Training of field personnel, Traditional Birth Attendants, community leaders, volunteers,
- NGOs and CBOs in first aid, measures to be taken to control outbreak of epidemics during and after a disaster, etc
- Arrangement of standby generators for every hospital
- Listing of vehicles, repair of departmental vehicles that will be requisitioned during emergencies for transport of injured

## **Preparedness Activities before Disaster Seasons**

### **For heat wave :**

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

### **For flood and cyclone:**

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

### **Response activities:**

Stock piling of life-saving drugs, detoxicants, anesthesia, Halogen tablets in vulnerable areas

Strengthening of drug supply system with powers for local purchase during Level-0

Situational assessment and reviewing the response mechanisms in known vulnerable pockets

Ensure adequate availability of personnel in disaster site

Review and update precautionary measures and procedures.

### **Sanitation**

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

### **Recovery Activities**

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

## **Epidemics**

### **Preventive Activities:**

- Supply of safe drinking water, water quality monitoring and improved sanitation
- Vector Control programme as a part of overall community sanitation activities
- Promotion of personal and community latrines
- Sanitation of sewage and drainage systems
- Development of proper solid waste management systems
- Surveillance and spraying of water bodies for control of malaria
- Promoting and strengthening Primary Health Centers with network of paraprofessionals to improve the capacity of surveillance and control of epidemics
- Establishing testing laboratories at appropriate locations to reduce the time taken for early diagnosis and subsequent warning
- Establishing procedures and methods of coordination with the Health Department, other local authorities/departments and NGOs to ensure that adequate prevention and preparedness
- measures have been taken to prevent and / or minimize the probable outbreak of epidemics
- Identification of areas prone to certain epidemics and assessment of requirements to control and ultimately eradicate the epidemic
- Identification of appropriate locations and setting up of site operation camps for combating epidemics
- Listing and identification of vehicles to be requisitioned for transport of injured animals.
- Vaccination of the animals and identification of campsites in the probable areas
- Promotion of animal insurance
- Tagging of animals
- Arrangement of standby generators for veterinary hospitals
- Provision in each hospital for receiving large number of livestock at a time
- Training of community members in carcasses disposal

### **Preparedness activities before disaster seasons**

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

### **Response Activities:**

- Control of animal diseases, treatment of injured animals, Protection of lost cattle.
- Supply of medicines and fodder to affected areas.
- Ensure adequate availability of personnel and mobile team.
- Disposal of carcasses ensuring proper sanitation to avoid outbreak of epidemics.

- Establishment of public information centre with a means of communication, to assist in providing an organized source of information.
- Mobilizing community participation for carcass disposal.

#### **Recovery Activities:**

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

### **Water Supplies and Sanitation (GWSSB)**

#### **Prevention Activities:**

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

#### **Preparedness Activities for disaster seasons**

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

#### **Response Activities:**

- Disinfections and continuous monitoring of water bodies.
- Ensuring provision of water to hospitals and other vital installations.
- Provision to acquire tankers and establish other temporary means of distributing water on an emergency basis.
- Arrangement and distribution of emergency tool kits for equipments required for dismantling and assembling tube wells, etc.
- Carrying out emergency repairs of damaged water supply systems.
- Disinfection of hand pumps to be done by the communities through prior awareness activities & supply of inputs.
- Monitoring flood situation.
- Dissemination of flood warning.

- Ensure accurate dissemination of warning messages to GPs & Taluka with details of flow.
- Monitoring and protection of irrigation infrastructures.
- Inspection of bunds of dams, irrigation channels, bridges, culverts, control gates and overflow channels.
- Inspection and repair of pumps, generator, motor equipments, station buildings.
- Community mobilization in breach closure

#### **Recovery Activities:**

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

#### **Police:**

##### **Prevention Activities:**

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

##### **Response Plan:**

- Security arrangements for relief materials in transit and in camps etc.
- Senior police officers to be deployed in control rooms at State & district levels during L 1 level deployment onwards.
- Deploy personnel to guard vulnerable embankments and at other risk points.
- Arrangement for the safety.

- Coordinate search, rescue and evacuation operations in coordination with the administration
- Emergency traffic management
- Maintenance of law and order in the affected areas
- Assist administration in taking necessary action against hoarders, black marketers etc.

## **Civil Defense**

### **Prevention Activities**

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

### **Response Activities**

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

## **Fire Services:**

### **Prevention Activities:**

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

### **Response Activities:**

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

## **Civil Supplies:**

### **Preventive Activities**

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

### **Response Activities**

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

### **Recovery Activities**

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

## **Public Works/ Rural Development Departments**

### **Prevention Activities :**

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

### **Response Activities**

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

### **Recovery Activities:**

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

## **Energy: PGVCL**

### **Prevention Activities:**

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

### **Response Activities:**

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

## **Fisheries**

### **Prevention Activities**

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



**Response Activities**

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

**Recovery Activities**

Provide compensations and advice to affected individuals, community.

**Forest Department****Prevention activities**

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

**Transport Department:****Prevention Activities**

- Listing of vehicles which can be used for emergency operation.
- Safety accreditation, enforcement and compliance
- Ensuring vehicles follow accepted safety standards.
- Build awareness on road safety and traffic rules through awareness campaign, use of different IEC strategies and training to school children.
- Ensure proper enforcement of safety regulations Response Activities.
- Requisition vehicles, trucks, and other means of transport to help in the emergency operations.
- Participate in post impact assessment of emergency situation
- Support in search, rescue and first aid.
- Cooperate and appropriation of relief materials.

**Recovery Activities**

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

## **Panchayati Raj Institutions**

### **Preventive Activities**

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

### **Response Activities**

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

### **Response Activities:**

- Assist in road clearance.
- Provision of tree cutting equipments
- Units for tree cutting and disposal to be put under the control of GSDMA, SRC, Collector during Level 1.
- Provision of building materials such as bamboos etc for construction of shelters

### **Recovery Activities:**

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

## **Information & Public Relations Department**

### **Prevention Activities**

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

### **Response Activities**

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

## **Revenue Department**

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

## **Home Department**

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

## **Gujarat Disaster Rapid Action Force**

### **Response**

- To be trained and equipped as an elite force within the Police Department and have the capacity to immediately respond to any emergency.
- Unit to be equipped with life saving, search & rescue equipments, medical supplies, security arrangements, communication facilities and emergency rations and be self-sufficient.
- Trained in latest techniques of search, rescue and communication in collaboration with international agencies

## **Reporting**

### **Media & information Management:**

Τασκφορχε Λεαδερ: Διστριχτ Ινφορματιον Οφφιχερ

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

#### **➤ Activation of the Plan**

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

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

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

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

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

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

### **End of Emergency**

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

## **Humanitarian Relief and Assistance**

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

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

### **Helpline**

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

### **Arrangement of VIP Visit: -**

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

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

**Responsibility matrix for response functions**

**TASKFORCE ACTION PLANS**

**Coordination and Planning:**

Coordinate early warning, response and recovery operations.

**Task Force Leader: Collector**

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

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

**Warning:**

Collection and dissemination of warnings of potential disasters

**Task Force Leader: Resident Additional Collector**

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

**Law and Order:**

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

**Task Force Leader: District Superintendent of Police**

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



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

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

### **Search and Rescue (including evacuation):**

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

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

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

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

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>48 hours</b>		
Demolish/Stabilize damaged buildings in cooperation with Public Works Task Force.	Logistics Task Force, workers, equipment.	Starting at 48 hours.
Demobilization, reconditioning, repair and replace equipment and other resources. (Task Force)		Based on nature of disaster.
Remain on stand-by for additional operations, particularly related to safety of recovery work. (Task Force).		As needed.
<b>72 hours</b>		
Lessons Learned meeting. (Task Force and others)		After 2 weeks.
Final Report. (Task Force)		After major activities completed.

### **Public Works:**

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

### **Task Force Leader: Executive Engineer, Roads and Buildings**

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>Before a Disaster</b>		
Inventory of personnel, equipment and status of infrastructure. (Task force)	Link to UNDP project data based development.	One week before warning.
Identify critical infrastructure. (Task Force)	Need to define what is critical infrastructure.	Before warning.
Identify alternate transport routes and publish map. (Task Force)		Before warning.
Plan for prioritized post-disaster inspection of infrastructure. (Task Force)		
Establish and maintain a resources and staffing plan. (Task Force)		
Plan to provide sanitation and other facilities for shelters. (Task Force)		

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

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Begin reporting on operations (Task Force)		Starting at 3 days
Reconditioning, repair and replace equipment and other resources. (Task Force)		Based on nature of disaster
Plan and start demobilization. (Task Force)		Starting at 3 days
<b>72 hours</b>		
Develop long term restoration plan and start activities. (Task Force)		From 72 hours
Lessons Learned meeting. (Task Force and others)		After 2 weeks
Final Report. (Task Force)		After major activities completed

### **Water Supply:**

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

### **Task Force Leader: Executive Engineer, Gujarat Water Supply Board**

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

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

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
<b>12 Hours</b>		
Establish temporary water systems. (Task Force)		Up to 72 hours from disaster.
Move toward permanent water supply system. (Task Force)		After 72 hours.
Complete long term recovery plan and needs. (Task Force)		After 72 hours.
Begin reporting and documentation. (Task Force)		From 48 hours.
Begin demobilization. (Task Force)	Coordinated with Control Room.	From 48 hours.
Lessons Learned meeting. (Task Force and others)		After 2 weeks.
Final Report. (Task Force)		After major activities completed

### **Food and Relief Supplies:**

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

### **Task Force Leader: District Supply Officer**

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



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

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Begin public announcement of distribution plan and standards. (Media Task Force)		Underway in 48 hours.
<b>48 Hours</b>		
Shift to normal operations. (Task Force)		Within 1 week.
Reconcile receipts and distribution records. (Task Force)		Within 30 days.
Continue providing relief to special areas/populations. (Task Force)		For 15 days from the disaster
<b>72 Hours</b>		
Restore Public Distribution System. (Task Force)		From 1 week after the disaster.
Lessons Learned meeting.		Within 14 days

### **Power:**

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

**Task Force Leader: Superintending Engineer, Gujarat Electricity Board**

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

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

### **Public Health and Sanitation**

(Including first aid and all medical care):

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

#### **Task Force Leader: Chief District Health Officer**

<b>Action and (Who Should Take It)</b>	<b>Requirements or Conditions to be met for the action can occur.</b>	<b>Timeframe</b>
<b>Before a Disaster</b>		
Develop inventory of personnel, resources and facilities. (Task Force)		1 week.
Training. (Task Force)	Coordination with GSDMA	6 months.
Establish Control Room.		Completed.
Prepare for specific diseases by season (e.g., monsoon)		Completed.
Establish Epidemiological Reporting System (ERS). (Task Force)		Completed.
Identify disease vulnerable areas. (CDHO)		Completed.
Improve public awareness. (Media Task Force)		
<b>Warning</b>		
Send out warning to health facilities. (Task Force)		As received.
Mobilize health teams to possible disaster areas. (Task Force)	In coordination with Control Room.	As needed.
Activate Task Force for whole district. (CDHO)		On warning.
<b>Disaster</b>		
Begin first aid efforts. (Task Force)		Within 1 hour of disaster.
Establish status of health care system. (Task Force)	Requires communications.	Within 6 hours of disaster.
Begin referral of injured to upper-level facilities. (Task Force)		Within 1 hour of disaster.
Implement SOP for management of deceased. (Task Force)	Involves cooperation with Law and Order and SAR Task Force.	Within 1 hour of disaster.
Coordinate efforts with Control Room and other Task Forces.		Within 2-3 hours of disaster.

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

### **Animal Health and Welfare:**

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

#### **Task Force Leader: Deputy Director, Veterinary and Animal Husbandry**

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

## **Shelter:**

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

### **Task Force Leader: District Primary Education Officer**

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

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



### **Logistics:**

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

#### **Task Force Leader: District Development Officer**

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

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

### **Damage Assessment and Survey:**

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

#### **Task Force Leader: Resident Additional Collector**

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

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

### **Telecommunications:**

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

#### **Task Force Leader: Resident Additional Collector**

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

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

## **Annexures**

### **Amreli District Profile**

#### **Introduction:-**

Amreli is Located in the south corner of Gujarat State. Its mainland extends between 20 degree - 45 min and 22 degree – 00 min north latitude and between 70 degree 50 Min and 71 degree - 40-min longitude. It is bounded by Rajkot district north, Arabic Sea at south, Bhavnagar Dist. In east & Junagadh Dist. In West. Its coastline is 18 Notical mile Long. Area & Population The district is having an area of 7397. Kms and accounting for above % of the total state land accommodates a population of 15.14.190 Lakhs persons (as per 20011 census) and it is about 2.60 % of the total state population. Density of population is 188 persons per sq. km. About 75.00 % of the population lives in the rural area. The literacy percentage is 78.

#### **History Of Amreli**

Amreli district derives its name from the town of Amreli, which is the Head Quarter of the district. It is believed that during the year 534 AD, Amreli existed as a city place with name Anumanji. After that the name was Amlik and then Amravati. The ancient Sanskrit name of Amreli was Amarvalli. Initially Amreli was the part of Former Gaikwad State of Baroda. During Gaikwad regime in 1886, the compulsory and free education policy was adopted in Amreli for the first time. After independence the district became the part of Bombay State and a separate district in Gujarat State after the bifurcation of Bombay State.

#### **➤ Overview**

Amreli district is located near the Gulf of Khambhat in Arabian Sea. Amreli district is bounded by Bhavnagar dist. in the East, Junagadh district in the West, Rajkot dist. in the North and Arabian sea in the south. Amreli district is one of the districts of the state of Gujarat in western India. The district headquarters are located at Amreli. Amreli existed as a city place with name Anumanji. After that the name was Amlik and then

Amravati. The ancient Sanskrit name of Amreli was Amarvalli.

Economy of Amreli depends upon agriculture. Diamond industry is developed well here. In Bagasara gold plating units and in Saver Kundla Weighing machine for diamond are famous. Pipavav, Jafrabad and Victor ports are in the district. Agro-based industries are well developed in the district.

Lathi is a taluk headquarters in Amreli District. It is situated 9 km to the south of Chavad and 19 km to the east of Chital. Lathi is the birthplace of the poet Kalapi. Shri Swaminarayan Mandir is the prime attraction. Bhurakhiya Hanuman Mandir and Khodiyar Mandir at Babra are also major tourist spots accessible from here.

### ➤ **Attractions**

Gir Wildlife Sanctaury: In the southwest of the peninsular state of Gujarat, lies the 116 square-mile Gir sanctuary created to protect the last wild population of Lion outside the African regions. Since 1913 when the Lion population over here fell drastically to just 20 animals, the numbers have increased to around 300.

Port Pipavav: Port Pipavav is located in the Saurashtra region of Gujarat, 135 km south-west of Bhavnagar. The port has three dry cargo berths and one LPG / liquid cargo berth. The three cargo berths have a length of about 725 m, which are equipped with instruments capable of handling multipurpose cargo.

Bhurakhiya Hanuman Mandir, Lathi

Khodiyar Mandir, Dam site, Dhari.

Nagnath Temple in Amreli is dedicated to Lord Shiva. It has been constructed during the 1600s and has got a huge historical importance. Prayers are offered not only through the locals but also people coming from all over the India. It is common for tourists to visit this famous temple whenever they tour Amreli. The celebration of Shivratri and Nagpanchami is observed with a lot of devotion each year.

### **Area & Administration:-**

Area wise Amreli is the Minimum Largest District of the state. The District has 11 Taluka (Less than Five Subdivisions Amreli, Rajula, Lathi, and S.Kundla Dhari). The information of taluka is as under

<b>TOTAL AREA OF AMRELI DISTRICT (TALUKAWISE)</b>
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Sr.NO	NAME OF TALUKA	AREA (Km)
1	VADIYA-KUKAVAV	545.82
2	BABRA	793.17
3	LATHI	632.75
4	LILIYA	394.99
5	AMELIA	892.08
6	BAGSARA	350.56
7	DHARI	1035.05
8	SAVARKUNDLA	1179.56
9	KHAMBHA	595.3
10	JAFRABAD	355.7
11	RAJULA	656.26

### Administrative Set up:Amreli District

Amreli District											
Amelia-Sub Division		Dhari-Sub Division		S.Kundla-Sub Division		Rajula-Sub Division		Lathi-Sub Division		Bagasara - Sub Division	
Name of Taluka	No. of Villages	Name of Taluka	No. of Villages	Name of Taluka	Name of Taluka	Name of Taluka	No. of Villages	Name of Taluka	No. of Villages	Name of Taluka	No. of Villages
Amreli	71	Dhari	78	Lathi	Lathi	Rajula	72	Lathi	51	Vadiya	45
		Khambha	56	Babra	Babra	Jafrabad	43	Babra	58	Bagasara	33

**Total Population(2011)**



Name	TRU	No HH	TOT P	TOT M	TOT F	P 06	M 06	F 06
Amreli	Total	294837	1514190	771049	743141	173555	92047	81508
Amreli	Rural	219041	1127555	572554	555001	131321	69460	61861
Amreli	Urban	75796	386635	198495	188140	42234	22587	19647

Sr.NO.	Name of Taluka	No. of Villages	Population(2011)
1	Amreli	71	247912
2	Babra	58	140521
3	Bagasara	33	83054
4	Dhari	78	139807
5	Jafrabad	43	108002
6	Khambha	56	93431
7	Lathi	51	132914
8	Liliya	37	60423
9	Rajula	72	175693
10	Savarkundla	82	239272
11	Vadiya	45	99794

AMRELI town is District Head quarter and has one of the 9 Municipalities in the State, There are 592 Gram Panchayat. Amreli, Savarkundla, Lathi, Chalala, Damnagar, Jafrabad, Bagasara, Babra, Rajula are Municipalities in Amreli District.

### **Climate:-**

The Climate of Amreli District can be regarded as one of extreme kind with hot summers & cold winters except in the coastal region, where it is generally pleasant all throughout the year. The air is humid due to coastal location. The Climate of Amreli is Mostly Dry.

The temperature at Amreli district headquarters ranges from 44.00 degree centigrade higher in the summer and 5.4 degree centigrade lowest in the winter.

The average annual rainfall is 609 mm. The soil found in the District may broadly be classified as alluvial, black, light brown and alkaline. The last ten years rainfall data is as under.

### **RAIN FALL DATA OF AMRELI DISTRICT IN MM (2011 TO 2020)**

Sr No.	Taluka	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	AMRELI	753	378	861	677	724	687	628	410	983	1071
2	LILIYA	733	428	944	508	501	845	489	407	805	1148
3	LATHI	741	423	980	578	729	746	670	318	916	999
4	BABRA	710	467	1105	644	501	587	654	332	913	621
5	VADIYA	759	258	846	433	845	600	789	615	835	1185
6	BAGASARA	798	318	639	425	1190	646	633	455	940	1390
7	DHARI	897	366	815	451	1103	606	345	293	745	762
8	KHAMBHA	484	276	822	516	709	603	524	467	1001	1338
9	S.KUNDLA	679	361	817	466	643	595	502	446	915	1095
10	RAJULA	533	327	1085	468	850	933	780	789	1195	1505
11	JAFARABAD	551	346	883	599	791	970	634	959	665	1289

### **Health :-**

The district has 3 Hospitals, 41 PHCs and 13 CHCs in the District to cater the people. There is a Hospital Knows GOL DAVAKHANA, By Netra raksha Trust. Location of CHCs & PHCs in different taluks are as follows.

- Hospitals (Govt PHCs/CHCs, Private and charitable) in the district**

Sr. No.	Taluka	Name of CHCs	Name of PHCs	Phone No.
1	AMRELI	Civil Hospital	Jaliya, Chital, Mota ankadiya, Vakiya,	02792-222587
2	LILIYA	Liliya CHC	Krankach, Gundarn,	02793-236575
3	LATHI	Lathi CHC	Matirala, Ansodar, Chavand	02793-250566
4	BABARA	Babara CHC	Kotadapitha, Mota devaliya, Khambhala,	02791-233466
5	VADIYA	Vadiya CHC, Kukavav CHC	Anida, Devgam,	02796-222013 02796-273044
6	BAGASARA	Bagasara CHC	Juna Haliyad, Mavjinjava	02796-222013

7	DHARI	Dhari CHC	Gopalgram, Dalkhaniya, Jira, Bhader,	02797-221114
8	KHAMBHA	Khambha CHC	Khadadhar, Mota samthiyala, Dedan, Tataniya	02797-260543
9	S.KUNDLA	S.Kundla CHC	Jira, Vijapadi, Vanda, Juna savar, Ambaradi, MotaJinjuda	02845-242604
10	RAJULA	Rajula CHC	Dungar, Vavera, Bherai,	02794-222033
11	JAFARABAD	JAfarabad CHC	Babrkot, Nageshri, Timbi	02794-246396

### **River & Dams:-**

The District has no major river. There are seasonal rivers streams. Amongst these are the river VADI, THEBI, SHETRUNJI, KALUBHAR, GHELO, VASAVADI, GANGANDIYO, RANBHOLI, SAKAROLI, SATHALI, KHARI, SURAJAVADI, SHEL, NAVLI, DHATARVADI, DEDUMAL, NATALIYO, DHEDHYA, RAYDI, RUPEN,

There are no major dams in Amreli District. There are 11 medium and minor dams controlled under state irrigation department and 42 minor dams controlled under the District Panchayat.

### **AMRELI DISTRICT RIVER & DEM AFFECTED VILLAGES**

Sr.No	RIVER	DEM	TALUKA NAME	water logging villages	Mamlatdar Office Phon No
1	Shetrunji	Khodiyar Dem	Dhari	Ambardi Padargadh Bhath Dhari Paldi	02797-225015 PSI-02797 225033
			Amreli	Sarbhada Medi Tarvda Babapur Vankiya Gavadka Fatepur Vitthalpur Mandavada Nana Gorakhavala Nana Gorakhavala Mota Pithvajal	02797-223225 PSI-02792 223198
2			Bagasara	Halaria Hulariya	02796-222194
			Liliya	kankot Aamba Krakach Bavadi Bavada Ingorala Shedhavadar Lonka Lonki	02793-236538
			Savar Kundla	Juna Savar Khalpar Aakolda Mekada Fifad Ghoba Borala khorada pipardi padargad halriya hulriya	02845-224200 PSI-02845 242599
2	Sataldi	Munjiyasar Dem	Bagasara	Bagasara Jethiyavadar Jamka	02796-222194

				Sanadiya	
			Amreli	Timbla Babapur Mandava	02792-223225
3	Sheel	Sheldedumal	Dhari	Nana Samdhiyala Ditla	02797-225015
			Savar Kundla	Hathasani Nana Samdhiyala Karjada Simran Khambhadiya	02845-224200
4	Dhatar	Dhatarvadi- 1	Rajula	Kovaya Navi Mandardi Juni Mandardi Hod Nava/Juna Zapodar Uchaiya Dharanones Rampara Hindorna Dhariesvar Jhampodar Vad Zapodar	02794-222013
			Jafrabad	Lothpur	02794-245436
5	Dhatar	Dhatarvadi-2	Rajula	Nani Khakhbay Khakhbay Hindorna Vad Chhatdiya Dharness Uchaiya Rampara	02794-222013
			Jafrabad	Lothpur	02794-245436
6	Survo Survo	Survodem Sakrolidem	Vadiya- Kukavav	Vadiya Hanumaan Khijadiya	02796-273388

**Details of Coastal Villages are under Amreli District**

Sr.No	Taluka	Village Name	Population (2011)	Temprrory Shelter Detail	Total Rooms
1	Jafrabad Mamlatdr Office- Phone No- 02794- 245436	Jafrabad	27167	Sagar Primary School Kanya Sala Vapaliya Primary School Taluka Primary School Parekh Maheta High School Koli Samaj Vadi Kharva Caste Vadi	4 5 7 9 12  2 hall 2 hall 3 rooms
2		Babarkot	4624	Primary School Community Hall	14 1
3		Balana	1701	Primary School Samaj Vadi	7 5
4		Bhankodar	1583	Primary School	8
5		Chitrasar	3091	Community Hall Primary School	1 16
6		Kadiyali	2982	Primary School	12
7		Mitiyala	2385	Primary School	16
8		Rohish	5604	Primary School Community hall Samajvadi	14 1 8
9		Shiyalbet	5096	Primary School Samajvadi	8 10
10		Vadhera	4442	Primary School Community Hall Samaj Vadi	15 14
11		Vandh	2046	Primary School	11

Sr.No	Taluka	Village Name	Population (2011)	Temprrory Shelter Detail	Total Rooms
1	Rajula Mamlatdr Office- Phone No- 02794-222013	Chanch	5830	High School Samaj Vadi Primary School	10 2 21
2		Victar	2040	Primary School Samaj Vadi	11 2
3		Nigala-1	1000	Primary School Samaj Vadi	21 1
4		Pipavav	1858	Primary School Samaj vadi	8 1
5		Visaliya	2958	Primary School	8
6		Khera	4191	Primary School Samaj vadi	9 2
7		Patva	2013	Primary School Samaj Vadi	8 2
8		Samdhiyala-1	2427	Primary School Samaj vadi	11 2
9		Bherai	4185	primary School Samaj vadi	18 1
10		Rampara-2	3559	High School Primary School Samaj vadi	11 14 1
11		Kovaya	4061	Primary School Samaj Vadi	12 2
12		Kathirvadar	1623	Primary School Samaj vadi	11 2

### **Ports & Fisheries:-**

Out of 1600 Kms Length of Coastal line of Gujarat the coastal belt of Amreli District is blessed with 18 Nautical Miles extending from Patava village in the south to Dhari Bander village in west. There are 4 ports in the Amreli District. Viz. Pipavav, Jafrabad, Port Albur victor, Pipavav, & Port Albur, are Cargo ports and Jafrabad, & Chancha Bander, are fisheries ports.

#### **Jafrabad Port:**

##### **LOCATION:**

Latitude : 20° 51' 56"N

Longitude : 71° 21' 50" E

Alang is the largest ship recycling yard in the Jafrabad is an all-weather direct berthing port for small ocean-going vessels. It is situated in the Gulf of Cambay on the south-west coast of Saurashtra, inside the Jafrabad Creek on the West Coast of India.

##### **Road and Rail network:**

Jafrabad is connected by NH 8E at 20 kms . The broad gauge railway line is available at Rajula which is 22 kms away from the port. Nearest airport is at Diu, which is 75 kms, away from Jafrabad.

##### **Communication with Steamers:**

There is a VHF set installed in the Port having 20 to 25 mile range. Channel no. 16 is open during office hours (1030 hrs. to 1830 hrs.) on working days.

##### **Charts:**

Admiralty : 1979

Indian Naval

Hydrographic : 2034

##### **Anchorage**

A good anchorage in fine weather may be obtained at a distance of 2.5 kms from shore, at a draft of 14 m.



## Pilotage

Not necessary as small vessels berth directly at the new clinker jetty. However, local guides are provided on request.

## Marine Features

MHWS - 2.88 m

MHWN - 2.20 m

MLWS - 1.50 m

MLWN - 0.90 m

## Navigational Aids:

There are three navigation towers situated at the Port. Two towers are situated at Piplikantha on northern bank for smooth berthing on the clinker jetty. The front tower has a fixed red light, while the rear tower has a fixed white light. One tower, with a fixed red light, is situated on the western bank at the breakwater end.

## Port Infrastructure and Facilities:

- Berthing facilities:

- i) New Clinker Jetty for small coastal steamers, with a working length of 211 m. and 4 m. draft. Small coastal steamers berth at the new clinker jetty for export of Clinker and jetty for export of Coal and Coke on account of M/s Narmada Cement Co. Ltd., Jafrabad  
(Subsidiary of M/s Ultra Tech Cement Co. Ltd.)
- ii) RCC Jetty for sailing vessels traffic, with a length of 45 m and a draft of 1 m.
- iii) One fish-loading wharf for fishing activities, with a length of 400 m with suitable draught.
- iv) Three landing slopes, with a length of 30 m and 0.30 m draft for passenger and small boats.

- Cargo handling equipment:  
M/s Narmada Cement Co. Ltd., has been taken over by M/s Ultra Tech Cement Co. Ltd to load Clinker through use of their own conveyor belt system which has a speed of 600 MT per hour. They discharge coal by their own cranes and the average discharge is about 9,000 to 10,000 MT per day.
- Warehousing and storage facilities:  
There are seven godowns available, with an area of 1,310 sq. mtrs. They have a storage capacity of 2,500 MT. Sufficient open space is available.
- Private bunkering and ship stores are available.

#### Supplies

Private water tankers are available for water supply.

#### Harbour Structures

- RCC Jetty for loading Clinkers (near Clinker Jetty): length - 211 m permissible draft - 4 m Loading is done mechanically by conveyor belt.
- RCC Jetty for loading salt and miscellaneous cargo: length - 45m
- Slope for cargo vessel: length - 30 m
- Fish-landing wharf: length - 450 m

#### Commodities Handled

Import: Coal, Coke

Export:

Clinker, Salt

Monsoon Period

May 15 to September 14.

#### Contact Detail :

The Port Officer,

Gujarat Maritime Board,

Jafrabad - 365 540.

Tel: (O) 02794-245165

Telefax: 02794-245165- E-mail:pojfd@rediffmail.com

### **Ports safety procedures**

It is the policy of APM Terminals to conduct its activities in a manner that protects the health and safety of its employees and that the actions of the company and its employees do not harm the health and safety of others.

APM Terminals is committed to the protection and conservation of the environment and places high priority on environmental consideration in managing its business.

### **Live Stock**

Cattle wealth occupies pivotal place in the rural economy of the district, Livestock position is as below

Total livestock = 8,07,089 lakhs

(a) Cows-3, 20,150 (b) Buffaloes-2, 42,911 (c) Sheep & Goats-2, 39,914  
There are 31 Veterinary hospitals in the district.

### **Industries:-**

Amreli district is industrially backward area. There are some small industries like oil mills spread over the district. Gem cutting and polishing industries are located in the Bagasara taluka. Savarkundla taluka is famous for its weighing materials and machines all over Gujarat. Fisheries are rendering a part to districts credit in Rajula and Jafrabad taluka. Amreli has 6 GIDC (Gujarat Industrial Development Centres) industrial estates of State Government and 1 from District Panchayat. District has 4822 Small Scale Industries and 5 Medium Scale Industries.

Economy of Amreli depends upon agriculture. Diamond industry is developed well here. In Bagasara gold plating units and in Savarkundla Weighing machine for diamond are famous. Pipavav, Jafrabad and Victor ports are in the district. Agro-based industries are well developed in the district.

There are major industries in the district:

Ultra Tech Cement Co. Ltd., Kovaya, Tal : Rajula. Narmada Cement Co. Ltd. Tal. Jafrabad. Metadist Co.Ltd., Tal.Rajula Dharamshi Morarji Chemicals Ltd. Zar, Tal. Dhari. GHCl Ltd., Rajula, Jafrabad

## ➤ History of past disasters

Historical records of 11 most devastating cyclones which formed in the Arabian Sea and made landfall on the West coast of India

S.No.	Date/Year	Type of Disturbance	Landfall and Relevant Information
1.	16, May 1618	Severe Cyclonic Storm	Crossed Bombay Loss and damage: <b>People killed=2,000</b>
2.	30 October-2 November, 1854	Severe Cyclonic Storm	Crossed Bombay coast on 1 November Loss and damage: <b>People killed=1,000</b> <b>Property worth crores of rupees perished within four hours</b>
3.	18-23 November, 1948	Severe Cyclonic Storm	<b>Crossed coast near Virar, 72 km North of Bombay at about 0830 hrs IST on 22 November.</b> Maximum wind: <b>Colaba recorded 120 kmph (65 kts) and Juhu recorded 151 Kmph (81 kts)</b> Loss and damage: <b>Great havoc and heavy loss of life and property and all means of traffic and communication were completely paralysed for two days.</b> A number of small vessels and crafts capsized in the water of the Bombay harbour. Thousands of big trees uprooted and hundred of buildings and hutments were rendered uninhabitable
4.	23-25 May, 1961	Severe Cyclonic Storm	Crossed coast near Devgad on the night of 24 to 25 May Loss and damage: <b>5 lakh fruit trees were reported to have been razed to the ground.1,700 houses completely and 25,000 houses partially damaged</b>
5.	9-13 June, 1964	Severe Cyclonic Storm	Crossed coast just west of Naliya during the late forenoon on 12 June Maximum wind: <b>Naliya recorded 135 kmph (73 kts);Dwarka recorded 105 kmph (57 kts); Porbandar recorded 74 kmph (40 kts); Veraval recorded 83 kmph (45 kts);</b> Surge height: <b>2m at Kandla</b> Loss and damage: <b>People killed=27</b>
6.	19-24 October, 1975	<i>Very Severe Cyclonic Storm*</i>	<b>Crossed Saurashtra coast about 15 km to the northwest of Porbandar at 1500 hours IST of 22 October</b> Maximum wind: <b>Jamnagar recorded 160-180 kmph (86-97 kts) and Porbandar recorded 110 kmph (59 kts)</b> Surge height: <b>4-6 m at Porbandar and Okha</b> Intensity: <b>T 6.0</b> Loss and damage: <b>People killed=85; Several thousands of houses were damaged; Many trees/ electric/telephone poles/roof tops blew; A train was also blown off its rails; loss of property was estimated to be Rs. 75 crores</b>

7.	31 May-5 June, 1976	Severe Cyclonic Storm	Crossed Saurashtra coast near Bhavnagar on 3 June Maximum wind: <b>Ship HAAKON magnus reported 167 kmph (90 kts)</b> Loss and Damage: <b>People Killed=70; Cattleheads lost=4,500; Houses Damaged=25,000; Damage estimated to be Rs. 3 crores</b>
8.	13-23 November, 1977	Very Severe Cyclonic Storm*	Crossed between Mangalore and Honavar in the early morning of 22 November Intensity: <b>T 5.5</b> Loss and Damage: <b>People killed=72; 8,400 houses totally and 19,000 houses partially damaged; Loss estimated to be Rs. 10 crores</b>
9.	4-9 November, 1982	Very Severe Cyclonic Storm*	Crossed Saurashtra coast, about 45 km east of Veraval on 8 November Loss and Damage: <b>People killed=507</b> <b>Livestock perished=1.5 lakh; Thousands of houses collapsed</b>
10.	17-20 June, 1996	Severe Cyclonic Storm	Crossed south Gujarat coast between Veraval and Diu in the early morning of 19 June Intensity: <b>T 3.5</b> Maximum wind: <b>Veraval recorded 86 kmph (46 kts) at 0430 hrs IST of 19 June</b> Storm surge: <b>5 – 6 m near Bharuch</b> Loss and Damage: <b>People killed=47 Cattleheads perished=2113; no of houses damaged=29,595; loss of Property=Rs. 1805 lakhs</b>
11.	4-10 June, 1998	Very Severe Cyclonic Storm*	Crossed Gujarat coast near Porbandar between 0630 and 0730 hrs IST of 9 June Intensity: <b>T 5.0</b> Maximum Wind: <b>Jamnagar recorded 182 kmph (98 kts) at 0730 hrs IST of 9 June</b> Surge Height: <b>2-3 m above the astronomical tide of 3.2 m;</b> Loss and Damage: <b>People killed=1173; People missing=1774</b> <b>Loss of property worth to be Rs. 1865.38 crore</b>

\* Severe Cyclonic Storm with core of hurricane winds as per earlier categorization








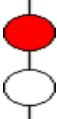



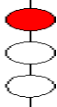





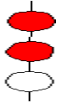




**Historical records of 12 most devastating cyclones, which formed in the Bay of Bengal and made landfall on the East coast of India**

S.No	Date/ Year	Category of cyclone	Landfall and Relevant Information
1.	7-12 October, 1737	Super Cyclone*	Crossed West Bengal coast over Sunderbans Surge height: <b>12 m</b> Loss of life: <b>300,000</b>
2.	31 October, 1831	Very Severe Cyclonic Storm*	Crossed Orissa coast near Balasore Surge Height: <b>2-5 m</b> Loss and Damage: <b>People Killed=22,000, Cattleheads lost=50,000</b>
3.	2-5 October, 1864	Very Severe Cyclonic Storm*	Cross the coast near Contai, West Bengal Surge Height: <b>The wave in many places rose to 9 m The Maximum height of the waves reached 12 m</b> <b>At Sagar Island it was 5 m above land level. At Diamond Harbour, the wave was 3 m</b> Loss and Damage: <b>People Killed=50,000 (mostly due to drowning), and 30,000 (due to diseases as a result of inundation)</b>
4.	1-2 November, 1864	Severe Cyclonic Storm*	Crossed Andhra Pradesh coast near Machili-patnam Surge-Height: <b>4 m</b> Loss and Damage: <b>People Killed=30,000</b>
5.	22 September, 1885	Super Cyclone*	<b>Crossed Orissa coast at False Point,</b> Central pressure: <b>919 hPa,</b> Surge Height: <b>7 m</b> Loss of Life: <b>5000</b>
6.	14-16 October, 1942	Severe Cyclonic Storm	Crossed West Bengal coast near Contai Surge Height: <b>3-5 m</b> Loss and Damage: <b>People Killed=19,000, Cattleheads killed=60,000</b>
7.	8-11 October, 1967	Severe Cyclonic Storm	Crossed Orissa coast between Puri and Paradip on the morning of 9 October and then crossed Bangladesh coast during the night of 10-11 October Loss and Damage: <b>People Killed=1,000, Cattleheads lost=50,000; property of few crores of rupees damaged</b>
8.	26-30 October, 1971	Severe Cyclonic Storm	Crossed Orissa coast near Paradip early morning of 30 October Maximum Wind: <b>150-170 kmph (81-92 kts)</b> Surge height: <b>4-5 m, north of Chandbali</b> Loss and Damage: <b>People killed=10,000; Cattleheads lost=50,000; Houses damaged=8,00,000</b>

9.	14-20 November, 1977	Super Cyclone*	Crossed Andhra coast near Nizamparnam at 1730 IST on 19 November Maximum wind: <b>Ongole recorded 102 kmph (55 kts); Machilipatnam recorded 120 kmph (65 kts); Gannavaram recorded 139 kmph (75 kts)</b> Surge Height: <b>5 m</b> Intensity: <b>T 7.0</b> Maximum estimated wind speed: <b>260 kmph (140 kts)</b> Loss and Damage: <b>People killed=10,000; Cattleheads lost=27,000; Damage to crops and other property was estimated to be around Rs. 350 crores.</b>
10.	4-11 May, 1990	Super Cyclone*	<b>Crossed Andhra coast at about 40 km south west of Machilipatnam around 1900 IST of 9 May</b> Maximum wind: <b>Machilipatnam recorded 102 kmph (55 kts); Gannavaram recorded 93 kmph (50 kts)</b> Surge height: <b>4-5m</b> Intensity: <b>T 6.5</b> Maximum estimated wind speed : <b>235 kmph (126 kts)</b> Loss and damage: <b>People killed=967; the estimated cost of the damages to crops and properties= Rs.2,248 crore</b>
11.	5-6 November, 1996	Very Severe Cyclonic Storm*	Crossed Andhra coast near Kakinada at midnight of 6 November Maximum wind: <b>200 kmph (108 kts )</b> Surge height: <b>3-4 m</b> Loss and damage: <b>People killed=2000; People missing=900;crops destroyed in 3,20,000 hectares of land; house destroyed=10,000</b> <b>Estimate of the loss for crops= Rs.150 crores</b>
12.	25-31 November, 1999	Super Cyclone	Crossed Orissa coast near Paradip at noon of 29 October Maximum wind: <b>260 kmph (140 kts); Bhubaneswar recorded 148 kmph (80 kts)</b> Surge height : <b>6-7m</b> Intensity : <b>T 7.0</b> Loss and damage : <b>People killed=8,960; People injured = 2,142; cattleheads perished=3,70,297; Paddy crops in 16,17,000 hectares and other crops in 33,000 hectares damaged.</b>

\* Severe Cyclonic Storm with core of hurricane winds as per earlier categorization

### Information of warning Signals for cyclone

PORT STORM WARNING SIGNAL NO.	DAY SIGNAL	NIGHT SIGNAL	MEANING
1			<b>DISTANT CAUTIONARY</b> (There is a region of squally weather in which a storm may be forming.)
2			<b>DISTANT WARNING</b> ( A storm has formed.)
3			<b>LOCAL CAUTIONARY</b> (The port is threatened by squally weather.)
4			<b>LOCAL WARNING</b> ( 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. )
5			<b>DANGER</b> (The port will experience severe weather from a cyclone expected to move keeping the port to the left of its track. )
6			<b>DANGER</b> ( The port will experience severe weather from a cyclone expected to move keeping the port to the right of its track. )
7			<b>DANGER</b> ( The port will experience severe weather from a cyclone expected to move over or close to the port. )
8			<b>GREAT DANGER</b> ( The port will experience severe weather from a severe cyclone expected to move keeping the port to the left of its track. )
9			<b>GREAT DANGER</b> ( The port will experience severe weather from a severe cyclone expected to move keeping the port to the right of its track. )
10			<b>GREAT DANGER</b> ( The port will experience severe weather from a severe cyclone expected to move over or close to the port. )
11			<b>FAILURE OF COMMUNICATIONS</b> ( Communications with the Meteorological Warning center have broken down and the local officer considers that there is danger of bad weather. )



➤ **District's Hazard History**

Amreli has been traditionally vulnerable to natural disasters on account of its unique geo-climatic conditions. Floods, Drought, Cyclones and Earthquake have been recurrent phenomena. Entire District Fall in to Seismic Zone-III . Jafrabad, Rajula 2 Costal Talukas are prone to Cyclone, 6 Taluka are Prone to Flood, and Entire District is also susceptible to drought.

Sr.	Type of Disaster	Last Impact Month / Year	Intensity	Affected Area / Taluka
1	Earth Quack	January-2001	Medium	Amreli,Babra,Dhari,Jafrabad,Khambha.S.Kundla
2	Flood	2006-2007	Medium	Amreli,Babra,Dhari,Jafrabad,Khambha.S.Kundla
3	Cyclone	November-1982	Medium	Entire District
4	Cyclone	May -2021	High	Entire District
5	Drought	1999 & 2013	Medium	Entire District
6	Fire	2010-11-12-13	Light	Amreli,Dhari,Bagasara,Lathi
7	Heat Wave	May-2010/13	Medium	Entire District
8	Cold Wave	January-2008	Light	Entire District
9	Accident	2009-10-13-14	Light	State Highways
10	Food Poisoning	2009-2010-14	Medium	Rajula, Khambha
11	Boat Sinking	2010	Light	Jafrabad
12	Flood	2015	High	Total 113 Village effected Of Amreli,Dhari,Bagasar,Savakundla Taluka Effected.

**List of the Industries of Amreli district handling hazardous chemicals**

Sr. No.	Name of the Factory	Category	Haz. Chemical	Quantity (MT)	Risk involved
01	Ultratech Cement Co.Ltd Village: Kovaya, Rajula and Jafrabad Plant	MAH	Naphtha  Chlorine	13120 KL. 6 tons	Flammable  Toxic
02	Bharat Shell Ltd. (GPPL) V: Uchhaiya Rajula	MAH	LPG	2700	Highly Flammable
3	Pipavav Shipyard Ltd.Rampara Rajula				
4	TT Kottan Ltd.Kadiyali-Rajula				
5	GSCL Ltd-Victor-Rajula &Jafrabad				
6	PLL Holdigs.Rajula				
7	Sintex Spining Mil Ltd.Lunsapur-Jafrabad				
8	SHV Energy North-West (I) Ltd. (Babra filling plant) Babra	MAH	LPG	100	Highly Flammable
9	Shripati Chemical, Port Albert Victor, Rajula	A	Chlorine Bromine	Closed at present	Toxic Toxic
10	Guj. State Co-op. Marketting Fad. Ltd. Savarkundla Road	B	Hexane	30	Flammable
Sr. No.	Name of the Factory			Distance from Amreli (km)	Distance from Junagadh (km)
01	Ultratech Cement Limited, Village : Kovaya, Rajula			85	190 - via Visavadar
02	Bharat Shell Ltd. (GPPL) V: Uchhaiya, Rajula			75	180
03	SHV Energy North-West (I) Ltd. (Babra filling plant)Babra			35	125
04	Shripati Chemical, Port Albert Victor, Rajula			85	190
05	Guj. State Co-op. Marketting Fad. Ltd. Savarkundla Road			10	95

Sr. No.	Name of the Factory	Name of village within 3 km	Population	Name of village within 5 km	Population	Total Population
01	Larsen & Toubro Limited, Guj. Cement Works Village: Kovaya, Rajula	Kovaya Inside the factory L&T - GCW Colony Bhankodar	1200 400 1500 900	Kovaya Bhankodar Varahswaroop Wand Lotpur Bherai Rampara  Shiyalbet  Uchhaiya	1200 900 About 4000 About 1000 About 2500	
02	Bharat Shell Ltd. (GPPL) Village: Uchhaiya Rajula	Rampara  Shiyalbet	About 4000 About 1000	Rampara  Shiyalbet  GPPL Port & Colony Bherai  Uchhaiya	About 4000 About 1000 About 400 About 5000 About 2500	
03	SHV Energy North-West (I) Ltd. (Babra filling plant) Babra	Babra  Inside the factory	15000-20000 15	Babra  Dared Barwada Galkotdi	15000-20000 1000 900 1500	22000
04	Guj. State Co-op. Marketting Fad. Ltd. Savarkundla Road	Inside the factory				

## HAZARDOUS CHEMICALS / GASES AND TREATMENT OF AFFECTED PERSONS

Sr. No.	Gases/ chemicals	Health Hazard	Treatment
1	Ammonia (NH <sub>3</sub> )	Upper Respiratory track Irritation/ CNS affected causing spasm corrial perforation	<b>Emergency Treatment:</b> Wash eye with 0.5 to 1% alum. SOS ophthalmologist. Skin to be washed with 5% citric/ acetic/ salicylic acid. Inhale with warm H <sub>2</sub> O vapour & 10% solution of menthol in chloroform. Drink milk (warm). 1% solution of atropine in case of asphyxia.
2	LPG	LPG can affect the body if it is inhaled or if it comes in contact with eyes or skin <b>Effects of Exposure/ Symptoms:</b> Overexposure to LPG can cause light headache and drowsiness. Greater exposure may also cause unconsciousness. Contact with the liquid may also cause frostbites and irritation. No chronic systematic toxicological effects have been reported from industrial exposure.	<b>Emergency Treatment:</b> Eye-exposure: - Flush the eyes immediately with large amounts of water (not hot); get medical attention. Skin-exposure: - Flush the skin immediately with large amounts of water (not hot); get medical attention Breathing: - Move the exposed person to fresh air at once. Keep the affected person warm and at rest; Perform artificial respiration, if necessary. Get medical attention.
3	Chlorine Bromine	can affect the body if it is inhaled or if it comes in contact with eyes or skin.  <b>Effects of Exposure/ Symptoms:</b> Cause eye irritation, sneezing, copious salivation, general exictment, restlessness,.High concentration causes respiratory distress and violent coughing, often with retching. Death may rsslut from suffocation.	<b>Emergency Treatment:</b> Eye-exposure: - Flush the eyes immediately with large amounts of water (not hot). Put 2-4 drops of 0.5% Pontokein or Benoxinate (Novesin) in the eyes. Get medical attention. Skin-exposure: - Flush the skin immediately with large amounts of water (not hot); again wash with the sodium bicarbonate solution; get medical attention Breathing: - Move the exposed person to fresh air at once. Get inhaled a cotton containing 2-4 drops of ethanol/ ether. Get medical attention.

➤ **List Of Resources Taluka & District**

No.	Name of Taluka Mamlatdar Office	Ring Boya	Artical includeed in each ECRs			Generato s
			Life Saving Jacket	200 ft. Ropes	100 ft. Ropes	
1	Mamlatdar Office – Amreli	50	40	03	05	01
2	Mamlatdar Office – Babra	09	11	01	01	01
3	Mamlatdar Office – Dhari	06	02	01	01	01
4	Mamlatdar Office – Lathi	14	15	01	06	01
5	Mamlatdar Office – Vadiya	10	10	05	00	01
6	Mamlatdar Office – Liliya	11	09	00	02	01
7	Mamlatdar Office – Bagasara	20	20	02	03	01
8	Mamlatdar Office – Khamabha	02	25	02	05	01
9	Mamlatdar Office – Rajula	17	18	03	05	01
10	Mamlatdar Office – Savar Kundla	04	04	02	06	01
11	Mamlatdar Office – Jafrabad	16	10	04	04	01
12	DEOC-Collector Office*	01	20	05	04	01
13	Prant Office-Amreli					01
14	Prant Office-Rajula					01

➤ **Fire Tender Provided by Govt. at Various Levels**

No	Municipalities Name		Name of Equipment		
		Water Bowser	Mini Fire Tender	Boat	Bullet
1	Nagar Palika-Amreli	2	1	--	1
2	Nagar Palika -Saver Kundla	1	1	--	1
3	Nagar Palika - Rajula	1	1	01	1
4	Nagar Palika -Bagasara	1	1	--	1
5	Nagar Palika -Jafrabad	1	1	--	1
6	Nagar Palika -Lathi	1	1	--	--
7	Nagar Palika-Chalala	-	1		
8	Nagar Palika-Babra	-	1		
	Total	07	08	01	5

**Police Department District Amreli**

S.No	Details of Equipment	Quantity
1	Inflateble Light System	13
2	Life Saving Jacket	28
3	Ring Boya	06
4	Ropes	17
5	Speed boat	02
6	D-water pump	01
7	Emergency Light	01
8	Wireless Mobile set	62
9	Hand held Wireless Battery 12 Volt Ampere's	15
	<b>Total</b>	<b>145</b>

**COST GUARD RESOURCES/EQUIPMENTS DETAIL'S**

S.NO	Unit Name	Details of Equipment	Name of Equipment
1	ICGS PIPAVAV	Life Jacket	30
		Life Buoy	02
		Diver	01
		Troops	01
		Carrier	01
		Mini Bus	01
		Ambulance	01
		Water Bowser	01
		Qualified swimmer	15
2	ICGS C-419	Gemini	01
		Life Buoy	06
		Life Jacket	30
		Diving Equipment	02
		Qualified Swimmer	15
3	ICGS C-156	Gemini	01
		Life Buoy	06
		Life Jacket	30
		Diving Equipment	02
		Qualified Swimmer	14

## Facilitis Available in the District

### Private Hospitals-

Sr.No	Hospitals	Contact No
1	Janral Hospital-Amreli	02792-223416
2	Shudarshan Hospital-Amreli	02792-231901
3	Doctor House-Amreli	9825235144
4	Shriji Hospital-Amreli	02792-221096
5	Shiv Sakti Hospital-Amreli	02792-225250
6	Dave Hospital-Amreli	02792-225250
7	Aastha Hospital-Amreli	02792-225840
8	Gunatit Hospital-Amreli	02792-223036
9	Hari Krishana Hospital-Amreli	02792-223584
10	Seva Bharti Hospital-Amreli	02792-223310
11	Madhavan Hospital-Amreli	9426223811
12	Vijay Parekh Hospital-Savarkundla	02845-242718
14	Madhav Hospital-Amreli	02792-228432
15	Sojitra Hospital-Amreli	02792-233685
16	Gajera Hospital-Amreli	9426208254
17	Madhuram Hospital-S.Kundla	02845-242718
18	Reiyani Hospital-S.Kundla	02845-222345
19	Dhodkiya Hospital-S.Kundla	02845-224332
20	Raychhdha Hospital-S.Kundla	02845-224555
21	Varun Hospital-S.Kundla	9426999700
22	Danel Hospital-Damnagar	9879534229
23	Sanjivni Hospital-Rajula	9878055455
24	P.P.Muchadiya Hospital-Rajula	02794-222378/220678
25	Tavar Hospital-Jafrabad	02794-225425
26	Isvar Hospital-Bagasara	02796-221005 9426243318
27	Kamaliya Hospital- Bagasara	02796-222263 9898773809



**SWIMMERS - AMRELI DISTRICT**

<b>Sr.No</b>	<b>Taluka Name</b>	<b>Swimmers Name</b>	<b>Add</b>	<b>Contact No</b>
1	Lathi	Maheshbhai Nanubhai	Lathi-Bhagatpara	9537152214
2	Lathi	Sureshbhai N.Bariya	Lathi-Bhagatpara	9904702829
3	Lathi	Natu Manjibhai	Lathi-Valmikivas	9904708829
4	Lathi	Bhupatbhai Kanjibhai	Lathi-Bhagatpara	9427260391
5	Lathi	Jagdishbhai Nandlalbhai	Lathi-Bhagatpara	9904708829
6	Lathi	Ashokbhai Manjibhai	Lathi-Bhagatpara	9998365794
7	Lathi	Maheshbhai Dhanjibhai	Lathi-Valmikivas	9904708820
8	Lathi	Shureshbhai dodiya	Lathi	9904708827
9	Lathi	Bhupatbhai Hamirbhai	Vankarvas Lathi	9427427476
10	Lathi	Dilabhai Ishabhai Koreja	Lathi-Setapati	9909740797
11	Lathi	Aarifbhai Kaji	Lathi-Setapati	-
12	Lathi	Sikandarbhai Dasadiya	Lathi-Setapati	-
13	Lathi	Amirdin Valibhai Seta	Lathi-Setapati	-
14	Dhari	Rameshbhai Vasrambhai	Dhari	9427245226
15	Dhari	Mahamadbhai Jusuf	Dhari	9723648925
16	Dhari	Baghabhai Bavaji	Dhari	-
17	Dhari	Pankajbhai Rathod	Dhari	9909743234
18	S.Kundla	Kalubhai Hirabhai Koli	Piyava Village	-
19	S.Kundla	Hasankha Pathan	Piyava Mon	9925544560
20	S.Kundla	Mushabhai Bachubhai Fakir	Fifad Village	-
21	S.Kundla	Bhimjibhai Lakhabhai Vaghela	Fifad Village	9898201942
22	S.Kundla	badar kha umar kha gaha	vijpadi	9913151893
23	S.Kundla	bhupatbhai vada bhai kodi	holti	-

24	S.Kundla	kalubhai hira bhai virani	vijaynagar	9737650394
25	Khambha	Bharatpuri manupuri goswami	-	-
26	Khambha	Imranbhai ahamadbhai dayatar	-	-
27	Khambha	Salimbhai bikhubhai parmar	-	-
28	Khambha	kanu ravjii bhai chawala	-	-
29	Khambha	Bhagubhai Rambhai Gohil	Kantala-Village	-
30	Khambha	Bijalbhai Rathod	Kantala-Village	-
31	Khambha	Devabhai Alabhai Mahida	Kantala-Village	-
32	Khambha	Ashokbhai Somatbhai	Khadadhar Village	-
33	Khambha	Pachabhai Jinbhai Vegad	Borala Village	-
34	Khambha	Dhirubhai Kanubhai Parmar	Mota Samadhiyala Village	-
35	Khambha	Ratigiri Bavaji	Mota Samadhiyala Village	-
36	Khambha	Karshanbhai Tapubhai Koli	Gidardi Village	-
37	Khambha	Rajubhai Bhatt	Khambha	-
38	Khambha	Hareshbhai Shivsankarbhai	Khambha	-
39	Liliya	Boricha Devabhai	Amba Village	-
40	Liliya	Mahebubhai Saiyad	Amba Village	-
41	Liliya	Arvindbhai Babubhai	Mota Kankot Village	-
42	Liliya	Devjibhai Jivrajbhai	Mota Kankot Village	-
43	Liliya	Pravinbhai Dayabhai	Mota Kankot Village	-
44	Liliya	Somabhai Bachubhai	Vaghaniya Village	-
45	Liliya	Nathabhai Laljibhai	Bhoringda Village	-
46	Liliya	Jethabhai Ahir	Bhoringda Village	-
47	Liliya	Dhirubhai Rangpara	Bhoringda Village	-
48	Liliya	Hiralalbhai Vanjibhai	Nanakankot- Village	-
49	Liliya	Didlipbhai Bhimjibhai	Nanakankot- Village	-

50	Liliya	Amrabhai Khuman	Nanakankot-Village	-
51	Liliya	Ghaganbhai Bhut	Panchtalavda-Village	-
52	Liliya	Batukbhai Mangukiya	Panchtalavda-Village	-
53	Liliya	Dhirubhai Dulabhai	Panchtalavda-Village	-
54	Liliya	Mangalubhai Bhanbhai	Krankach Village	-
55	Liliya	Dulabhai Ranabhai Khant	Krankach Village	-
56	Liliya	Chaganbhai Jivabhai Khant	Krankach Village	-
57	Liliya	Kanabhai Rathod	Krankach Village	-
58	Bagasara	Laxmanbhai Vasrambhai Nakum	Bagasara	-
59	Bagasara	Chandrakant Nanalal	Bagasara-Balampirseri	-
60	Bagasara	Badhugiri Kanugiri	Bagasara-Balampirseri	-
61	Bagasara	Piyushbhai Haridhai	Sanaliya-Village	-
62	Bagasara	Ramkubhai Vala	Juna Vaghaniya	-
63	Bagasara	Jivabhai Rudabhai	Deripipariya-Village	-
64	Bagasara	Kalubhai Babubhai	Mavjinjva-Village	-
65	Bagasara	Chaganbhai Kadvabhai	Juna Janjariya-Village	-
66	Jafrabad	Naranbhai Bhagubhai Bhaliya	Jafrabad	9998488237
67	Jafrabad	Sheileshbhai Jinabhai Sonalki	Jafrabad	9998276158
68	Jafrabad	Kamleshbhai Naranbhai	Jafrabad	9904145568
69	Jafrabad	Nareshbhai Devabhai	Jafrabad	9428967056
70	Jafrabad	Sanjaybhai Mangabhai Bariya	Jafrabad	9974105732
71	Jafrabad	Mahendrabhai Mangabhai Bariya	Jafrabad	9601993394
72	Jafrabad	Kadubhai Ramabhai	Jafrabad	9974105737
73	Jafrabad	Parshotambhai Ramabhai	Jafrabad	9904114831

74	Jafrabad	Jayeshbhai Ranabhai Bariya	Jafrabad	9275750458
75	Jafrabad	Kishorbhai Ranabhai Bariya	Jafrabad	9824913881
76	Jafrabad	Narshibhai Ramjibhai	Jafrabad	9824980551
77	Jafrabad	Arvindbhai Dhisabhai Bhaliya	Jafrabad	9714417590
78	Jafrabad	Yogeshbhai Babubhai Solanki	Jafrabad	9624347540
79	Jafrabad	Pravinbhai Dhishabhai	Jafrabad	9377118913
80	Jafrabad	Alpeshbhai Sankarbhai	Jafrabad	9714477046
81	Jafrabad	Yogeshbhai Chanabhai Bariya	Jafrabad	9714374800
82	Jafrabad	Sheileshbhai Chanabhai Bariya	Jafrabad	9723285302
83	Jafrabad	Ashishbhai Ramjibhai Solanki	Jafrabad	9725932374
84	Jafrabad	Rakeshbhai Ramjibhai	Jafrabad	9904145667
85	Jafrabad	Jigarbhai Asvinbhai	Jafrabad	9424012193
86	Jafrabad	Shureshbhai Kanabhai	Jafrabad	9914393728
87	Jafrabad	Kailashbhai Bavabhai Bariya	Jafrabad	9904200722
88	Jafrabad	Ronakbhai Shureshbhai	Jafrabad	9904722180
89	Jafrabad	Kalpeshbhai Vashrambhai	Jafrabad	9723269274
90	Jafrabad	Jigneshbhai Bhagubhai	Jafrabad	9904145616
91	Jafrabad	Devabhai Ramjibhai Bariya	Jafrabad	9924750690
92	Jafrabad	Vinodbhai Limmbabhai Makwana	Jafrabad	9723197392
93	Jafrabad	Vijaybhai Isvarbhai Solanki	Jafrabad	9904579186
94	Jafrabad	Ramjibhai Karshanbhai	Jafrabad	9904541903
95	Jafrabad	Ajaybhai Ramjibhai	Jafrabad	9904145655
96	Jafrabad	Ashokbhai Lakhabhai	Jafrabad	9824035944
97	Jafrabad	Bharatbhai L.Solanki	Jafrabad	9558271349
98	Jafrabad	Dharmeshbhai M..Bariya	Jafrabad	9714581083
99	Jafrabad	Dharmeshbhai R..Bariya	Jafrabad	9904555661
100	Jafrabad	Dineshbhai Mangabhai Bariya	Jafrabad	9898751928
101	Jafrabad	Dineshbhai M.Sonalki	Jafrabad	9737416395
102	Jafrabad	Girishbhai Jinabhai	Jafrabad	9898855673
103	Jafrabad	Hareshbhai.D.Bariya	Jafrabad	9904114801
104	Jafrabad	Hiteshbhai R.Solanki	Jafrabad	9723481855
105	Jafrabad	Jagdishbhai Babubhai Bariya	Jafrabad	9427245129

106	Jafrabad	Jayantibhai H.Bambhniya	Jafrabad	9824667977
107	Jafrabad	Jayeshbhai Ramjibhai	Jafrabad	9428967737
108	Jafrabad	Kailashbhai R.Solanki	Jafrabad	9898831670
109	Jafrabad	Maheshbhai Babubhai	Jafrabad	9723755499
110	Jafrabad	Rajnikant Ramjibhai Bariya	Jafrabad	9824373592
111	Jafrabad	Rajeshbhai Bhagubhai	Jafrabad	9574026276
112	Jafrabad	Rakeshbhai Bhagubhai Solanki	Jafrabad	9426555176
113	Jafrabad	Shureshbhai Bhagubhai Solanki	Jafrabad	9274279942
114	Jafrabad	Tulsibhai B.Bambhaniya	Jafrabad	9998885722
115	Jafrabad	Tulsibhai J.Bambhaniya	Jafrabad	9714580856
116	Jafrabad	Ukabhai Ramjibhai Solanki	Jafrabad	9998357579
117	Jafrabad	Vimalbhai Ramjibhai	Jafrabad	9898797893
118	Jafrabad	Visnubhai Mangabhai Solanki	Jafrabad	9723716078
119	Jafrabad	mush bhai bachu bhai patan	fifad	-
120	Jafrabad	ghanshaymbhai ram jii bhai rathore	fifad	9979248785
121	Jafrabad	somabhai tapu bhai rathore	fifad	-
122	Jafrabad	vinubhai ram jii bhai rathore	fifad	9913074951
123	Jafrabad	baratbhakalu bhai makhvana	fifad	-
124	Jafrabad	Visveshbhai Rambhai Solanki	Jafrabad	9998116081
125	Jafrabad	Kishorbhai Babubhai Bariya	Jafrabad	8000825838
126	Vadiya	Raj nibhai Rasikbhai	Jafrabad	9913105808
127	Vadiya	Pravinbhai Jilubhai	Vadiya	90337464413
128	Vadiya	Pradipbhai Valjibhai Solanki	Vadiya	9601931540
129	Vadiya	Ajaybhai Maheshbhai	Vadiya	9974646744
130	Vadiya	Bhavesbhai Maheshbhai Makwana	Vadiya	-
131	Vadiya	Sahilbhai Habibbhai Dodiya	Vadiya	99243995194
132	Vadiya	Renishbhai Bhikhabhai	Vadiya	-
133	Dhari	Rameshbhai Vasrambhai	Dhari	9427245226
134	Dhari	Babugiribapu Bavaji	Bhader Village	
135	Amreli	Ashokbhai Amshibhai	Baharpara-Amreli	992585099

136	Amreli	Rasikbhai H.Chawhan	Baharpara-Amreli	9904869086
137	Amreli	Sandipbhai Pravinbhai Sitapara	Baharpara-Amreli	-
138	S.Kundla	Sureshbhai Mohanbhai	Simran Village	-
139	S.Kundla	Shureshbhai Vaghela	Juna Savar Village	-
140	S.Kundla	Bharatbhai Devshibhai	Junasavar Village	-
141	Rajula	Snjaybhai rashilbhai	vikator bera	9147689808
142	Rajula	Nirmalbhaishomatbhai	bera	7874884585
143	Rajula	hareshbhai nimal bhai gujariya	bera	7874884584
144	Rajula	artibennirmal gujariya	bera	7874884584
145	Rajula	rajubhai babubhai shiyad	bera	9687302268
146	Rajula	rajubhaibhupat bhai khambhadiya	vikator	8847230321

### Jafrabad-Marin Police Swimmer List:

Sr.No	Taluka Name	Swimmers Name	Add	Contact No
1	Jafrabad	Ddilipbhai rambhai vada	Jafrabad	9426264688
2	Jafrabad	Shri G.P Jadega	Jafrabad	9909068465
3	Jafrabad	Deepak ravjibhai	Jafrabad	9512740815
4	Jafrabad	yuvraj singh	Jafrabad	9428070777
5	Jafrabad	surajbhai somatbhai	Jafrabad	9624382962
6	Jafrabad	milankumar dineshbhai	Jafrabad	8306803492
7	Jafrabad	jaideep singh bahadur singh	Jafrabad	7069828282
8	Jafrabad	Jigneshbhai Vashrambhai	Jafrabad	9624805800
9	Jafrabad	mahesh bhai deeraj bhai	Jafrabad	9925195045
3	Jafrabad	ikbalbhai bhai	Jafrabad	9979052519
4	Jafrabad	vikrambhai	Jafrabad	7984739959
5	Jafrabad	rameshbhai	Jafrabad	9429221143
6	Jafrabad	pratapbhai	Jafrabad	9824115900
7	Jafrabad	ismilebhai najubhai	Jafrabad	9624298236
8	Jafrabad	devayatbhai bhada bhai	Jafrabad	9723215981
9	Pipavav	chaparabhai amurbhai	Pipavav	8980048524
10	Pipavav	dadabhai bhagwanjii bhai dav	Pipavav	9824862092
11	Pipavav	ashokbhai bhagwan jii bhai dav	Pipavav	9924292951
12	Pipavav	manshukh bhai kanjii bhai	Pipavav	9904364580
13	Pipavav	vijubha dhanubha jadega	Pipavav	9998576704

## Media Management Plan for

6. Preparedness	
<b>External</b>	
<ul style="list-style-type: none"><li>• Broadcast programs to raise people's awareness of disaster prevention measures</li><li>• Develop news sources in emergency situation</li><li>• Liaison with community leaders</li><li>• Publicize station frequency</li><li>• Broadcast public planning meetings</li><li>• Outreach to the elderly, women, children, mentally and physically disabled people, as well as other marginalized and other vulnerable groups</li><li>• Encourage stockpiling of (hand –powered) radio receivers</li><li>• Compile local knowledge on signs of impending disaster and share it with community</li></ul>	
<b>Internal</b>	
<ul style="list-style-type: none"><li>• Back up important documents and files (including audio content) and store in a safe location</li><li>• If possible, place a set of minimum broadcast equipment such as a microphone, tape/CD player, transmitter and antennae in a safe location</li><li>• Plan radio programs to raise people's awareness of disaster prevention</li><li>• First aid training for station personnel</li><li>• Technical preparedness (generator, APS, securing, transmitter</li><li>• Guidelines for managing staff and volunteers</li><li>• Arrange emergency drills in the station</li><li>• Develop a contact list and post in station</li><li>• Map community (ethnicity, religion, race, culture, vulnerability)</li><li>• Prepare pre-recorded Emergency Response</li><li>• Announcements and scripts and post in the studio</li></ul>	
7. Mitigation	
<ul style="list-style-type: none"><li>• Develop networks with local Disaster Management and Response (DMR) NGOs, local government and key stakeholders: hold regular meeting with them</li><li>• Arrange emergency drills in the community</li><li>• Training of on-air personnel - what and how to broadcast</li></ul>	
8. Response	
<b>External-on air</b>	
<ul style="list-style-type: none"><li>• Broadcast pre-prepared announcements</li><li>• Broadcast emergency public meetings</li><li>• Broadcast emergency evacuation announcements</li><li>• All announcements broadcast in a reassuring and calm manner</li></ul>	

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

#### **Internal-behind the scenes**

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

### **9. Relief**

- Establish Information Support Centre for information sharing and logistic distribution

### **10. Rehabilitation**

#### **External – Networking and Support**

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

#### **Internal – Evaluation and Review**

- Decentralize and copy important documents
- Call meeting of all personnel to debrief
- Monitor all official announcements and activities of national government, local government and aid agencies(NGOs)
- Evaluate response and update guidelines
- Check physical infrastructure and repair damage
- Log all communications for reference
- Update preparedness and response manuals as required



### Telephone Numbers for Disaster Information

1.	State Control Room	079-1070
2.	District Control Room	District STD Code + 1077

#### ➤ **Rehabilitation:**

In short term response rehabilitation is the final step. The incident Command System shall be deactivated as the rehabilitation phase is over. Thereafter the normal administration shall take up the remaining reconstruction works in the disaster-affected areas. These activities shall be performed by the Working Group for relief and rehabilitation under the direction of the DDMC.

#### ➤ **Format (Reports, Damage and Loss Assessment):**

##### ➤ Standard damage assessment form:

Application form for Government help for to Repair / Rebuilt House/Huts  
damaged during the Natural calamities of Earthquake on date 26.01.2001

:: **APPLICATION FORM** ::

3. Name of Applicant
4. Name of Village & Location of House / Hut
3. a. Ward No.                      Block No.                      House No.  
b. Area  
c. Valuation Register No.
8. Total No. of Family Member of Applicant

Sr. No.	Name	Age	Relation
1			
2			
3			

9. Annual Income of Applicant family

10. (A) Ownership of House :

House owner / House Tenant Name and Address :

11. House / Hut Party damage or fully damage

12. Damage estimate cost (In Rupees)

13. Amount Damaged for to Repair / Rebuilt House / Hut.

14. Fully damage House/ Hut is on official place or not ? If not then Rebuilt House / Hut is on official place ?

Place :

Signature of Applicant

Date :

**Rojkam**

Shri .....resident of Amreli has residential building / Hut which is demolished heavy damage during the .....(type of Calamities). Which has seen by us and the estimated damage cost is Rs..... is true for that we punch sign under this .

- 1.
- 2
- 3

In presence of Team leader

**Agreement**

I shri ..... living in village ..... Taluka .....  
Agree to write agreement that in referce to my application what over the help given to me by Government according to his rules, I spend it for rebuilt house / hut. If I fail to do so I repaid the help to Government .

Witness :

Name :

Dates :

Applicant Signature

In presence of Ten leaders.

In accordance with the Application of Shri..... for to repair / rebuilt residential building / kacha / packa / Hut. I personally verified the damage. In accordance with damage of ..... situation of applicant . I agree to give him help according to rule. His valuation register No. is .....

Date:

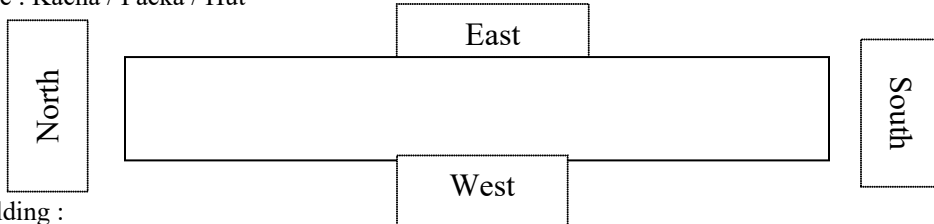
Team Leader : Signagture

Shri..... Residence..... house / hut damage details

Ward No.....

House No.....

Type of House : Kacha / Packa / Hut



Height of building :

Plinth Area :

Walls :

Cellar :

Roof detail : Tiles / Slash

Approximate damage :

(Repairing cost )

Categon of Damage :

% damage :

Engineer's Sign / Officer's Sign

Name :

-----Looking to the above detail

Rs. ....is sranted as a help for to repair / rebuilt . House / Hut.

Date :

Mamlatdar

Place :

## **SOP-Roll of Each Department:**

### **1. Each Department and Govt. agency involved in Disaster Mgmt and Mitigation will :**

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

### **2. Agriculture**

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

➤ **Preparedness Activities before disaster seasons**

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

➤ **Response Activities:**

- Management of control activities following crop damage, pest infestation and crop disease to minimize losses.
- Collection, laboratory testing and analysis of viruses to ensure their control and eradication.
- Pre-positioning of seeds and other agro inputs in strategic points so that stocks are readily available to replace damage caused by natural calamities.
- Rapid assessment of the extent of damage to soil, crop, plantation, irrigation systems, drainage, embankment, other water bodies and storage facilities and the requirements to salvage, re-plant, or to compensate and report the same for ensuring early supply of seeds and other agro inputs necessary for re-initiating agricultural activities where crops have been damaged.
- Establishment of public information centers with appropriate and modern means of communication, to assist farmers in providing information regarding insurance, compensation, repair of agro equipments and restarting of agricultural activities at the earliest.

➤ **Recovery Activities**

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

### **3. Health Department**

#### **3.1. Disaster Events**

➤ **Prevention Activities:**

- Assess preparedness levels at State, District and Block levels.
- Identification of areas endemic to epidemics and natural disasters.

- Identification of appropriate locations for testing laboratories.
- Listing and networking with private health facilities.
- Developing a network of volunteers for blood donation with blood grouping data.
- Strengthening of disease surveillance, ensuring regular reporting from the field level workers (ANMs/LHV etc) and its compilation and analysis at the PHC and District levels, on a weekly basis (daily basis in case of an epidemic or during natural disasters), forwarding the same to the State Disease Surveillance Cell and monthly feedback from the State to the district and from the District to the PHC.
- Formation of adequate number of mobile units with trained personnel, testing facilities, communication systems and emergency treatment facilities.
- Identification of locations in probable disaster sites for emergency operation camps.
- Awareness generation about various infectious diseases and their prevention.
- Training and IEC activities
- Training of field personnel, Traditional Birth Attendants, community leaders, volunteers, NGOs and CBOs in first aid, measures to be taken to control outbreak of epidemics during and after a disaster, etc.
- Arrangement of standby generators for every hospitals.
- Listing of vehicles, repair of departmental vehicles that will be requisitioned during emergencies for transport of injured.
- **Preparedness Activities before Disaster Seasons**
- **For heat wave :**
- Preparation and distribution of IEC materials, distribution of ORS and other life-saving drugs, training of field personnel on measures to be taken for management of patients suspected to be suffering from heatstroke;
- For flood and cyclone: Assessment and stock piling of essential medicines, anti snake venom, halogen tablets, bleaching powders. ORS tablets, Pre-positioning of mobile units at vulnerable and strategic points.
- **Response activities:**
- Stock piling of life-saving drugs, detoxicants, anesthesia, Halogen tablets in vulnerable areas.
- Strengthening of drug supply system with powers for local purchase during LO.
- Situational assessment and reviewing the status of response mechanisms in known vulnerable pockets.
- Ensure adequate availability of personnel in disaster sites.
- Review and update precautionary measures and procedures, and apprise the personnel who will be implementing those.
- **Sanitation**
- Dispensing with post-mortem activities during L1, L2 and L3 when the relatives and/or the

competent authority is satisfied about cause of death.

- Disinfections of water bodies and drinking water sources.
- Immunization against infectious diseases.
- Ensure continuous flow of information.
- **Recovery Activities**
- Continuation of disease surveillance and monitoring.
- Continuation of treatment, monitoring and other epidemic control activities till the situation is brought under control and the epidemic eradicated.
- Trauma counselling.
- Treatment and socio-medical rehabilitation of injured or disabled persons.
- Immunization and nutritional surveillance.
- Long term plans to progressively reduce various factors that contribute to high level of vulnerability to diseases of population affected by disasters.

### 3.2 Epidemics

- **Preventive Activities:**
- Supply of safe drinking water, water quality monitoring and improved sanitation.
- Vector Control programme as a part of overall community sanitation activities.
- Promotion of personal and community latrines.
- Sanitation of sewage and drainage systems.
- Development of proper solid waste management systems.
- Surveillance and spraying of water bodies for control of malaria.
- Promoting and strengthening Primary Health Centres with network of paraprofessionals to improve the capacity of surveillance and control of epidemics.
- Establishing testing laboratories at appropriate locations to reduce the time taken for early diagnosis and subsequent warning.
- Establishing procedures and methods of coordination with the Health Department, other local authorities/departments and NGOs to ensure that adequate prevention and preparedness measures have been taken to prevent and / or minimise the probable outbreak of epidemics.
- Identification of areas prone to certain epidemics and assessment of requirements to control and ultimately eradicate the epidemic.
- Identification of appropriate locations and setting up of site operation camps for combating epidemics.
- Listing and identification of vehicles to be requisitioned for transport of injured animals.
- Vaccination of the animals and identification of campsites in the probable areas.
- Promotion of animal insurance.

- Tagging of animals
- Arrangement of standby generators for veterinary hospitals.
- Provision in each hospital for receiving large number of livestock at a time.
- Training of community members in carcasses disposal.
- **Preparedness activities before disaster seasons**
- Stock piling of water, fodder and animal feed.
- Pre-arrangements for tie-up with fodder supply units.
- Stock-piling of surgical packets.
- Construction of mounds for safe shelter of animals.
- Identification of various water sources to be used by animals in case of prolonged hot and dry spells.
- Training of volunteers & creation of local units for carcass disposal.
- Municipalities / Gram Panchayats to be given responsibility for removing animals likely to become health hazards.
- **Response Activities:**
- Eradication and control of animal diseases, treatment of injured animals ~ Protection of abandoned and lost cattle.
- Supply of medicines and fodder to affected areas.
- Ensure adequate availability of personnel and mobile team.
- Disposal of carcasses ensuring proper sanitation to avoid outbreak of epidemics.
- Establishment of public information centre with a means of communication, to assist in providing an organised source of information.
- Mobilizing community participation for carcass disposal.
- **Recovery Activities:**
- Assess losses of animals assets and needs of persons and communities.
- Play a facilitating role for early approval of soft loans for buying animals and ensuring insurance coverage and disaster proof housing or alternative shelters/ mounds for animals for future emergencies.
- Establishment of animal disease surveillance system.

## **5. Water Supplies and Sanitation (GWSSB)**

- **Prevention Activities:**
- Provision of safe water to all habitats.
- Clearance of drains and sewerage systems, particularly in the urban areas.
- **Preparedness Activities for disaster seasons**

- Prior arrangement of water tankers and other means of distribution and storage of water.
- Prior arrangement of stand-by generators.
- Adequate prior arrangements to provide water and halogen tablets at identified sites to used as relief camps or in areas with high probability to be affected by natural calamities.
- Raising of tube-well platforms, improvement in sanitation structures and other infrastructural measures to ensure least damages during future disasters.
- Riser pipes to be given to villagers.
- **Response Activities:**
- Disinfections and continuous monitoring of water bodies.
- Ensuring provision of water to hospitals and other vital installations.
- Provision to acquire tankers and establish other temporary means of distributing water on an emergency basis.
- Arrangement and distribution of emergency tool kits for equipments required for dismantling and assembling tube wells, etc.
- Carrying out emergency repairs of damaged water supply systems.
- Disinfection of hand pumps to be done by the communities through prior awareness activities & supply of inputs.
- **Recovery Activities:**
- Strengthening of infrastructure.
- Sharing of experiences and lessons learnt.
- Training to staff, Review and documentation.
- Development of checklists and contingency plans.

## 6. Police:

- **Prevention Activities:**
- Keep the force in general and the GSDRAF in particular fighting fit for search, rescue, evacuation and other emergency operations at all times through regular drills.
- Procurement and deployment of modern emergency equipments while modernising existing infrastructure and equipments for disaster response along with regular training and drills for effective handling of these equipments.
- Focus on better training and equipments for GSDRAF for all types of disasters, e.g. diving equipments.
- Rotation of members of GSDRAF so that the force remains fighting fit.
- Ensure that all communication equipments including wireless are regularly functioning and deployment of extra wireless units in vulnerable pockets.



- Ensure inter changeability of VHF communication sets of police and GSDMA supplied units, if required.
- Keeping close contact with the District Administration & Emergency Officer.
- Superintendent of Police be made Vice Chairperson of District Natural Calamity Committee.
- Involvement of the local army units in response planning activities and during the preparation of the annual contingency plans to ensure logistics and other support to armed forces during emergencies.
- **Response Plan:**
- Security arrangements for relief materials in transit and in camps etc.
- Senior police officers to be deployed in control rooms at State & district levels during L 1 level deployment onwards.
- Deploy personnel to guard vulnerable embankments and at other risk points.
- Arrangement for the safety.
- Coordinate search, rescue and evacuation operations in coordination with the administration
- Emergency traffic management.
- Maintenance of law and order in the affected areas.
- Assist administration in taking necessary action against hoarders, black marketers etc.

## 7. Civil Defence

- **Prevention Activities**
- Organise training programmes on first-aid, search, rescue and evacuation.
- Preparation and implementation of first aid, search and rescue service plans for major public events in the State.
- Remain fit and prepared through regular drills and exercises at all times.
- **Response Activities**
- Act as Support agency for provision of first aid, search and rescue services to other emergency service agencies and the public.
- Act as support agency for movement of relief.
- Triage of casualties and provision of first aid and treatment.
- Work in co-ordination with medical assistance team.
- Help the Police for traffic management and law and order.

## **8. Fire Services:**

### **➤ Prevention Activities:**

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

### **➤ Response Activities:**

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

## **9. Civil Supplies:**

### **➤ Preventive Activities**

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

### **➤ Response Activities**

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

### **➤ Recovery Activities**

- Conversion of stored, unutilized relief stocks automatically into other schemes like Food for Work.

Wherever, it is not done leading to damage of stock, it should be viewed seriously.

## **10. Works/ Rural Development Departments**

### **➤ Prevention Activities :**

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

### **➤ Response Activities**

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

### **➤ Recovery Activities:**

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

## **11. Energy:**

### **➤ Prevention Activities:**

- Identification of materials/tool kits required for emergency response.
- Ensure and educate the minimum safety standards to be adopted for electrical installation and equipments and organize training of electricians accordingly.
- Develop and administer regulations to ensure safety of electrical accessories and electrical installations.
- Train and have a contingency plan to ensure early electricity supply to essential services during emergencies and restoration of electric supply at an early date.
- Develop and administer code of practice for power line clearance to avoid electrocution due to broken / fallen wires.

- Strengthen high-tension cable towers to withstand high wind speed, flooding and earthquake, modernize electric installation, strengthen electric distribution system to ensure minimum damages during natural calamities.
- Conduct public/industry awareness campaigns to prevent electric accidents during normal times and during and after a natural disaster.
- **Response Activities:**
- Disconnect electricity after receipt of warning.
- Attend sites of electrical accidents and assist in undertaking damage assessment.
- Stand-by arrangements to ensure temporary electricity supply.
- Prior planning & necessary arrangements for tapping private power plants like those belonging to ICCL, NALCO, RSP during emergencies to ensure uninterrupted power supply to the Secretariat, SRC, GSDMA, Police Headquarters, All India Radio, Doordarshan, hospitals, medical colleges, Collectorate Control Rooms and other vital emergency response agencies. v Inspection and repair of high tension lines /substations/transformers/poles etc.
- Ensure the public and other agencies are safeguarded from any hazards, which may have occurred because of damage to electricity distribution systems.
- Restore electricity to the affected area as quickly as possible.
- Replace / restore of damaged poles/ salvaging of conductors and insulators.

## **12. Water Resources Department:**

- **Prevention Activities:**
- Assess preparedness level.
- Annual assessment of danger levels & wide publicity of those levels.
- Identify flood prone rivers and areas and activate flood monitoring mechanisms.
- Provide water level gauge at critical points along the rivers, dams and tanks.
- Identify and maintain of materials/tool kits required for emergency response.
- Stock-pile of sand bags and other necessary items for breach closure at the Panchayat level.
- **Response Activities:**
- Monitoring flood situation.
- Dissemination of flood warning.
- Ensure accurate dissemination of warning messages naming GPs & Taluka with details of flow & likely damage.
- Monitoring and protection of irrigation infrastructures.
- Inspection of bunds of dams, irrigation channels, bridges, culverts, control gates and overflow channels.

- Inspection and repair of pumps, generator, motor equipments, station buildings.
- Community mobilization in breach closure
- **Recovery Activities:**
- Strengthening of infrastructure and human resources.
- Review and documentation.
- Sharing of experiences and lessons learnt.
- Training of staff.
- Development of checklists and contingency plans.

### 13. Fisheries

- **Prevention Activities**
- Registration of boats and fishermen.
- Building community awareness on weather phenomena and warning system especially on Do's and Don'ts on receipt of weather related warnings.
- Assist in providing life saving items like life jackets, hand radios, etc.
- Certifying the usability of all boats and notifying their carrying capacities.
- Capacity building of traditional fishermen and improvisation of traditional boats which can be used during emergencies.
- Train up young fishermen in search & rescue operation and hire their services during emergency.
- **Response Activities**
- Ensure warning dissemination to fishing communities living in vulnerable pockets.
- Responsible for mobilising boats during emergencies and for payment of wages to boatmen hired during emergencies.
- Support in mobilization and additional deployment of boats during emergencies.
- Assess the losses of fisheries and aquaculture assets and the needs of persons and communities affected by emergency.
- **Recovery Activities**
- Provide compensations and advice to affected individuals, community.
- Plan for rehabilitation in the long run of the fisher folk including resettlement, insurance, better boats, nets, etc., improved communication system as a part of the communication hub for warning dissemination, especially for marine fishermen and fishing communities residing in high-risk areas.

#### **14. Forest Department**

##### **➤ Prevention activities**

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

#### **15. Transport Department:**

##### **➤ Prevention Activities**

- Listing of vehicles which can be used for emergency operation.
- Safety accreditation, enforcement and compliance.
- Ensuring vehicles follow accepted safety standards.
- Build awareness on road safety and traffic rules through awareness campaign, use of different IEC strategies and training to school children.
- Ensure proper enforcement of safety regulations Response Activities.
- Requisition vehicles, trucks, and other means of transport to help in the emergency operations.
- Participate in post impact assessment of emergency situation.
- Support in search, rescue and first aid.
- Failure to cooperate and misappropriation of relief materials to invite disqualification from the post.

##### **➤ Recovery Activities**

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

## **16. Panchayati Raj**

### **➤ Preventive Activities**

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

### **➤ Response Activities**

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

### **➤ Response Activities :**

- Assist in road clearance.
- Provision of tree cutting equipments.
- Units for tree cutting and disposal to be put under the control of GSDMA, SRC, Collector during L1.
- Provision of building materials such as bamboos etc for construction of shelters.

### **➤ Recovery Activities :**

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

## **17. Information & Public Relations Department**

### **➤ Prevention Activities**

- Creation of public awareness regarding various types of disasters through media campaigns.
- Dissemination of information to public and others concerned regarding doís and doníts of various disasters.
- Regular liaisoning with the media.

### **➤ Response Activities**

- Setting up of a control room to provide authentic information to public regarding impending emergencies.
- Daily press briefings at fixed times at state & district levels to provide official version (during LO also).
- Media report & feedback to field officials on a daily basis from L1 onwards.
- Keep the public informed about the latest of the emergency situation (area affected, lives lost, etc).
- Keep the public informed about various post-disaster assistances and recovery programmes.

## **18. Revenue Department**

- Co-ordination with Govt. of Gujarat Secretariat and Officers of Govt. of India
- Overall control & supervision
- Damage assessment, finalization of reports and declaration of L1/L2 disasters
- Mobilization of finance

### **➤ 19. Home Department**

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

## **20. Gujarat Disaster Rapid Action Force**

### **➤ Response**

- To be trained and equipped as an elite force within the Police Department and have the capacity to immediately respond to any emergency.
- Unit to be equipped with life saving, search & rescue equipments, medical supplies, security arrangements, communication facilities and emergency rations and be self-sufficient.
- Trained in latest techniques of search, rescue and communication in collaboration with international agencies.
- Co-opt doctors into the team.



# Project for Prevention of disasters Available in-[gsdma.org](http://gsdma.org)

## List of Trained Personnl

### ➤ POLICE SWIMMERS - AMRELI DISTRICT

Sr.NO	Taluka	Person Name	catogery	B-No	Contact
1	Lathi	janka bhai mita bhai	pc	740	8490959293
2	Lathi	Dilipbhai jyantibhai	pc	108	9687777076
3	Lathi	kishanbhai yunusbhai	pc	692	9723565412
4	Lathi	sarfarajbhai yusunbhai	pc	686	7874728400
5	Lathi	sanjaybhai kanu	pc	1554	8128911214
6	Lathi	vishal rambhai	pc	-	9727249627
7	Lathi	tulsi leng sarveya	pc	-	9726390569
8	Lathi	sureshbhai a.dodiya	pc	-	9904708827
9	Lathi	bhupatbhai hamir bhai	pc	-	7698814459
10	Lathi	ashokbhai manjibhai	pc	-	9998365794
11	Damnagar	p.d.solanki	-	7025	9909445280
12	Damnagar	m.m rana	-	6280	9723835233
13	Damnagar	m.p bhadoriya	-	6267	9924677600
14	Damnagar	r.p.parmar	-	6269	9426656889
15	Damnagar	d.p gohil	-	7955	8758610720
16	Damnagar	deepakbhai nimavat	-	7020	9426976088
17	Damnagar	ranjitbhai hamirbhai	-	-	7878232523
18	vadiya	prakeshbhai devjiibhai	-	7259	9879629510
19	vadiya	arvind bhai	-	7258	9909191096
20	vadiya	ghuvrajbhai	-	8330	8128266713
21	vadiya	nileshbhai	-	8334	9601275056
22	vadiya	vanrajbhai	-	8473	9601591170
23	savarkundla	ketanbhai devjiibhai	UHC	671	9979731477
24	savarkundla	praddep kumar pitha bhai	ULRD	725	9727332277
25	savarkundla	f.h jhabra	-	7983	9537312586
26	savarkundla	m.s baloch	-	7985	9525432267
27	savarkundla	a.h.mer	-	7963	8429351212
28	rajula	d.a tuvar	pi	-	9725240909
29	rajula	hareshbhai vansrambhai	HC	644	9712771269
30	rajula	ravjiibhai	PC	699	9428711167
31	rajula	harpal singh gajrajbhai	PC	782	7698151151
32	rajula	aniradhye natubha	PC	768	9898972209
33	rajula	vanrajbhai jorajbhai	PC	1594	9825258934
34	rajula	mehulbhai lupat bhai	PC	776	9924185049
35	rajula	bharatabhai bariya	-		9924539756

Sr.NO	Taluka	Person Name	catogery	B-No	Contact
36	rajula	dinesgbhai vansibhai gohil	-		7349054421
37	rajula	jitubhaibhojbhai	-	7859	9723346724
38	rajula	prakeshbhai govind bhai	-	6978	8140403630
39	rajula	prakeshbhai maghabhai bhaliya	-	7877	9737433889
40	dhari	j.m.jhasa	PSI	-	9712908347
41	dhari	arvind manshukhbhai amreliya	UASI		8980048530
42	dhari	tribhovandas mohan das gondiya	UASI		9825745464
43	dhari	jyentibhai govind bhai bhasarka	APC		9974262290
44	dhari	devendra kumar nareshbhai joshi	UHC		9574319396
45	dhari	anil singh govind singh basan	UHC		7069754720
46	dhari	b.v.madak	-		9925995601
47	dhari	r.d.mehta	-		8141606089
48	dhari	I.a.shekh	-		8758813510
49	dhari	d.b.makvana	-		9978226576
50	dhari	bhavesbhai gohil	GRD		9979777817
51	dhari	magandas a.rathore	GRD		9879772205
52	dhari	vijaybhai m.hafda	GRD		9879738767
53	dhari	jayeshbhai g.ramsheni	GRD		8347898289
54	dhari	nileshbhai m.gohil	GRD		972535050
55	dhari	ashif r.bhagvan	GRD		9925620789
56	dhari	rameshbhai v.bheda	GRD		9979446846
57	dhari	jayshukhbhai patadiya	GRD		993753489
58	dhari	mudjibhai s.vada	GRD		9979482715
60	dhari	umeshbhai ke vada	GRD		9924710027
61	khambha	balubhai lakhabhai nagar	ULRD	690	9687044888
62	khambha	sukhdevbhai jivarabhai gondliya	ULRD	734	9429865649
63	khambha	changanbhaimavjibhai vada	ULRD	735	9978845772
64	khambha	rambhai aalbhai bamamar	ULRD	1683	9998926553
65	khambha	k.l.kareta	H.G	5113	9426371811
66	khambha	s.r.nimbakr	H.G		-
67	khambha	yevrajbhai anakbhai vada	ULRD	728	9726502386
68	khambha	c.s.devra	H.G	6628	9904363469
69	khambha	s.s.raviya	H.G	7148	9427245660
70	khambha	s.s.shekh	H.G	7140	9979012690
71	khambha	b.u.rathore	H.G	4083	9879457804

Sr.NO	Taluka	Person Name	catogery	B-No	Contact
72	khambha	bhola bhai mohandas vaghela	UHC	584	9898361149
73	khambha	vikrambhai ghanshyam dali	LRD	936	8160720456
74	khambha	chandreshbhai manubhai kavadi	LRD	812	7409117952
75	khambha	nitinbhai balubhai boriya	LRD	1645	9714464224
76	khambha	maheshbhai gabha bhai rathore	LRD	1607	7698839351
77	khambha	rameshbhai bojalbhai solanki	LRD	1575	9537536674
78	khambha	pareshbhai bhilabhai bariya	LRD	1646	9825269537
79	jafrabad	ajaybhai gobarbhai bhaghela	PC	214	9898332267
80	jafrabad	pratapbhai kanu bhaiboriya	LRD	1618	9558578958
81	jafrabad	vijubhai kunbhabhai gohil	LRD	1627	8141276687
82	Amreli	n.c.jhala	--	-	9723437202
83	Amreli	sanjaybhai bhimabhai	-	884	8140642816
84	Amreli	ravirajbhai lakhu bhai	-	1465	9924678234
85	Amreli	sindhrajsingh bharat singh jadeja	-	32	9714727347
86	Amreli	sagarkumar dinkarraji dhani	-	41	8347815568
87	Amreli	jyeshbhai manji bhai chohan	-	822	9723279329
88	Amreli	sohailbhai usmanbhai	-	1565	8866297329
89	Amreli	vijaybhai samatbhai sagathiya	-	-	9537300686
90	Amreli	dilipbhai khemjibhai sagathiya	GRD	-	9909523784
91	Amreli	manojbhai rameshbhai chawala	GRD	-	6355512460
92	Amreli	yogeshbhai bodabhai chawala	GRD	-	8200926346
93	Amreli	munabhai bhai	GRD	-	9913498059
94	Amreli	udaybhai gopalbhai	ULRD	1672	9909677977
95	Amreli	sanjay devjibhai	ULRD	1639	9712415095
96	Amreli	ankurbhai bhikhabhai	ULRD	1671	9428707969
97	Amreli	mahesh bhai	ULRD	1605	8980753767
98	Babara	r.d gopal	P.S.I	-	9825292677
99	Babara	ghanshayambhai	ULRD	1591	9724724232
100	Babara	prakeshbhai ravatbhai	ULRD	1590	9586112205
101	Babara	dharmeshkumar ashokbhai	ULRD	1650	9727574037

Sr.NO	Taluka	Person Name	catogery	B-No	Contact
102	Babara	bhavikbhai raghuvir	ULRD	1407	9909090502
103	Babara	dhartiben manojbhai	WULRD	1304	9265163774
104	Babara	punitaben makanbhai	WULRD	1309	9712920612
105	Babara	divya ben	WULRD	1342	9265956823
106	bagasara	s.v sarveya saheb	PSI	-	9601054860
107	bagasara	u.f.rakhol	PSI	-	9825265707
108	bagasara	harshvandh jyantilaljani	UAS	--	9426264642
109	bagasara	madhubhai nathu popt	UHC	-	9558427648
110	bagasara	hareshbhai karshanbhai heleya	UHC	-	9879223943
111	bagasara	jitendrabhai ramsurbhai dati	UHC	-	9925995601
112	bagasara	sureshbhai prtapbhai ghagal	LRD	-	7567723674
113	bagasara	jayrajbhai ghusabhai vada	LRD	-	9712279364
114	bagasara	hareshbhai ramsang bhai keleya	GRD	-	9712800532
115	bagasara	ramesh bachugiri gosai	GRD	-	9638882974
116	bagasara	ashvinbhai valabhai ghogsara	GRD	-	9925786435
117	bagasara	yogeshbhai haribhai joshi	GRD	-	9727455447
118	bagasara	manubhai bhayabhai patdiya	GRD-	-	9726494325
119	bagasara	selesh bhai valjibhai patdiya	GRD	-	8128273658

## HOME GUARD SWIMMERS DISTRICT AMRELI

Sr.NO	Taluka	Person Name	catogery	B-No	Contact
1	lathi	amitbhai usman bhai	-	8063	9998888609
2	lathi	sabirbhai asarkhbhai	-	8067	9033194032
3	lathi	ibrahimbhai starbhai	-	8087	9119271370
4	amreli	sunilbhai	ASI	931	990317659
5	amreli	panchabhai chaganhai vaghela	HG	-	9925083291
6	amreli	karshanbhai kanu bhai	HG	-	6371916741
7	jafarabad	jigarbhai rambhai beriya	-	-	9714470644
8	jafarabad	rameshbhai babu bhai solanki	-	-	9904738733

9	jafarabad	jivanbhai jidabhai makvana	-	-	9737139481
10	jafarabad	rameshbhai ukabhai gadiya	-	-	9054331515
11	jafarabad	laljiibhai bhuvat bhai rathore	-	-	9904555094
12	jafarabad	darshanbhai ram jii bhai solanki	-	-	9904870644
13	jafarabad	aheshan navaj akbarsheyad	-	-	9614833402
14	jafarabad	prakulbhai govind bhai bhanbhadiya	-	-	9723449784
15	jafarabad	baratbhai khatubhai bareya	-	-	9824932204
16	jafarabad	baratbhai shamjiibhai bareya	-	-	9714189481
17	dungar	aminbhai ashraakhbhai	H.G	6677	9724296442
18	dungar	nirjanbhai dineshbhai	H.G	7846	9638644599
19	nageshri post	vijaybhai damjibhai bariya	H.G	7305	9998099856
20	nageshri post	k.p sondrvaa	H.G	7317	8780303219
21	nageshri post	p.j gadsar	H.G	8342	7567367664
22	nageshri post	m.k ghohil	H.G	8343	7984346500
23	nageshri post	d.v sakhat	H.G	8345	9537208808
24	nageshri post	n.p jadav	H.G	8346	9512148434
25	nageshri post	r.g bariya	H.G	8347	8000780753

*POLICE RESCUE TEAM-DISTRICT AMRELI*

Sr.NO	Taluka	Person Name	catogery	B-No	Contact
1	LATHI	Mhavirsinghbhai babubhai	PC	1604	9723954275
2	LATHI	shivabhai keshubhai	PC	722	9998926551
3	LATHI	kumarsingh kushubhai	PC	712	8758737771
4	LATHI	prakeshbhai jyantibhai	PC	869	8998754767
5	LATHI	hardikbhai banabhai	PC	475	9727219920
6	AMRELI	a.d sakhand	PSI	-	9825656386
7	AMREL	govindbhai manu bhai	HC	666	9428619363
8	AMREL	jaydeepbhai bharat bhai	HC	824	9408352698
9	AMREL	shaktibhai ajeet bhai singh	HC	861	9428079528

10	AMREL	prathaviraj singh bhai	PC	542	9727988678
11	AMREL	aminbhai sarifbhai	PC	1677	9924351053
12	AMREL	prakeshbhai	PC	784	9624484835
13	AMREL	ashokbhai bhanushanker	PC	765	9638459750
14	BABARA	g.d aahir	PSI	-	9727700212
15	BABARA	maheshbhai madhubhai chouhan	ULRD	770	9638796171
16	BABARA	bhavikkumar lajibhai	ULRD	691	8758232313
17	BABARA	parvej mahamad bhai	ULRD	710	9724009111
18	BABARA	kishan bhai bhupat bhai	ULRD	703	799033482
19	BABARA	bhagirat singhlalubhai	ULRD	685	9726111117
20	BABARA	shaileshbhaidadubhai	ULRD	1614	8000602260
21	DAMNAGAR	jaidevbhaiherma	H.C	817	9879726503
22	DAMNAGAR	sanjaybhai jivrajbhai	P.C	786	9687526277
23	DAMNAGAR	bharatbhai pravin bhai	P.C	715	9624619068
24	DAMNAGAR	vikramvbhaipopat bhai	P.C	1670	9727270327
25	DAMNAGAR	vijaybhai makabhai	P.C	1663	9624290655
26	DAMNAGAR	m.p pandoriya	H.G	6267	9924677600
27	DAMNAGAR	r.b parmar	H.G	6269	9426656889
28	DAMNAGAR	d.p gohil	H.G	7955	8758610720
29	VADIYA	PRAKESHBHAI DEVJIICHUDASAMA	H.G	7259	9879629510
30	VADIYA	praven bhai mohan bhai chudasama	H.G	7258	9909191097
31	VADIYA	druvrabhai rajubhai boricha	H.G	8330	8128266713
32	VADIYA	nileshbhai dirubhaisarveya	H.G	8334	9601275057
33	VADIYA	vanrajbhai dilubhai vada	H.G	8473	9601591170
34	SAVARKUNDLA	hiteshbhai selar bhaivada	-	982	9624114444
35	SAVARKUNDLA	dostmahamad ishak bhai	ULRD	688	9904028700

36	SAVARKUNDLA	jitendra kumar jivraj bhai rathore	-	986	9624009699
37	SAVARKUNDLA	hareshbhai dila bhai kavadi	-	722	9725062049
38	SAVARKUNDLA	ravi bhai koda bhai	ULRD	1585	7227851854
39	SAVARKUNDLA	vanrajbhai madhu bhai	U LRD	1620	7046590357
40	SAVARKUNDLA	R.u dhama	PSI	-	7990453006
41	SAVARKUNDLA	valerabhai savajbhai vanjar	UASI	1502	8200533431
42	SAVARKUNDLA	kana bhai arjun bhai sankhat	UHC	702	8141750607
43	SAVARKUNDLA	rajendendra singh bahadur singh vaghela	ULRD	689	9904034702
44	SAVARKUNDLA	madhubhai lakhu bhai berda	ULRD	727	7600338055

45	SAVARKUNDLA	sanjay bhai jorubhai kamliya	ULRD	682	7698641479
46	SAVARKUNDLA	harpal singh nerubha sarviya	ULRD	767	9924639551
47	SAVARKUNDLA	ajaybhai ajmal bhaibariya	ULRD	1747	9974532200
48	RAJULA	Aalarakbhai abdulsatar kadri	H.G	6304	9898334919
49	RAJULA	bhavesbhaichampubhai jakhada	H.G	7872	8141642020
50	RAJULA	chunni lala babu bhai bhaliya	H.G	6967	9924243821
51	RAJULA	husenbhai kalubhai jhakara	H.G	6975	9033743438
52	RAJULA	amitbhai harshad bhai raveya	H.G	6945	8140404048
53	RAJULA	maganbhai bhai kalubhai	H.C	816	9723575510
54	RAJULA	sureshbhai thakarshibhai	P.C	694	9825539898
55	RAJULA	ghanshayam bhai bhagvan bhai	P.C	684	7878973571
56	RAJULA	mehulbhai bhojubhai	P.C	1603	9723748714
57	RAJULA	jankbhaijilubhai	P.C	1570	9510611158
58	RAJULA	manubhai rambhai	P.C	1572	8690256427
59	RAJULA	arandben shamjii bhai	LPC	626	9924898688
60	RAJULA	raksarben yunusbhai	LPC	634	7016807313
61			LPC		
62	JAFARABAD	indrajeet singh lakhuba gohil	HC	656	9904158678
63	JAFARABAD	pravin bhai dula bhai kalsariya	HC	799	8264389150

64	JAFARABAD	jigneshbhai dharmendra bhai sarveya	PC	794	9924243773
65	JAFARABAD	bharat bhai vijay bhai magthiya	PC	662	9979888539
66	JAFARABAD	vishvadeep singh pratap singh gohil	LRD	839	8460612561
67	JAFARABAD	anupsingh gagjii bhai solanki	LRD	681	9824195667
68	DUNGAR POST	vadabhai mohan bhai vaghela	UHC	584	9898361149
69	DUNGAR POST	vikrambhai ghanshyam bhai dabhi	UPC	936	8160720456
70	DUNGAR POST	chandreshbhai manu bhai kaval	LRD	812	7409117952
71	DUNGAR POST	nnitin nhai balu bhai boricha	LRD	1645	9714464224

72	DUNGAR POST	maheshbhai gabha bhai rathore	LRD	1607	9537536674
73	DUNGAR POST	rameshbhai vijal bhai solanki	LRD	1575	7698839351
74	DUNGAR POST	preshbhai vikha bhai bariya	LRD	1656	9998190186

➤ JAFARABAD MARIN POLICE STATION RESCUE TEAM

Sr.NO	Taluka	Person Name	catogery	B-No	Contact
1	JAFRABAD	yuvrajsingh aniragh singh	ULRD	835	9428070777
2	JAFRABAD	surajbhai somat	ULRD	1558	9624382968
3	JAFRABAD	binubhai magha bhai	ULRD	1598	8347110615
4	JAFRABAD	barvinbhai jyentibhai	ULRD	1674	9099684739
5	JAFRABAD	aniragbhai bijubhai	ULRD	1681	7069828282
6	JAFRABAD	jaydeepsinghbahdurbhai	APC	475	7043998298
7	JAFRABAD	shantaben jagubhai	APC	907	7043998298
8	JAFRABAD	dayabenkhatubhai	APC	927	8347689187

➤ PIPAPAV MARIN POLICE STATION RESCUE TEAM

Sr.NO	Taluka	Person Name	catogery	B-No	Contact
1	RAJULA	sureshbhai arvind bhai makhavan	UHC	981	9979083009
2	RAJULA	kamleshbhai arvind bhai vadher	UHC	591	8140018888
3	RAJULA	himatbhai lakhman bhai rathore	UHC	581	9724429453
4	RAJULA	khaltafbhai vasim bhai sama	UHC	672	9978270675
5	RAJULA	prakeshbhai givku bhai gohil	UHC	528	8460042224
6	RAJULA	hamirbhai hajabhai lamdhiya	UHC	-	9909300981



## **EMERGENCY MEDICAL TEAM DISTRICT AMRELI**

<b>Sr.N O</b>	<b>Taluka</b>	<b>Cordinator Name</b>	<b>Mobile No</b>	<b>Team Name</b>	<b>Vehicle no</b>
1	Savarkundla	Dr mihir sidhpura	9727723371	Team-1juna savar	GJ-18-G-8463
2	Amreli	Dr kosis chouhan	9727723341	mota akdiya	GJ-18-G-8473
3	Lathi	Dr Parth chanu	8788937711	jarakhiya	GJ-14-G0342
4	Dhari	Dr N.R Dhaluk	9727723358	bhader	GJ-18-G-8460
5	Jafrabad	Dr D.B BALDADHIYA	7567882486	TEAM-B	GJ-18-G-8458
6	liliya	Dr M.S Bhatti	7567881900	raksh	GJ-18-G-295
7	rajula	Dr M.B.Tak	9978967588	berae	GJ-18-G-8581
8	vadiya	Dr H.R pithava	9904364135	anida	GJ-18-G-291
9	bagarasa	Dr mitesh kobdaliya	9727723352	mavjijova	GJ-18-G-294
10	babara	Dr akshay dak	9408727421	khambhada	GJ-18-G-8589
11	khambha	DrV.D Ajmera	9727723361	dedang	GJ-18-G-8466

## **LIST OF NGO**

<b>Sr No.</b>	<b>Name of Organization</b>	<b>Address</b>	<b>Contact Person</b>	<b>Mobile No</b>
1	Brahmyuva Sangathan	Near Railway Station, Dhari	Riddhesh B. Joshi	97128 02244
2	B.A.P.S. Swaminanarayana Sanstha	Yogiji Maharaj Street, Dhari	Jitubhai Joshi	02797- 221209
3	Jaher Aarogya Samitee, District Panchayat, Amreli	Yash Medical Store, Vadia	Dharmendra B. Pansuriya	98790 26563
4	Swaminanarayana Mandir Trust, Bagasara	Bagasara	Sadhu Laxmiprasad Swami	90999 97251/52
5	Shri Shantidham Seva Sansthan, Lathi	Ramnath Society, Lathi	M.R. Trivedi Trustee	

6	Active Ismile Youth, Rajula	Bherai Road, Ghanshyam Nagar, Rajula	Kanojiya Javed Rahimbhai	94080 00092
7	Mehulkumar K. Joshi	Yoginagar, Dhari	Mehulkumar K. Joshi	99242 18933
8	Joshi Hiteshkumar Kantilal	Nalanda Society, Near J.K. Petrol Pump, Dhari	Joshi Hiteshkumar Kantilal	99740 64300
9	Jivdaya Parivar, Babra	Babra	Maulibhai S. Teraiya	95379 61667
10	Kuldeepbhai Basiya	Darbargadh, At: Chamardi	Kuldeepbhai Basiya	98250 94384
11	Ansuya Xudha Trust, Damnagar	Damnagar	Narola Jayantibhai Balabhai	94249 85551
12	Shree Shiv Darbarbar Aashram Gauseva Trust	Savarkundla	Khuman Bhavesbhai B.	
13	Satvara Samaj, Bagasara	Near Govt. Hospital, Bagasara	Vitthalbhai Chauhan	94282 61419
14	Shree Ramyuva Sangthan	Muldas Bapuni Jagya, Near Tower, Amreli	Hirenbhai Rathod	94287 95944
15	Lohana Samaj, Bagasara	Near Mahajan Vanda, Amreli Road, Bagasra	Bhikhubhai L. Sejpal	94269 38580
16	Maruti Group, Rajula	Pravinbhai Vaghela	Ambedkar Society, Rajula	99242 39451
17	Parth Group, Rajula	Dhakhda Kanubhai L.	Near Kohinoor Hotel, Rajula	99785 19311
18	Vishva Hindu Parishad	B-44, Avadh Residency, Chittal Road, Amreli	Dudhat Hasmukhbhai S.	94263 16776
19	Shravan Seva Prasad Kendra, Amreli	Postal Society, Chittal Road, Amreli	Agravat Bhikhalal Nandlal	94088 47434
20	Amansetu Education Walfare Charitable Trust, Amreli	Daulum Maheboobiyah, Pratappara Road, Amreli	Saiyad Shakil Ahmaad R.	90333 38536

21	Lalji Dadano Vadlo			
22	Harihar Trust, Amreli	Near Nana Bus stand, Amreli		
23	Lohana Samaj. Babra	Babra		
24	Gayatri Mndir, Damnagar	Damnagar		
25	Dan bapuni Jagya, Chalala	Chalala		
26	Koli Samaj, Jafrabad	Jafrabad		
27	Ram Roti Ashram, Kunkavav	Kunkavav		
28	Sarahi Youth Club, Amreli	Avadh Residency, Chital Road, Amreli	Tushar Joshi	94272 18759
29	Kanji Bapuni Vadi, Dhari	Khambha Road, Virpur	N.P. Sheladiya	75677 60185
30	Shree Siddhi Vinayak Mahila Utkarsh Trust, Amreli	Maninagar, Amreli	Rathva Rekhaben N.	98981 59909
31	Sankalp Gruop of Amreli	Gajerapara, Amreli	Sandipbhai Dhanani	82381 80609
32	Parivartan Trust, Amreli	Gajerapara, Amreli	Sandipbhai Pandya	99789 66607
33	Balmukund Caterers, Amreli	Amreli	Pravinbhai Dhanani	98258 76692
34	Manav Mandir Ashram, Savarkundla	Hathsani Road, Savarkundla	Bhakriram Bapu	87587 52378
35	Kabir Tekri Ashram,	Savarkundla	Narayan Das Saheb	89795 66919
36	Jalaram Mandir, Savarkundla	Sanghediya Bajar, Savarkundla	Jasabhai Sariya	94086 53535
37	Young Sports Club, Chalala	Chalala, Ta. Dhari	Bicchubhai Mala	99259 33450
38	Daudi Vhora Jamat, Amreli	Navi Voravad, Vhora Masjid, Amreli	Salimbhai Munshi	98244 72911
39	Amansetu Edu. Walfare Charitable Trust	Daoolulum, Pratappara Road, Amreli	Saiyad Sakil Ahmad	90333 38536

40	Amreli Jilla Sunni Sandhi Muslim Vikas Trust	Sandhi Society, Amreli	Dilubhai N. Juneja	94270 25876
41	Ahmadi Trust	Babara	Ashrafbhai Saiyad	94269 37313
42	Faizan Molaali Group	Babra	Rahimbhai Saiyad	97147 44042
43	Samast Brahma Samaj Gujarat (Rajya Kaxa)	Amreli City	Siddharth Thakar	98797 61561

### **Heat wave Action Plan**

Sr.No	Name of Actitivites	Name of Department
1	Warning System	IMD-Ahemadabad
2	Awareness Generation Activities	1.Health Department( Urban& Rural) 2.108-Co-ordinator 3.Nagar Palikas 3.District emergency Operation Center 4. DRDA Agency
3	ORS Depo And water /Lemon DepoActivities	1.Health Department( Urban& Rural) 2.108-Co-ordinator 3.Nagar Palikas at ward level with the help of Local Resources 3.Taluka/District emergency Operation Center with the help of NGOs 4.Director of State Transpost
4.	ORS Depo And water /Lemon /Chas Vitran Also prepared shed for labour Working under Menrega	DRDA Agency
5	Reporting to DEOC	Health Department ( Rural and Urban ) Daily update to District control Room Regarding Any major incident due to Heat wave

**Table 1: Temperature/ Humidity Index**

Relative Humidity %	Temperature °C																
	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
40	27	28	29	30	31	32	34	35	37	39	41	43	46	48	51	54	57
45	27	28	29	30	32	33	35	37	39	41	43	46	49	51	54	57	
50	27	28	30	31	33	35	36	38	41	43	46	49	52	55	58		
55	28	29	30	32	34	36	38	40	43	46	48	52	54	58			
60	28	29	31	33	35	37	40	42	45	48	51	55	59				
65	28	30	32	34	36	39	41	44	48	51	55	59					
70	29	31	33	35	38	40	43	47	50	54	58						
75	29	31	34	36	39	42	46	49	53	58							
80	30	32	35	38	41	44	48	52	57								
85	30	33	36	39	43	47	51	55									
90	31	34	37	41	45	49	54										
95	31	35	38	42	47	51	57										
100	32	36	40	44	49	56											

Caution

Extreme Caution

Danger

Extreme Danger

Source: Calculated °F to °C from NOAA's National Weather Service

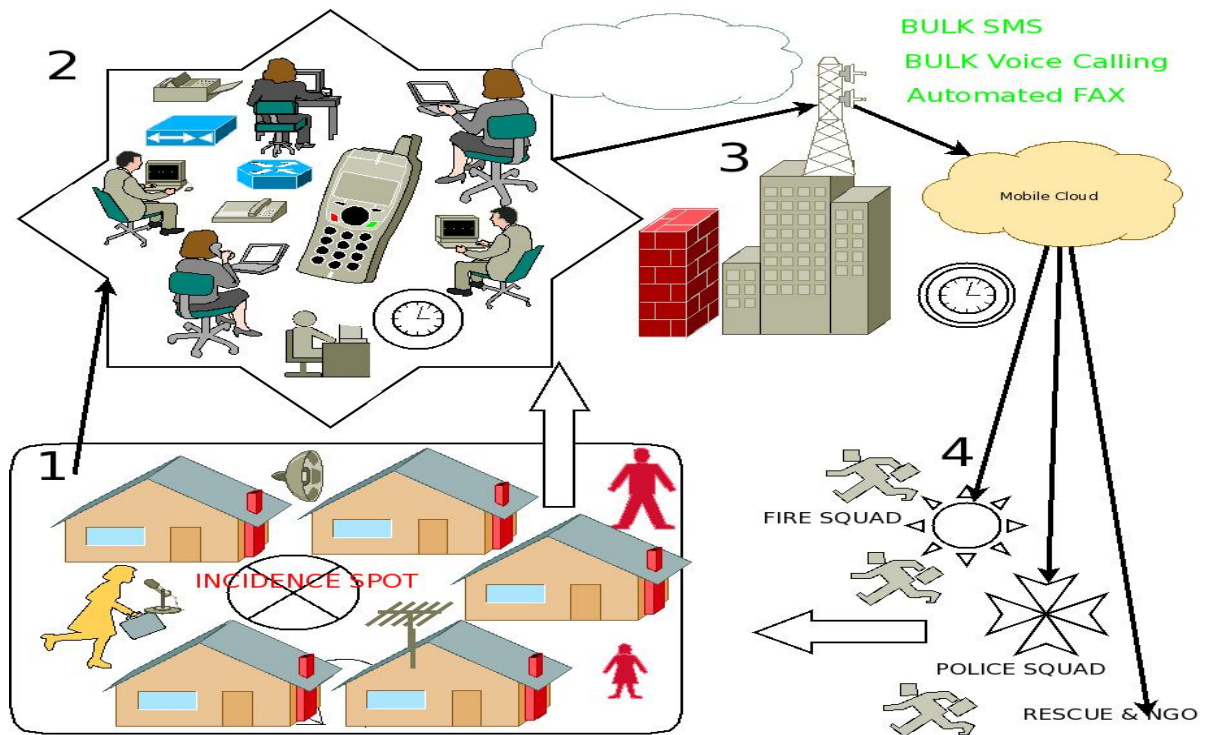
## Levels:

Yellow: 41.1- 43 deg Celsius  
 Orange: 43.1- 44.9 deg Celsius  
 Red :  $\geq 45.0$  deg Celsius

## Legend: Probability of occurrences

Unlikely: less than 25 %  
 Likely: 25 to 50 %  
 Very likely: 50 to 75 %  
 Most likely: 75 to 100 %

# Contact Directory



**District Name:- Amreli Code -02792**

## Gujarat State's District Level Emergency Contact No.

S r.	District Name	Code No.	Collector			DDO		SP		RAC	DEOC
			Office	Fax	Mobile	Office	Mobile	Office	Mobile	Mobile	Office
1	Ahmedabad	079	27551681	27552144	9978406201	25506487	9978406226	26890440	9978406062	9978405173	27560511
2	Amreli	02792	222307	222710	9978406202	222313	9978406227	222333	9978405063	9978405203	230735
3	Anand	02692	262271	261575	9978406203	241110	9978406228	260027	9978405064	9978405175	243222
4	Banaskantha	02742	257171	252063	9978406204	254060	9978406229	257015	9978405065	9978405176	250627
5	Bharuch	02642	240600	240602	9978406205	240603	9978406230	223633	9978405066	9978405177	242300
6	Bhavnagar	0278	2428822	2427941	9978406206	2426810	9978406231	2520050	9978405067	9978405178	2521554
7	Botad	02849	231301	231302	9978405931	2426810	9978406231	231407	9712415910	9727758035	
8	Dahod	02673	239001	239005	9978406207	239066	9978406232	222300	9978405068	9978405179	239277
9	Dang	02631	220201	220294	9978406208	220254	9978406233	220248	9978405021	9978405180	220347
10	Gandhinagar	079	23259030	23259040	9978406209	23222618	9978406234	23210901	9978405070	9978405181	23256639
11	Jamnagar	0288	2555869	2555899	9978406210	2553901	9978406235	2554203	9978405071	9978405210	2553404
12	Devbhumi Dwarka	02833	223804	232102	9978405933	2553901	9978406235	232002	9978405976	9727763794	
13	Junagadh	0285	2636100	2635599	9978406211	2635315	9978406236	2635633	9978405250	9978405211	2633448
14	Geer Somnath	02876	240001	243300	9978405934	2651001	9978406236	222250	9978405974	9727756448	
15	Kheda	0268	2553334	2553358	9978406212	2557262	9978406237	2550150	9978405072	9978405597	2553356
16	Kutch	02832	220020	250430	9978406213	250080	9978406238	250444	9978405073	9978405212	252347
17	Mehsana	02762	222200	222202	9978406214	222301	9978406239	222122	9978405074	9978405213	222220
18	Narmada	02640	222161	222171	9978406216	222086	9978406241	222315	9979405076	9978405188	224001
19	Navsari	02637	244999	281540	9978406215	244299	9978406240	245333	9978405075	9978405187	259401
20	Panchmahal	02672	242800	242899	9978406217	253377	9978406242	242200	9978405077	9978405189	242536
21	Mahisagar	02674	250666	250655	9978405936	253377	9978406242	250815	7874376004	9727354151	
22	Patan	02766	233301	233055	9978406218	232936	9978406243	230104	9978405078	9978405190	224830
23	Porbandar	0286	2221800	2222527	9978406219	2243804	9978406244	2211222	9978405079	9978405191	2220800

24	Rajkot	0281	2473900	2453621	9978406220	2477008	9978406245	2433444	9978405082	9978405218	2471573
25	Morbi	02822	241701	241602	9978405932	247708	9978406245	243471	9978405975	9727759674	2427592
26	Sabarkantha	02772	241001	241611	9978406221	242350	9978406246	247333	9978405081	9978405219	249039
27	Arvalii	02772	247800	247801	9978405935	242350	9978406246	247333	9879910101	9879044388	
28	Surat	0261	2652525	2655757	9978406222	2422160	9978406247	2651831	9978405082	9978405220	2465112
29	Surendranagar	02752	2820200	283862	9978406223	283752	9978406248	282100	9978405083	9978405224	283400
30	Tapi	02626	224460	221281	9978405364	222141	9978405263	220400	9978405488	9978405415	223332
31	Vadodara	0265	2423100	2431093	9978406224	2432027	9978406249	2412255	9978406094	9978405196	2427592
32	Chota Udaipur	02669	233003	233002	9978405937	2432027	9978406249	233077	9978405977	9824048430	
33	Valsad	02632	253613	243417	9978406225	253184	9978406250	254222	9978405085	9978405253	243238



### **Contact Details of Collector Office (STD Code No.02792)**

Sr. No	Designation	Name	Contact Number	
			Office	Mobile
1	Collector	Shri Gaurang Makwana (IAS)	222307	9978406202
2	RAC	Shri R.V.Vala	228903	9878405203
3	Dy.Controller, Civil Defence	-	-	-
4	DSO	Shri Swetaben H.Pandya	222807	9099939631
5	Dy.Collector, MDM	Shri R.V.Chauhan	222446	6359136022
6	Dy.Collector, Election	Shri N.G. Kumpavat	2232872	9978405280
7	Dy.Collector, Stamp Duty	Shri D.B.Tank	224401	7567010029
8	District Planning Officer	Shri L.F.Amin	223658	8160489196
9	Chitnis	Shri H.R. Kordiya	221977	9898268987
10	PRO	Shri P.M. Mehta	223748	9664633923
11	Mamlatdar, Disaster Management	Shri Birju Pandya	230735	9429585891
12	DPO-GSDMA	Dimpal Teraiya	230735	9824438275
13	DIO-NIC	Shri Ravi Gupta	220918	7795111985
14	ICT Officer	Shri Nishant Makwana	220918	9428857505

### **Contact Details of Panchayat Office (STD Code No.02792)**

Sr. No	Designation	Name	Contact Number	
			Office	Mobile
1	DDO	Shri Gurav Dinesh Ramesh (IAS)	222313	9978406227
2	Director, DRDA	Shri V.R. Saxena	223563	7567031983
3	CDHO	Dr. J.H. Patel	222115	9099086262
4	DPEO	Shri K.V. Mayani	222109	9909971652
5	Executive Engineer (R&B)	Shri S.B. Purohit	222112	9925471776
6	Executive Engineer (Irrigation)	Shri S.O. Padavi	222164	9427460009
7	District Agriculture Officer	Shri J.K. Kanani	223324	9913215747
8	Dy. Director, Animal Husbandary	Shri G.R.Soni	223058	9426362090
9	District Social Welfare Officer	Shri D.H. Bhatt	223217	9427202752
10	PO-ICDS	Shri M.B.Barot	231326	9099064006

### **Contact Details of DSP Office (STD Code No.02792)**

Sr. No	Designation	Name	Contact Number	
			Office	Mobile
1	DSP	Shri Himkar Singh (IPS)	222333	9978405063
2	Dy.SP (HQ)	Shri B.V.Jadav	222797	9825355493
3	Dy.SP (SC/ST Cell)	Shri R.D.Oza	-	9825605133
4	Dy.SP (SC/ST Cell)	Shri A.G.Gohil	-	9825412976
5	Dy.SP (Amreli Div.)	Shri J.P.Bhandari	-	7861818565
6	Dy.SP (Savarkundla Div.)	Shri K.J.Chaudhari	-	9978407974
7	PI-CPI	Shri J.D.Dangarwala	-	9925027670
8	PI-LIB	Shri V.B.Desai	-	9099042772
9	PI-Cyber Crime	Shri H.K.Makwana	-	7878782228
10	PI-Traffic	Shri C.S.Kugasiya	-	8320464282
11	PSI-BDDS	Shri M.N.Vala	-	9979316101
12	PSI-QRT	Shri D.B.Bagada	-	9978625777
13	PSI-GRD	Shri R.F.Sheikh	-	9638043255
14	PSI-LCB	Shri R.K.Karmata	-	9978299793

### **Contact Details of Other Offices (STD Code No.02792)**

Sr. No	Designation	Name	Contact Number	
			Office	Mobile
1	DCF-Forest	Shri Priyanka Gehlot	222606	9978405157
2	Suprentendent-Civil Hospital	Shri Haresh Vala	222113	8128500522
3	Fire Officer	Shri Gadhavi	220916	7567677377
4	Exe.Engineer-R&B State	Shri Digvijaysinh Solanki	223100	8690307238
5	Exe.Engineer-Irrigation State	Shri A.B.Rathod	222009	9512838981
6	Suprentending Engineer-PGVCL	Shri H.M.Khirsariya	223836	9825603170
7	Exe.Engineer-Water Supply	Shri L.M.Singhal	223611	9978406843
8	Regional Officer-GPCB	Shri A.G.Oza	-	9427050550
9	Ass.Director-DISH	Shri J.M.Trivedi	-	9824190891
10	Port Officer	Shri A.K.Mishra	245165	9099694747

11	CO-Coast Gaurd	Shri Rakeshkumar	02794-221603	-
12	Divisional Controllor-ST	Shri Jadeja	240169	6359919027
13	Regional Transport Officer	Shri I.S.Tank	223313	9723759293
14	Exe.Engineer-JETCO	Shri Vamja	222032 220037	9925210155
15	Ass.Director-Fisheries	Shri Tushar Purohit	245432	9427698507
16	General Manager-DIC	Shri Bhatiya	222529	7203027889
17	Ass.Laboure Officer	Shri D.S.Baliya	222899	9825580438
18	Dy.Director-Information	Shri Divya Chhatbar	223404	8980784382
19	Disrict Homegaurd Commandent	Shri Ashokbhai Joshi	222517	9426999816
20	District Education Officer	Shri N.G.Vyas	222939	9909970203
21	Ass.Charity Officer	Shri C.K.Joshi	220503	9979341411
22	District Sports Officer	Shri A.R.Kureshi	223630	9714057866
23	Manager-BSNL	Shri D.C.Patel	222988	9426730500
24	District Treusary Office	Shri Suva	222268	7567022758
25	Manager-Circuit House	Shri Chavada	223362 222057	9510167456

### **Contact Details of All SDM**

Sr. No	Designation	Name	Contact Number	
			Office	Mobile
1	Dy.Colle. & SDM Amreli	Shri Bharhav Dangar	222730	7567010024
2	Dy.Collector & SDM Rajula	Shri Hanshrajsinh Gohil	02794-222001	7567010182
3	Dy.Collector & SDM Lathi	Shri D.B.Tank	02793-251252	7567010029
4	Dy.Collector & SDM Savarkundla	Shri Chaudhari	02845-236800	7567010058
5	Dy.Collector & SDM Dhari	Shri Pooja Jotaniya	02797-225070	7567009902
6	Dy.Collector & SDM Bagasara	Shri Pooja Jotaniya	02797-225070	7567009902

## **Contact Details of All Mamlatdar**

Sr. No	Designation	Name	Contact Number	
			Office	Mobile
1	Mamlatdar-Amreli City	Shri M.K.Joliya	223225	9925126048
2	Mamlatdar-Amreli Rural	Shri Y.M.Joshi	223225	9426730039
3	Mamlatdar Babra	Shri Balwantsinh Revar	02791-233422	7567000803
4	Mamlatdar Lathi	Shri R.V. Gadhavi	02793-250542	7567000832
5	Mamlatdar Liliya	Shri A.N. Radadiya	02793-236538	7567001106
6	Mamlatdar Vadia	Shri A.N. Sharma	02796-273388	7567001046
7	Mamlatdar Bagasara	Shri A.N. Sharma	02796-222194	9033624928
8	Mamlatdar Savarkundla	Shri F.J. Makda	02845-224200	7567000784
9	Mamlatdar Rajula	Shri Hanshraisinh Gohil	02794222013	7567000930
10	Mamlatdar Dhari	Shri D.C. Pal	02797-225015	7567000728
11	Mamlatdar Khambha	Shri Ram	02797-260528	7567000917
12	Mamlatdar Jafrabad	Shri J.N.Mehta	02794-245436	7990612741

## **Contact Details of All TDO**

Sr. No	Designation	Name	Contact Number	
			Office	Mobile
1	TDO-Amreli	Shri T.H. Trivedi	223204	8141445378
2	TDO-Babra	Shri R.K. Katariya	02791- 233423	9978943049
3	TDO-Liliya	Shri Hetal Katara	02793-226535	9712778107
4	TDO-Dhari	Shri M.G. Rav	02797-221017	9662224777
5	TDO-Bagasara	Shri S.P. Bodar	02791-223204	9408464409
6	TDO-Khambha	Shri Z.K. Ghorl	02797-260532	8734000276
7	TDO-Rajula	Shri H.J.Parmar	02794-222039	7567012028
8	TDO-Jafrabad	Shri V.M.Sonagara	02794-245421	7096070204
9	TDO-Lathi	Shri K.K.Patel	02793-250550	7016849012
10	TDO-Kunkavav	Shri D.G.Limbasiya	02796-238229	9265572408
11	TDO-Savarkundla	Shri P.C.Parmar	02845-225811	9408464409

## **Contact Details of All Chief Officer**

Sr. No	Designation	Name	Contact Number	
			Office	Mobile
1	Chief Officer-Amreli	Shri H.K.Patel	220916	7567770253
2	Chief Officer- Babra	Shri R.G.Zala	02791-223440	7567770268
3	Chief Officer- Bagsara	Shri Panara	02796-222053	7567770259
4	Chief Officer-Chalala	Shri D.C.Damor	02797-251013	9726285755
5	Chief Office-Jafrabad	Shri Ansari	02794-245420	7567770254
6	Chief Officer- Lathi	Shri Bhavanaben Goswami	02793-250549	7567770255
7	Chief Officer--Damnagar	Shri Rajyaguru	02793-222006	7567770260
8	Chief Officer- Rajula	Shri Girishbhai Sarvaiya	02794-251013	7567770248
9	Chief Officer- Savarkundla	Shri Girishbhai Sarvaiya	02845-242638	9978400065

## **APDA MITRA**

SR.NO	NAME	MOBILE NO.	TALUKA
1	GEDIA PRATIKKUMAR	8866368045	SAVARKUNDLA
2	BARAIYA VANRAJSIH	9638729152	SAVARKUNDLA
3	GALTHARIYA AJAY	9375414035	SAVARKUNDLA
4	BHATT VIVEKBHAI	7567742009	BABARA
5	MANDANI NEHAL	7435828248	BABARA
6	RATHOD ANJALI	7041217344	BABARA
7	SIKANDAR DUDASHA	9909054932	LATHI
8	SHABBIRBHAI MALEK	9033194032	LATHI
9	HASANBHAI GAGDANI	9033255539	LATHI
10	IIBRAHIMBHAI LOHIYA	9016271390	LATHI
11	RAMIJRAJA GAGDANI	9879907175	LATHI
12	VILASBEN AGRAVAT	9427108066	KHAMBHA
13	SENJALIYA SHANTIBHAI	9427108066	KHAMBHA
14	BASIYA PRATIK	9723540989	BAGASARA
15	SOLANKI PIYUSH	9687577195	BAGASARA
16	BATADA JAYESH	9909697220	BAGASARA
17	JADAV NIKETAN	9879864233	BAGASARA
18	RATHOD PRATIKKUMAR	9662196425	BAGASARA
19	SAVARIYA SATISH	9664933533	BAGASARA
20	SAVARIYA HARESH	9638464473	BAGASARA

21	MAKAWANA VISHAL	9825381085	BAGASARA
22	RANVADIYA RAHULBHAI	8758591209	BAGASARA
23	BHATAKIYA AJAYKUMAR	7600929489	BAGASARA
24	HITESH MADHUBHAI	9601583050	BAGASARA
25	DESAI PRASHANT	9601292758	BAGASARA
26	YASHVANT MUKESHBHAI	9925988437	BAGASARA
27	BHUTAIYA DHAVAL	9879647433	BAGASARA
28	MAKAWANA ASISH		BAGASARA
29	JAYVEER DEVKUMARBHAI	9979239659	BAGASARA
30	HAYANI KRISHNA VINYBHAI	9428930230	AMRELI
31	BAVLIYA GEETA RMESHBHAI	9909066900	AMRELI
32	KTHIRIYA DHARUVI PRAVINBHAI	9909190717	AMRELI
33	POKIYA NIDHI HARESHBHAI	9825950474	AMRELI
34	CHIVATIYA RUSHITA KISHORBHAI	9904704503	AMRELI
35	SENJALIYA BHAVISHA RAJUBHAI	9904498005	AMRELI

### **SETELITE PHONE NUMBER**

<b>Sr No.</b>	<b>District Name</b>	<b>SETELITE PHONE NUMBER</b>
<b>1</b>	<b>Collector Amreli</b>	<b>8991115046</b>

➤ Amreli District Latitude-Longitude:

Taluka	Village Name	Latitude	Longitude	Latitude	Longitude
		In Decimal		Deg Min Sec	
AMRELI	Amarpur(Varudi)	71.19	21.58	71 11' 24"	21 34' 48"
AMRELI	Amreli	71.21	21.55	71 12' 36"	21 33' 0"
AMRELI	Ankadiya Mota	71.1	21.6	71 6' 0"	21 36' 0"
AMRELI	Ankadiya Nana	71.19	21.62	71 11' 24"	21 37' 12"
AMRELI	Babapur	71.11	21.48	71 6' 36"	21 28' 48"
AMRELI	Baxipur	71.21	21.59	71 12' 36"	21 35' 24"
AMRELI	Bhandariya Mota	71.1	21.5	71 6' 0"	21 30' 0"
AMRELI	Bhandariya Nana	71.14	21.57	71 8' 24"	21 34' 12"
AMRELI	Chadiya	71.13	21.42	71 7' 48"	21 25' 12"
AMRELI	Chakkargadh	71.25	21.5	71 15' 0"	21 30' 0"
AMRELI	Champathal	71.22	21.5	71 13' 12"	21 30' 0"
AMRELI	Chandgad	71.29	21.45	71 17' 24"	21 27' 0"
AMRELI	Chital	71.21	21.69	71 12' 36"	21 41' 24"
AMRELI	Dahida	71.15	21.64	71 9' 0"	21 38' 24"
AMRELI	Devaliya	71.26	21.48	71 15' 36"	21 28' 48"
AMRELI	Devrajiya	71.17	21.47	71 10' 12"	21 28' 12"
AMRELI	Dholarva	71.03	21.55	71 1' 48"	21 33' 0"
AMRELI	Fattepur	71.22	21.51	71 13' 12"	21 30' 36"
AMRELI	Gavadka	71.16	21.5	71 9' 36"	21 30' 0"
AMRELI	Giriya	71.23	21.59	71 13' 48"	21 35' 24"
AMRELI	Gokharvala Mota	71.25	21.46	71 15' 0"	21 27' 36"
AMRELI	Gokharvala Nana	71.26	21.46	71 15' 36"	21 27' 36"
AMRELI	Haripura	71.28	21.64	71 16' 48"	21 38' 24"
AMRELI	Ishvariya	71.26	21.58	71 15' 36"	21 34' 48"
AMRELI	Jaliya	71.06	21.51	71 3' 36"	21 30' 36"
AMRELI	Jasvantgad	71.2	21.69	71 12' 0"	21 41' 24"
AMRELI	Kamigadh	71.02	21.52	71 1' 12"	21 31' 12"
AMRELI	Kathma	71.11	21.63	71 6' 36"	21 37' 48"
AMRELI	Kerala	71.02	21.49	71 1' 12"	21 29' 24"
AMRELI	Keriyachad	71.2	21.43	71 12' 0"	21 25' 48"
AMRELI	Keriyaganas	71.29	21.55	71 17' 24"	21 33' 0"
AMRELI	Khed Khambhaliya	71.21	21.42	71 12' 36"	21 25' 12"
AMRELI	Khijadiya Khari	71	21.5	71 0' 0"	21 30' 0"
AMRELI	Khijadiya Radadiya	71.27	21.69	71 16' 12"	21 41' 24"
AMRELI	Lalavadar	71.28	21.54	71 16' 48"	21 32' 24"
AMRELI	Lapaliya	71.26	21.44	71 15' 36"	21 26' 24"
AMRELI	Machiyala Mota	71.24	21.63	71 14' 24"	21 37' 48"
AMRELI	Machiyala Nana	71.24	21.62	71 14' 24"	21 37' 12"
AMRELI	Malila	71.18	21.42	71 10' 48"	21 25' 12"
AMRELI	Malvan	71.08	21.61	71 4' 48"	21 36' 36"
AMRELI	Mandavda Mota	71.02	21.46	71 1' 12"	21 27' 36"
AMRELI	Mandavda Nana	71.1	21.42	71 6' 0"	21 25' 12"
AMRELI	Mangvapal	71.17	21.58	71 10' 12"	21 34' 48"
AMRELI	Medi	71.1	21.44	71 6' 0"	21 26' 24"

AMRELI	Monpur	71.2	21.72	71 12' 0"	21 43' 12"
AMRELI	Navakhijadiya	71.16	21.53	71 9' 36"	21 31' 48"
AMRELI	Paniya	71.04	21.48	71 2' 24"	21 28' 48"
AMRELI	Piplag	71.14	21.61	71 8' 24"	21 36' 36"
AMRELI	Pithavajal	71.18	21.49	71 10' 48"	21 29' 24"
AMRELI	Rajasthali	71.22	21.47	71 13' 12"	21 28' 12"
AMRELI	Randhiya	71.15	21.66	71 9' 0"	21 39' 36"
AMRELI	Rangpur	71.13	21.54	71 7' 48"	21 32' 24"
AMRELI	Rikadiya	71.18	21.65	71 10' 48"	21 39' 0"
AMRELI	Sajiyavadar	71.13	21.43	71 7' 48"	21 25' 48"
AMRELI	Sangaderi	71.2	21.6	71 12' 0"	21 36' 0"
AMRELI	Sanosara	71.09	21.53	71 5' 24"	21 31' 48"
AMRELI	Sarambhda	71.09	21.42	71 5' 24"	21 25' 12"
AMRELI	Shambhupura	71.22	21.44	71 13' 12"	21 26' 24"
AMRELI	Shedubhar	71.26	21.66	71 15' 36"	21 39' 36"
AMRELI	Sonariya	71.24	21.43	71 14' 24"	21 25' 48"
AMRELI	Suragpur	71.31	21.65	71 18' 36"	21 39' 0"
AMRELI	Taraktalav	71.19	21.46	71 11' 24"	21 27' 36"
AMRELI	Taravda	71.11	21.45	71 6' 36"	21 27' 0"
AMRELI	Thordi	71.12	21.52	71 7' 12"	21 31' 12"
AMRELI	Timba	71.22	21.66	71 13' 12"	21 39' 36"
AMRELI	Timbla	71.05	21.45	71 3' 0"	21 27' 0"
AMRELI	Vadera	71.11	21.55	71 6' 36"	21 33' 0"
AMRELI	Vankiya	71.13	21.48	71 7' 48"	21 28' 48"
AMRELI	Varasda	71.3	21.6	71 18' 0"	21 36' 0"
AMRELI	Venivadar	71.16	21.6	71 9' 36"	21 36' 0"
AMRELI	Vithalpur	71.19	21.51	71 11' 24"	21 30' 36"

## **TALUKA BABRA**

BABRA	Amarvalpar	71.25	21.77	71 15' 0"	21 46' 12"
BABRA	Babra	71.31	21.81	71 18' 36"	21 48' 36"
BABRA	Balel Pipariya	71.12	21.71	71 7' 12"	21 42' 36"
BABRA	Barvala	71.43	21.82	71 25' 48"	21 49' 12"
BABRA	Bhila	71.25	21.72	71 15' 0"	21 43' 12"
BABRA	Bhildi	71.24	21.71	71 14' 24"	21 42' 36"
BABRA	Chamardi	71.23	21.8	71 13' 48"	21 48' 0"
BABRA	Charkha	71.24	21.83	71 14' 24"	21 49' 48"
BABRA	Dared	71.39	21.81	71 23' 24"	21 48' 36"
BABRA	Devaliya Mota	71.1	21.77	71 6' 0"	21 46' 12"
BABRA	Dharai	71.15	21.76	71 9' 0"	21 45' 36"
BABRA	Fuljhar	71.09	21.75	71 5' 24"	21 45' 0"
BABRA	Galkotdi	71.37	21.78	71 22' 12"	21 46' 48"
BABRA	Gamapipaliya	71.16	21.81	71 9' 36"	21 48' 36"
BABRA	Garni	71.13	21.88	71 7' 48"	21 52' 48"
BABRA	Ghughrala	71.18	21.82	71 10' 48"	21 49' 12"
BABRA	Hathigadh	71.26	21.76	71 15' 36"	21 45' 36"
BABRA	Ingorala	71.24	21.74	71 14' 24"	21 44' 24"
BABRA	Isapar	71.13	21.84	71 7' 48"	21 50' 24"



BABRA	Ishvariya	71.37	21.87	71 22' 12"	21 52' 12"
BABRA	Jivapar	71.17	21.76	71 10' 12"	21 45' 36"
BABRA	Kalorana	71.23	21.95	71 13' 48"	21 57' 0"
BABRA	Kariyana	71.35	21.85	71 21' 0"	21 51' 0"
BABRA	Karnuki	71.18	21.89	71 10' 48"	21 53' 24"
BABRA	Khakhariya	71.36	21.82	71 21' 36"	21 49' 12"
BABRA	Khambhala	71.35	21.92	71 21' 0"	21 55' 12"
BABRA	Khanpar	71.2	21.95	71 12' 0"	21 57' 0"
BABRA	Khijadiya Kotda	71.11	21.74	71 6' 36"	21 44' 24"
BABRA	Kidi	71.39	21.87	71 23' 24"	21 52' 12"
BABRA	Kotda Pitha	71.21	21.91	71 12' 36"	21 54' 36"
BABRA	Kundal Nani	71.44	21.88	71 26' 24"	21 52' 48"
BABRA	Kunvargadh	71.22	21.78	71 13' 12"	21 46' 48"
BABRA	Lalka	71.3	21.97	71 18' 0"	21 58' 12"
BABRA	Lonkotda	71.06	21.82	71 3' 36"	21 49' 12"
BABRA	Lunki	71.28	21.77	71 16' 48"	21 46' 12"
BABRA	Miya Khijadiya	71.16	21.85	71 9' 36"	21 51' 0"
BABRA	Nadala	71.1	21.84	71 6' 0"	21 50' 24"
BABRA	Navaniya	71.18	21.87	71 10' 48"	21 52' 12"
BABRA	Nilavala	71.29	21.87	71 17' 24"	21 52' 12"
BABRA	Nonghanvadar	71.07	21.86	71 4' 12"	21 51' 36"
BABRA	Pansada	71.15	21.87	71 9' 0"	21 52' 12"
BABRA	Pir Khijadiya	71.23	21.76	71 13' 48"	21 45' 36"
BABRA	Ranpar	71.1	21.85	71 6' 0"	21 51' 0"
BABRA	Raypar	71.24	21.89	71 14' 24"	21 53' 24"
BABRA	Samadhiyala	71.26	21.88	71 15' 36"	21 52' 48"
BABRA	Sirvaniya	71.41	21.86	71 24' 36"	21 51' 36"
BABRA	Sukavala	71.27	21.9	71 16' 12"	21 54' 0"
BABRA	Sukhpar	71.33	21.92	71 19' 48"	21 55' 12"
BABRA	Taivadar	71.32	21.86	71 19' 12"	21 51' 36"
BABRA	Thorkhan	71.08	21.85	71 4' 48"	21 51' 0"
BABRA	Tramboda	71.12	21.81	71 7' 12"	21 48' 36"
BABRA	Untvad	71.21	21.87	71 12' 36"	21 52' 12"
BABRA	Valardi	71.21	21.77	71 12' 36"	21 46' 12"
BABRA	Vandaliya	71.3	21.75	71 18' 0"	21 45' 0"
BABRA	Vankiya	71.3	21.93	71 18' 0"	21 55' 48'
BABRA	Vavda	71.23	21.92	71 13' 48"	21 55' 12"
BABRA	Vavdi	71.17	21.78	71 10' 12"	21 46' 48"

**TALUKA BAGASARA**

Taluka	Village Name	Latitude	Longitude	Latitude	Longitude
		In Decimal		Deg Min Sec	
BAGASARA	Adpur	70.9	21.46	70 54' 0"	21 27' 36"
BAGASARA	Bagasara	70.94	21.43	70 56' 24"	21 25' 48"
BAGASARA	Balapur	70.9	21.53	70 54' 0"	21 31' 48"
BAGASARA	Charan pipali	71.01	21.48	71 0' 36"	21 28' 48"
BAGASARA	Deri Pipaliya	70.88	21.48	70 52' 48"	21 28' 48"
BAGASARA	Ghantiyan	70.81	21.45	70 48' 36"	21 27' 0"
BAGASARA	Hadala	70.95	21.51	70 57' 0"	21 30' 36"
BAGASARA	Halariya	71.06	21.38	71 3' 36"	21 22' 48"
BAGASARA	Haliyad Juni	70.85	21.47	70 51' 0"	21 28' 12"
BAGASARA	Haliyad Navi	70.85	21.46	70 51' 0"	21 27' 36"
BAGASARA	Hamapur	71	21.38	71 0' 0"	21 22' 48"
BAGASARA	Hulariya	71.04	21.39	71 2' 24"	21 23' 24"
BAGASARA	Jamka	71	21.44	71 0' 0"	21 26' 24"
BAGASARA	Janjariya Juna	70.94	21.39	70 56' 24"	21 23' 24"
BAGASARA	Janjariya Nava	70.93	21.41	70 55' 48"	21 24' 36"
BAGASARA	Jethiavadar	70.98	21.45	70 58' 48"	21 27' 0"
BAGASARA	Kadaya	70.86	21.36	70 51' 36"	21 21' 36"
BAGASARA	Kagdadi	70.95	21.35	70 57' 0"	21 21' 0"
BAGASARA	Khari	70.98	21.5	70 58' 48"	21 30' 0"
BAGASARA	Khijadiya	71.03	21.41	71 1' 48"	21 24' 36"
BAGASARA	Manekvada	70.83	21.43	70 49' 48"	21 25' 48"
BAGASARA	Mavjinjva	70.9	21.5	70 54' 0"	21 30' 0"
BAGASARA	Munjiasar Mota	70.9	21.44	70 54' 0"	21 26' 24"
BAGASARA	Munjiasar Nana	70.86	21.43	70 51' 36"	21 25' 48"
BAGASARA	Natvarnagar	70.95	21.46	70 57' 0"	21 27' 36"
BAGASARA	Pipaliya Nava	70.91	21.48	70 54' 36"	21 28' 48"
BAGASARA	Pithadiya	70.92	21.53	70 55' 12"	21 31' 48"
BAGASARA	Rafala	70.88	21.41	70 52' 48"	21 24' 36"
BAGASARA	Samadhiyala	70.97	21.38	70 58' 12"	21 22' 48"
BAGASARA	Sanaliya	71.02	21.44	71 1' 12"	21 26' 24"
BAGASARA	Shilana	71.03	21.42	71 1' 48"	21 25' 12"
BAGASARA	Vaghaniya Juna	70.96	21.53	70 57' 36"	21 31' 48"
BAGASARA	Vaghaniya Nava	70.99	21.56	70 59' 24"	21 33' 36"

### TALUKA DHARI

Taluka	Village Name	Latitude	Longitude	Latitude	Longitude
		In Decimal		Deg Min Sec	
DHARI	Amaratpur	71.06	21.23	71 3' 36"	21 13' 48"
DHARI	Ambardi	71.05	21.35	71 3' 0"	21 21' 0"
DHARI	Bhader	70.94	21.33	70 56' 24"	21 19' 48"
DHARI	Bharad	71.01	21.34	71 0' 36"	21 20' 24"
DHARI	Bhayavadar	70.98	21.35	70 58' 48"	21 21' 0"
DHARI	Bordi	70.91	21.24	70 54'	21 14' 24"

				36''	
DHARI	Chalala	71.17	21.37	71 10' 12''	21 22' 12''
DHARI	Chhatradiya	71.1	21.3	71 6' 0''	21 18' 0''
DHARI	Dabhali	71.1	21.22	71 6' 0''	21 13' 12''
DHARI	Dahida	71.11	21.35	71 6' 36''	21 21' 0''
DHARI	Dangavadar	71	21.33	71 0' 0''	21 19' 48''
DHARI	Devla	71.1	21.25	71 6' 0''	21 15' 0''
DHARI	Dhargani	71.2	21.28	71 12' 0''	21 16' 48''
DHARI	Dhari	71.02	21.29	71 1' 12''	21 17' 24''
DHARI	Dholarva	71.14	21.4	71 8' 24''	21 24' 0''
DHARI	Ditla	71.22	21.32	71 13' 12''	21 19' 12''
DHARI	Fategadh	71.07	21.27	71 4' 12''	21 16' 12''
DHARI	Garamali Moti	71.17	21.32	71 10' 12''	21 19' 12''
DHARI	Garamali Nani	71.16	21.31	71 9' 36''	21 18' 36''
DHARI	Garamli	71.19	21.39	71 11' 24''	21 23' 24''
DHARI	Gigasan	70.94	21.24	70 56' 24''	21 14' 24''
DHARI	Gopalgram	71.1	21.39	71 6' 0''	21 23' 24''
DHARI	Govindpur	70.98	21.2	70 58' 48''	21 12' 0''
DHARI	Hudli	71.13	21.31	71 7' 48''	21 18' 36''
DHARI	Ingorala(Dungri)	71.2	21.34	71 12' 0''	21 20' 24''
DHARI	Juna Charkha	71.22	21.4	71 13' 12''	21 24' 0''
DHARI	Kami	71.22	21.36	71 13' 12''	21 21' 36''
DHARI	Kaner	71.16	21.29	71 9' 36''	21 17' 24''
DHARI	Kathirvadar	71.23	21.42	71 13' 48''	21 25' 12''
DHARI	Kathrota	70.93	21.29	70 55' 48''	21 17' 24''
DHARI	Kerala	71.21	21.35	71 12' 36''	21 21' 0''
DHARI	Khambhaliya	71.21	21.3	71 12' 36''	21 18' 0''
DHARI	Khicha	71.05	21.27	71 3' 0''	21 16' 12''
DHARI	Kotha Pipariya	70.97	21.3	70 58' 12''	21 18' 0''
DHARI	Kubda	70.99	21.23	70 59' 24''	21 13' 48''
DHARI	Lakhapadar	71.17	21.25	71 10' 12''	21 15' 0''
DHARI	Madhupur	71.13	21.23	71 7' 48''	21 13' 48''

DHARI	Manavav	71.08	21.34	71 4' 48"	21 20' 24"
DHARI	Mashika	70.96	21.28	70 57' 36"	21 16' 48"
DHARI	Mithapur Nakki	70.9	21.21	70 54' 0"	21 12' 36"
DHARI	Mithapur(Dungri)	71.13	21.37	71 7' 48"	21 22' 12"
DHARI	Monvel	70.89	21.31	70 53' 24"	21 18' 36"
DHARI	Morzar	71.11	21.34	71 6' 36"	21 20' 24"
DHARI	Nagadhra	71.15	21.25	71 9' 0"	21 15' 0"
DHARI	Nava Charkha	71.24	21.39	71 14' 24"	21 23' 24"
DHARI	Padargadh	71.03	21.37	71 1' 48"	21 22' 12"
DHARI	Paniya Dungri	70.87	21.19	70 52' 12"	21 11' 24"
DHARI	Paniya(Devasthan)	71.2	21.37	71 12' 0"	21 22' 12"
DHARI	Parbadi	71.12	21.34	71 7' 12"	21 20' 24"
DHARI	Rampur	71.12	21.26	71 7' 12"	21 15' 36"
DHARI	Samadhiyala Nana	71.23	21.34	71 13' 48"	21 20' 24"
DHARI	Sarasiya	71.04	21.2	71 2' 24"	21 12' 0"
DHARI	Shivad	70.96	21.26	70 57' 36"	21 15' 36"
DHARI	Vaghvadi	71.15	21.28	71 9' 0"	21 16' 48"
DHARI	Vavdi	71.19	21.31	71 11' 24"	21 18' 36"
DHARI	Virpur	71.14	21.21	71 8' 24"	21 12' 36"
DHARI	Zar	71.12	21.31	71 7' 12"	21 18' 36"

### TALUKA LATHI

Taluka	Village Name	Latitude	Longitude	Latitude	Longitude
		In Decimal		Deg Min Sec	
LATHI	Akala	71.39	21.61	71 23' 24"	21 36' 36"
LATHI	Aliudepur	71.32	21.6	71 19' 12"	21 36' 0"
LATHI	Ambardi	71.49	21.74	71 29' 24"	21 44' 24"
LATHI	Ansodar	71.43	21.61	71 25' 48"	21 36' 36"
LATHI	Bhalvav	71.6	21.6	71 36' 0"	21 36' 0"
LATHI	Bhatvadar	71.57	21.63	71 34' 12"	21 37' 48"
LATHI	Bhingrad	71.44	21.64	71 26' 24"	21 38' 24"
LATHI	Bhurakhiya	71.48	21.68	71 28' 48"	21 40' 48"
LATHI	Chavand	71.41	21.76	71 24' 36"	21 45' 36"
LATHI	Chhabhadiya	71.48	21.65	71 28' 48"	21 39' 0"
LATHI	Dahinthara	71.52	21.68	71 31' 12"	21 40' 48"
LATHI	Damnagar	71.52	21.65	71 31' 12"	21 39' 0"
LATHI	Derdi-Janbai	71.44	21.76	71 26' 24"	21 45' 36"
LATHI	Dhamel	71.57	21.6	71 34' 12"	21 36' 0"

LATHI	Dhrufania	71.55	21.67	71 33' 0"	21 40' 12"
LATHI	Dudhala Bai	71.31	21.62	71 18' 36"	21 37' 12"
LATHI	Dudhala Bai	71.31	21.62	71 18' 36"	21 37' 12"
LATHI	Dudhala Lathi	71.36	21.63	71 21' 36"	21 37' 48"
LATHI	Hajiradhar	71.55	21.61	71 33' 0"	21 36' 36"
LATHI	Harsurpur	71.33	21.69	71 19' 48"	21 41' 24"
LATHI	Havtad	71.51	21.63	71 30' 36"	21 37' 48"
LATHI	Hirana	71.42	21.78	71 25' 12"	21 46' 48"
LATHI	Ingorala	71.47	21.61	71 28' 12"	21 36' 36"
LATHI	Jarakhiya	71.32	21.66	71 19' 12"	21 39' 36"
LATHI	Kanchardi	71.54	21.71	71 32' 24"	21 42' 36"
LATHI	Karkoliya	71.42	21.73	71 25' 12"	21 43' 48"
LATHI	Kerala	71.34	21.62	71 20' 24"	21 37' 12"
LATHI	Keriya	71.36	21.69	71 21' 36"	21 41' 24"
LATHI	Krishna gadh	71.37	21.58	71 22' 12"	21 34' 48"
LATHI	Lathi	71.4	21.67	71 24' 0"	21 40' 12"
LATHI	Luvariya	71.4	21.57	71 24' 0"	21 34' 12"
LATHI	Malaviya Pipariya	71.32	21.57	71 19' 12"	21 34' 12"
LATHI	Matirala	71.34	21.59	71 20' 24"	21 35' 24"
LATHI	Memda	71.51	21.7	71 30' 36"	21 42' 0"
LATHI	Methli	71.5	21.68	71 30' 0"	21 40' 48"
LATHI	Muliyapat	71.58	21.66	71 34' 48"	21 39' 36"
LATHI	Narangadh	71.51	21.71	71 30' 36"	21 42' 36"
LATHI	Padarshinga	71.51	21.61	71 30' 36"	21 36' 36"
LATHI	Part of LC - 29	71.32	21.57	71 19' 12"	21 34' 12"
LATHI	Pipalva	71.46	21.72	71 27' 36"	21 43' 12"
LATHI	Pratapgadh	71.44	21.67	71 26' 24"	21 40' 12"
LATHI	Punjapar	71.32	21.71	71 19' 12"	21 42' 36"
LATHI	Rabhda	71.54	21.64	71 32' 24"	21 38' 24"
LATHI	Rajkot Nana	71.43	21.7	71 25' 48"	21 42' 0"
LATHI	Rampar	71.44	21.69	71 26' 24"	21 41' 24"
LATHI	Shakhpur	71.51	21.52	71 30' 36"	21 31' 12"
LATHI	Shekhpipariya	71.34	21.73	71 20' 24"	21 43' 48"
LATHI	Suvagadh	71.59	21.66	71 35' 24"	21 39' 36"
LATHI	Tajpar	71.46	21.67	71 27' 36"	21 40' 12"
LATHI	Thansa	71.56	21.66	71 33' 36"	21 39' 36"
LATHI	Toda	71.35	21.65	71 21' 0"	21 39' 0"
LATHI	Virpur	71.4	21.72	71 24' 0"	21 43' 12"

Taluka	Village Name	Latitude	Longitude	Latitude	Longitude
		In Decimal		Deg Min Sec	
LILIA	Antaliya	71.39	21.53	71 23' 24"	21 31' 48"
LILIA	Bavada	71.48	21.39	71 28' 48"	21 23' 24"
LILIA	Bavadi	71.47	21.39	71 28' 12"	21 23' 24"
LILIA	Bhensan	71.4	21.51	71 24' 0"	21 30' 36"
LILIA	Bhensvadi	71.34	21.45	71 20' 24"	21 27' 0"
LILIA	Bhoringda	71.46	21.45	71 27' 36"	21 27' 0"

LILIA	Bodiya	71.42	21.5	71 25' 12"	21 30' 0"
LILIA	Dhangla	71.47	21.53	71 28' 12"	21 31' 48"
LILIA	Eklera	71.48	21.57	71 28' 48"	21 34' 12"
LILIA	Godhavadar	71.34	21.5	71 20' 24"	21 30' 0"
LILIA	Gundran	71.48	21.55	71 28' 48"	21 33' 0"
LILIA	Haripur	71.45	21.56	71 27' 0"	21 33' 36"
LILIA	Hathigadh	71.43	21.52	71 25' 48"	21 31' 12"
LILIA	Ingorala	71.51	21.4	71 30' 36"	21 24' 0"
LILIA	Jatroda	71.36	21.54	71 21' 36"	21 32' 24"
LILIA	Kalyanpar	71.48	21.51	71 28' 48"	21 30' 36"
LILIA	Kankot Mota	71.3	21.47	71 18' 0"	21 28' 12"
LILIA	Kankot Nana	71.54	21.56	71 32' 24"	21 33' 36"
LILIA	Khara	71.47	21.51	71 28' 12"	21 30' 36"
LILIA	Krankach	71.45	21.42	71 27' 0"	21 25' 12"
LILIA	Kuntana	71.46	21.48	71 27' 36"	21 28' 48"
LILIA	Lilia	71.35	21.51	71 21' 0"	21 30' 36"
LILIA	Lilia Nana	71.4	21.46	71 24' 0"	21 27' 36"
LILIA	Lonka	71.37	21.44	71 22' 12"	21 26' 24"
LILIA	Lonki	71.38	21.43	71 22' 48"	21 25' 48"
LILIA	Panch Talavda	71.51	21.54	71 30' 36"	21 32' 24"
LILIA	Pipalva	71.39	21.48	71 23' 24"	21 28' 48"
LILIA	Punjapadar	71.36	21.48	71 21' 36"	21 28' 48"
LILIA	Putaliya	71.29	21.51	71 17' 24"	21 30' 36"
LILIA	Rajkot Nana	71.54	21.51	71 32' 24"	21 30' 36"
LILIA	Saldi	71.34	21.53	71 20' 24"	21 31' 48"
LILIA	Sanaliya	71.42	21.49	71 25' 12"	21 29' 24"
LILIA	Sanjantimba	71.42	21.54	71 25' 12"	21 32' 24"
LILIA	Sedhavadar	71.39	21.42	71 23' 24"	21 25' 12"
LILIA	Timbdi	71.43	21.46	71 25' 48"	21 27' 36"
LILIA	Vaghaniya	71.4	21.46	71 24' 0"	21 27' 36"

### **TALUKA LILIYA**

### **TALUKA SAVARKUNDLA**

Taluka	Village Name	Latitude	Longitude	Latitude	Longitude
		In Decimal		Deg Min Sec	
SAVAR KUNDLA	Ankolada	71.48	21.38	71 28' 48"	21 22' 48"
SAVAR KUNDLA	Badhada	71.33	21.24	71 19' 48"	21 14' 24"
SAVAR KUNDLA	Bhenkra	71.43	21.25	71 25' 48"	21 15' 0"
SAVAR KUNDLA	Bhonkarva	71.5	21.24	71 30' 0"	21 14' 24"
SAVAR KUNDLA	Bhuva	71.36	21.38	71 21' 36"	21 22' 48"
SAVAR KUNDLA	Borala	71.33	21.41	71 19' 48"	21 24' 36"
SAVAR KUNDLA	Charkhadiya	71.29	21.35	71 17' 24"	21 21' 0"
SAVAR KUNDLA	Dedkadi	71.49	21.21	71 29' 24"	21 12' 36"
SAVAR KUNDLA	Dhajdi	71.29	21.22	71 17' 24"	21 13' 12"
SAVAR KUNDLA	Dhar	71.42	21.36	71 25' 12"	21 21' 36"
SAVAR KUNDLA	Fachariya	71.47	21.36	71 28' 12"	21 21' 36"
SAVAR KUNDLA	Fifad	71.54	21.37	71 32' 24"	21 22' 12"
SAVAR KUNDLA	Gadhakda	71.39	21.23	71 23' 24"	21 13' 48"
SAVAR KUNDLA	Ghoba	71.57	21.37	71 34' 12"	21 22' 12"
SAVAR KUNDLA	Ghobapati	71.55	21.35	71 33' 0"	21 21' 0"
SAVAR KUNDLA	Hathasani	71.25	21.25	71 15' 0"	21 15' 0"
SAVAR KUNDLA	Hipavadli	71.6	21.35	71 36' 0"	21 21' 0"
SAVAR KUNDLA	Jejad	71.52	21.3	71 31' 12"	21 18' 0"
SAVAR KUNDLA	Jira	71.3	21.4	71 18' 0"	21 24' 0"
SAVAR KUNDLA	Juna Savar	71.38	21.39	71 22' 48"	21 23' 24"
SAVAR KUNDLA	Kanatalav	71.25	21.3	71 15' 0"	21 18' 0"
SAVAR KUNDLA	Kantrodi	71.6	21.31	71 36' 0"	21 18' 36"
SAVAR KUNDLA	Karjala	71.25	21.36	71 15' 0"	21 21' 36"
SAVAR KUNDLA	Kedariya	71.58	21.3	71 34' 48"	21 18' 0"
SAVAR KUNDLA	Kerala	71.42	21.38	71 25' 12"	21 22' 48"
SAVAR KUNDLA	Khadkala	71.35	21.41	71 21' 0"	21 24' 36"
SAVAR KUNDLA	Khalpar	71.47	21.38	71 28' 12"	21 22' 48"
SAVAR KUNDLA	Kunkavav	71.44	21.37	71 26' 24"	21 22' 12"
SAVAR KUNDLA	Likhala	71.44	21.21	71 26' 24"	21 12' 36"
SAVAR KUNDLA	Madhada	71.52	21.21	71 31' 12"	21 12' 36"
SAVAR KUNDLA	Mekda	71.51	21.36	71 30' 36"	21 21' 36"
SAVAR KUNDLA	Mevasa	71.46	21.29	71 27' 36"	21 17' 24"
SAVAR KUNDLA	Moldi	71.38	21.34	71 22' 48"	21 20' 24"
SAVAR KUNDLA	Mota Bhamodra	71.57	21.34	71 34' 12"	21 20' 24"
SAVAR KUNDLA	Mota Zinzuda	71.36	21.28	71 21' 36"	21 16' 48"
SAVAR KUNDLA	Nal	71.57	21.28	71 34' 12"	21 16' 48"
SAVAR KUNDLA	Nana Bhamodra	71.3	21.36	71 18' 0"	21 21' 36"
SAVAR KUNDLA	Nana Zinzuda	71.39	21.3	71 23' 24"	21 18' 0"
SAVAR KUNDLA	Nani Vadal	71.47	21.26	71 28' 12"	21 15' 36"

SAVAR KUNDLA	Nesdi	71.24	21.32	71 14' 24"	21 19' 12"
SAVAR KUNDLA	Oliya	71.26	21.36	71 15' 36"	21 21' 36"
SAVAR KUNDLA	Piparadi	71.6	21.37	71 36' 0"	21 22' 12"
SAVAR KUNDLA	Pithvadi	71.41	21.29	71 24' 36"	21 17' 24"
SAVAR KUNDLA	Piyava	71.44	21.34	71 26' 24"	21 20' 24"
SAVAR KUNDLA	Rabarika	71.55	21.25	71 33' 0"	21 15' 0"
SAVAR KUNDLA	Savarkundla	71.3	21.3	71 18' 0"	21 18' 0"
SAVAR KUNDLA	Senjal	71.43	21.28	71 25' 48"	21 16' 48"
SAVAR KUNDLA	Shelana	71.51	21.34	71 30' 36"	21 20' 24"
SAVAR KUNDLA	Simaran	71.27	21.39	71 16' 12"	21 23' 24"
SAVAR KUNDLA	Thavi	71.54	21.29	71 32' 24"	21 17' 24"
SAVAR KUNDLA	Vanda	71.47	21.35	71 28' 12"	21 21' 0"
SAVAR KUNDLA	Vanshiyali	71.49	21.29	71 29' 24"	21 17' 24"
SAVAR KUNDLA	Vijayanagar	71.36	21.24	71 21' 36"	21 14' 24"
SAVAR KUNDLA	Virdi	71.55	21.31	71 33' 0"	21 18' 36"
SAVAR KUNDLA	Zadkala	71.62	21.32	71 37' 12"	21 19' 12"



## **KUNKAVAV AND VADIYA TALUKA**

Taluka	Village Name	Latitude	Longitude	Latitude	Longitude
		In Decimal		Deg Min Sec	
KUNKAVAV VADIA	Anida	70.93	21.64	70 55' 48"	21 38' 24"
KUNKAVAV VADIA	Arjansukh	70.89	21.6	70 53' 24"	21 36' 0"
KUNKAVAV VADIA	Badanpur Juna	71	21.68	71 0' 0"	21 40' 48"
KUNKAVAV VADIA	Badanpur Nava	70.99	21.67	70 59' 24"	21 40' 12"
KUNKAVAV VADIA	Bambhaniya	71.05	21.7	71 3' 0"	21 42' 0"
KUNKAVAV VADIA	Bantwa-Devli	70.79	21.67	70 47' 24"	21 40' 12"
KUNKAVAV VADIA	Barvala Baval	70.82	21.68	70 49' 12"	21 40' 48"
KUNKAVAV VADIA	Barvala Bavishi	71.06	21.54	71 3' 36"	21 32' 24"
KUNKAVAV VADIA	Bhayavadar	70.99	21.65	70 59' 24"	21 39' 0"
KUNKAVAV VADIA	Bhukhli-Santhali	70.86	21.67	70 51' 36"	21 40' 12"
KUNKAVAV VADIA	Dadva(Randal)	71.08	21.77	71 4' 48"	21 46' 12"
KUNKAVAV VADIA	Devalki	70.77	21.73	70 46' 12"	21 43' 48"
KUNKAVAV VADIA	Devgam	71.07	21.72	71 4' 12"	21 43' 12"
KUNKAVAV VADIA	Ishvariya	71.06	21.66	71 3' 36"	21 39' 36"
KUNKAVAV VADIA	Jithudi	71.12	21.68	71 7' 12"	21 40' 48"
KUNKAVAV VADIA	Jungar	71.05	21.62	71 3' 0"	21 37' 12"
KUNKAVAV VADIA	Khadkhad	70.87	21.65	70 52' 12"	21 39' 0"
KUNKAVAV VADIA	Khajuri	70.89	21.67	70 53' 24"	21 40' 12"
KUNKAVAV VADIA	Khajuri-Pipaliya	70.91	21.66	70 54' 36"	21 39' 36"
KUNKAVAV VADIA	Khakhariya	70.87	21.63	70 52' 12"	21 37' 48"
KUNKAVAV VADIA	Khijadiya Hanuman	70.75	21.61	70 45' 0"	21 36' 36"
KUNKAVAV VADIA	Khijadiya Khan	70.84	21.6	70 50' 24"	21 36' 0"
KUNKAVAV VADIA	Kolda	71.07	21.62	71 4' 12"	21 37' 12"
KUNKAVAV VADIA	Kunkavav Moti	70.97	21.58	70 58' 12"	21 34' 48"
KUNKAVAV VADIA	Kunkavav Nani	71.01	21.6	71 0' 36"	21 36' 0"

KUNKAVAV VADIA	Lakhapadar	71.04	21.66	71 2' 24"	21 39' 36"
KUNKAVAV VADIA	Luni-Dhar	71.1	21.65	71 6' 0"	21 39' 0"
KUNKAVAV VADIA	Maya padar	71.07	21.68	71 4' 12"	21 40' 48"
KUNKAVAV VADIA	Megha- pipaliya	70.9	21.7	70 54' 0"	21 42' 0"
KUNKAVAV VADIA	Morvada	70.84	21.63	70 50' 24"	21 37' 48"
KUNKAVAV VADIA	Najapur	70.92	21.57	70 55' 12"	21 34' 12"
KUNKAVAV VADIA	Pipaliya Dhundhiya	70.81	21.6	70 48' 36"	21 36' 0"
KUNKAVAV VADIA	Rampur	70.88	21.56	70 52' 48"	21 33' 36"
KUNKAVAV VADIA	Sanala	71.01	21.66	71 0' 36"	21 39' 36"
KUNKAVAV VADIA	Sanali	70.95	21.69	70 57' 0"	21 41' 24"
KUNKAVAV VADIA	Sarangpur	71.09	21.72	71 5' 24"	21 43' 12"
KUNKAVAV VADIA	Surya Pratapgadhi	70.91	21.63	70 54' 36"	21 37' 48"
KUNKAVAV VADIA	Talali	70.95	21.67	70 57' 0"	21 40' 12"
KUNKAVAV VADIA	Targhari	70.92	21.68	70 55' 12"	21 40' 48"
KUNKAVAV VADIA	Tori	70.87	21.57	70 52' 12"	21 34' 12"
KUNKAVAV VADIA	Ujala-Mota	70.95	21.64	70 57' 0"	21 38' 24"
KUNKAVAV VADIA	Ujala-Nana	70.99	21.62	70 59' 24"	21 37' 12"
KUNKAVAV VADIA	Vadia	70.81	21.64	70 48' 36"	21 38' 24"
KUNKAVAV VADIA	Vavdi	70.98	21.67	70 58' 48"	21 40' 12"

## TALUKA JAFRABAD

### Taluka - Jafrabad

Village	Latitude	Longitude
Babarkot	71.41	20.83
Balana	71.28	20.8
Balanivav	71.36	20.91
Bhada	71.22	20.84
Bhankodar	71.45	20.85
Bhatvadar	71.37	20.92
Chhelana	71.23	20.86
Chitrasar	71.24	20.81
Dharabandar	71.23	20.77
Dholadri	71.31	20.86
Dudhala	71.3	20.87
Ebhalvad	71.27	20.9
Fachariya	71.27	20.94
Ghenspur	71.27	20.84
Hemal	71.26	20.88
Jafrabad	71.35	20.83
Jikadri Juni	71.28	20.88
Jikadri Navi	71.29	20.89
Kadiyali	71.3	20.82
Kagvadar	71.38	20.92
Kanthariya Khalsa	71.33	20.91
Kanthariya Koli	71.36	20.92
Kerala	71.23	20.8
Lor	71.26	20.91
Lothpur	71.44	20.92
Lunsapur	71.42	20.89
Mithapur	71.35	20.88
Mitiyala	71.39	20.86
Mota Mansa	71.23	20.89
Nageshri	71.34	20.88
Pati Mansa (Nana)	71.24	20.9
Pichhadi	71.28	20.91
Rohisa	71.25	20.79
Sakariya Mota	71.26	20.83
Sakariya Nana	71.25	20.83
Sarovarda	71.36	20.94
Shiyalbet	71.51	20.86
Sokhda	71.28	20.85
Timbi	71.2	20.85
Vadhera	71.31	20.81
Vadli	71.22	20.82
Vandh	71.41	20.86
Varahsvarup	71.45	20.84

# TALUKA-RAJULA

Taluka - Rajula

Village	Latitude	Longitude
Agariya Dhudiya	71.39	21.03
Agariya Mota	71.38	21.06
Agariya Nava	71.4	21.04
Amuli	71.57	21.1
Babariyadhar	71.55	21.1
Balapar	71.57	21.09
Barbatana	71.5	21.05
Barpatoli	71.39	20.94
Bhachadar	71.46	20.93
Bhakshi	71.43	21.08
Bherai	71.52	20.94
Chanch	71.58	20.92
Charodiya	71.48	21.04
Chhapri	71.55	21.08
Chhatadiya	71.45	20.95
Chotra	71.33	20.9
Dantardi	71.62	20.98
Devka	71.52	20.99
Dharano Nes	71.45	20.92
Dhareshvar	71.43	21.06
Dipadiya	71.46	21.04
Doliya	71.56	21.06
Dungar	71.58	21.02
Dungarparda	71.6	21.03
Ganjavadar	71.53	21.02
Hadmatiya	71.52	21
Hindorna	71.44	20.96
Jholapar	71.55	20.99
Kadiyali	71.5	20.97
Katar	71.34	20.96
Kathivadar	71.58	20.96
Khakhbai	71.41	20.97
Khambhaliya	71.49	20.99
Khari	71.52	21.1
khera	71.61	20.94
Kherali Moti	71.52	21.08
Kherali Nani	71.49	21.08
Kotdi	71.38	20.99
Kovaya	71.46	20.86
Kumbhariya	71.54	21
Kundaliyala	71.52	21.04
Majdar	71.57	20.98
Mandal	71.58	21.06
Mandardi Navi-Juni	71.43	21.03
Masundada Nana- Mo	71.59	21.09
Mobhiyana Mota	71.61	21.05
Mobhiyana Nava	71.62	21.06
Morangi	71.61	21.07
Navagam(Mariana)	71.56	21.1

Village	Latitude	Longitude
Nesdi No -1	71.6	20.99
Ningala No-1	71.53	20.96
Patva	71.66	20.96
Pipavav	71.54	20.96
Rabhda	71.63	21.01
Rajpada	71.54	21.02
Rajula	71.45	20.98
Rampara No-1	71.65	21.06
Rampara No-2	71.48	20.89
Ringaniyala Mota	71.55	21.04
Ringaniyala Nana	71.45	21.01
Sajanavav	71.61	21.02
Samadhiyala No-1	71.65	20.97
Uchaiya	71.47	20.91
Untiya	71.52	21.02
Vad	71.45	20.93
Vadli	71.46	21.03
Vavdi	71.35	21.05
Vavera	71.46	21.06
Victar	71.56	20.95
Visaliya	71.61	20.97
Zampodar	71.41	21
Zanzarda	71.49	21.02
Zinzka	71.61	21.04

## **Dos and don'ts of various disasters**

### **Cyclone Safety:**

A cyclone is a storm accompanied by high-speed whistling and howling winds. It brings torrential rains.

#### **Where does a cyclone come from?**

A cyclonic storm develops over tropical oceans like the Indian Ocean and Bay of Bengal and the Arabian Sea. Its strong winds blow at great speed, which can be more than 118 kilometers per hour.

#### **What are the visible signs of a cyclone?**

When a cyclonic storm approaches, the skies begin to darken accompanied by lightning and thunder and a continuous downpour of rain.

#### **How does a cyclone affect us?**

- A cyclone causes heavy floods.
- It uproots electricity supply and telecommunication lines. Power supply shuts down and telephones stop functioning.
- Road and rail movements come to halt because floods damage rail tracks and breach roads. Rail movements are also disrupted because of communication failure.
- The inclement weather conditions also disrupt Air services. Seaports stop work due to high winds, heavy rains and poor visibility. Sometimes ships overturn or are washed ashore. The high-speed winds bend and pluck out trees and plants.
- A cyclone tears away wall sidings and blows off roofs of houses.
- Houses collapse and people are rendered homeless. In villages kacha houses get blown away. The speeding winds cause loose metal and wooden sheets to fly turning them to potential killers. Broken glass pieces can cause serious injuries.
- The floodwaters can take time to recede.
- The floodwaters can turn the fields salty.
- Bridges, dams and embankments suffer serious damages.
- Floods wash away human beings and animals and make water unfit for drinking. There can be outbreak of diseases like Cholera, Jaundice or Viral fever due to intake of impure water. Water gets contaminated because of floating corpses of animals and human beings and mixing of sewage stored food supplies, gets damaged.

#### **Which areas are exposed to a cyclone in Gujarat?**

In Gujarat, the Saurashtra-Kachchh region experiences a cyclone. The port towns of Veraval, Porbandar, Jamnagar, Dwarka, Okha, Kandla and Bhavnagar and other minor port towns suffer most.

#### **Does a cyclone follow a particular path?**

It is often difficult to predict where a cyclone will strike. When it starts moving from oceans (in Gujarat it is Arabian Sea) towards the land area, a cyclone can change track and hit areas other than those anticipated earlier.

#### **Has any early warning system been evolved for the occurrence of a cyclone?**

Yes. In India, the Indian Meteorological Department has developed a four-stage warning system for a cyclone.

### **How does the system operate?**

This warning is about the possibility of a cyclone when a low pressure depression develops in oceans. For Gujarat, the development of such a depression in the Arabian Sea is indicative of a cyclone attack.

- **The Alert stage**

This warning is given 48 hours prior to the time when a cyclone is expected to hit the land.

- **The Warning stage**

This is the stage when a cyclone gets formed. The warning is given 24 hours before the anticipated time of arrival of a cyclone.

- **Cyclone arrival**

This warning is issued 12 hours before a cyclone is due to hit the land. The warning gives information about cyclone and will continue until the winds subside. In sea ports, danger signal are hoisted about the impending cyclone.

### **From where can people access cyclone storm warnings?**

Warnings about storms, their intensity and the likely path they may take are regularly broadcasted by radio and television network continuously until the storm passes over.

### **What to do before and during a cyclone.**

- Have your dwellings checked before a cyclone season starts and carry out whatever repairs that are needed.
- Talk to children and explain about cyclones without scaring them.
- Create storm awareness by discussing effects of a cyclonic storm with family members so that everyone knows what one can and should do in an emergency. This helps to remove fear and anxiety and prepares everyone to respond to emergencies quickly.
- Keep your valuables and documents in containers, which cannot be damaged by water.
- Keep information about your blood group.
- Keep lanterns filled with kerosene, torches and spare batteries. These must be kept in secure places and handy.
- Make plans for people who are either sick, suffer from disabilities, aged and children.
- Store up at least seven-day stock of essential food articles, medicines and water supply.
- Keep blankets & clothes ready for making beds. Also keep cotton bandages and several copies of photographs of family members in case they are needed for identification purposes after the storm.
- Store some wooden boards so that they can be used to cover windows.

- Keep trees and shrubs trimmed. Remove damaged and decayed parts of trees to make them resist wind and reduce the potential for damage. Cut weak branches and make winds blow through.
- All doors, windows and openings should be secured.
- Continue to listen to warning bulletins and keep in touch with local officials. Keep radio sets in working condition. Battery powered radio sets are desirable.
- Evacuate people to places of safety when advised.
- Take steps to protect your assets.
- Store extra drinking water in covered vessels.
- Remain calm.

### **What one should not do during a Cyclone attack?**

- During the storm do not venture out unless advised to evacuate.
- If you have a vehicle and wish to move out of your house, leave early before the onset of a cyclone. It is often best to stay at home
- Avoid remaining on the top floor of dwellings. Stay close to the ground.

### **Earthquake safety:**

- Tell the facts about earthquake to your family members
- Construct new buildings with earthquake resistant method and strengthen the old buildings
- Insure your house and family members
- Take the training for first aid and fire fighting
- Do not keep cots near the glass window
- Do not keep heavy and fragile things in the selves
- Do don't hang photo frames, mirrors, or glasses up your bed
- Keep your important documents, some cash and necessary articles ready in a bag
- Get your house insured before the earthquake
- Identify special skills of neighbor (medical, technical) so that it can be utilized in emergency

### **During Earthquake**

- Do not panic.
- If already inside, then stay indoors! Get under a heavy desk or table and hold to it.
- If fire breaks out, drop on the floor and crawl towards the exist
- If you are out doors during the quake, keep away from buildings, trees and electricity lines. Walk towards open places, in a calm and composed manner.
- If you are driving, quickly but carefully move your car as far out of traffic as possible and stop. Do not stop on or under a bridge or overpass or under trees, light posts, power lines, or signs. Stay inside the car until shaking stops
- If you are in a school, get under a desk or table and hold on

## **After the Earthquake**

- Do not be afraid of the aftershocks
- Listen to radio-TV and other media for Government Announcement
- Check for injuries to yourself and those around you. Take first aid where you can
- Extinguish fire, if any
- Examine walls, floors, doors, staircases and windows to make sure that the building is not in danger of collapsing
- Do not enter into the unsafe or risky houses or buildings
- Inspect for Gas leaks-If you smell gas or hear blowing or hissing noises, open a window and quickly leave the building. Don't light your kitchen stove if you suspect a gas leak.
- Do not keep telephone lines busy unnecessarily
- Switch off electric lines

## **Fire safety:**

### **Do's**

- Buy Fireworks from the licensed shop.
- Keep fireworks in a closed box
- Store crackers away from source of fire or inflammation
- Follow all safety precautions issued with the fire works
- Go to open spaces like playgrounds, fields
- Light them at arm's length using a taper.
- Stand back while lighting the crackers
- Discard used fireworks in a bucket of water
- Keep buckets of water and blankets ready, in case a firebreaks out.
- Wear thick cotton clothes for maximum safety from fire.
- If clothes catch fire, Stop, Drop and Roll
- In case of uncontrolled fire wrap the victim in a blanket, till it stop.
- In case of burns splash tap water (not ice water), the process may be repeated till the burning sensation reduces.
- If fingers or toes are burned, separate them with dry, sterile, non-adhesive dressings.
- Make sure the burn victim is breathing, if breathing has stopped or if the victim's airway is blocked then open the airway and if necessary begin rescue breathing.
- Elevate the burned area and protect it from pressure and friction.
- Cover the area of the burn with a moist sterile bandage, of clean cloth (do not use blanket or towel for healing burns).
- Consult the doctor as soon as possible for the proper medication
- Consult an ophthalmologist immediately in case of eye injuries.
- Do contact at the Fire Brigade (Tel.No. 101), for getting the details of the doctors on duty during the festival.



### **Don'ts**

- Don't burn crackers in crowded, congested places, narrow lanes or inside the house.
- Don't let children burst crackers unaccompanied by an adult
- Don't put fireworks in your pocket or throw them
- Don't cover crackers with tin containers or glass bottles for extra sound effect
- Don't dare to examine sunbursts crackers...leave it!! Light a new cracker
- Don't show the Dare-devilry of lighting crackers on own hands.
- Don't use fireworks inside a vehicle
- Avoid long loose clothes, as they are fast in catching fire
- Don't remove burnt clothing (unless it comes off easily), but do ensure that the victim is not still in contact with smoldering materials.
- Don't apply adhesive dressing on the burnt area.
- Don't break the burst blister

### **Flood Safety:**

#### **Do's and Don'ts after flood**

- There is a possibility of spread of water borne diseases after flood, and hence medical treatment should be taken immediately.
- Do not enter deep, unknown waters.
- Do not go near the riverbank even after the floodwater has receded.
- Sprinkle medicines in the stagnant dirty water.
- Inspect your house for any cracks or other damage. Check all the walls, floor, ceiling, doors and windows, so that any chance of house falling down can be known and you can be aware about the immediate danger.
- If the floodwater has entered the house or has surrounded the house, then it is advisable not to enter such house.
- Keep listening to weather forecast on radio and television. Move to your residence only when instructed by the competent authority. It is not safe to believe that the problems have ended after the flood water have receded
- Inform the competent authority/officer for restoration of the necessary connections like gas, electricity, telephone, drainage, etc.
- Beware of the various insects or poisonous snakes that may have been dragged inside the house along with the floodwater.
- Destroy the food commodities that have been affected by floodwater.
- Check properly all the electric circuits, floor level furnace, boilers, gas cylinders, or electric equipments like motor pump etc. Check whether any inflammable or explosive item has not entered along with the floodwater.
- Switch off the main electric supply, if any damage is noticed to the electric equipments.
- If you find any breakage in the drainage system stop using latrines and do not use tap water.
- Do not use polluted water.

- Sewerage system should be checked and any damage should be repaired immediately so as to curtail spread of diseases.
- Empty the water clogged in the basement slowly with help of water pump so that damage to infrastructure can be minimized
- Check gas leakage which can be known by smell of gas or by hearing the sound of leakage; immediately open all windows and leave the house.
- Boil drinking water before usage and drink chlorinated water.
- Eat safe food.
- Rescue work should be undertaken immediately after flood situation as per the instruction. Do not follow any shortcut for rescue work.
- Do not try to leave the safe shelter to go back home until the local officials declare normalcy after flood and instruction to return home are not given.

## **Tsunami:**

**The phenomenon Tsunami is a series of traveling ocean waves of extremely long length generated primarily by earthquakes occurring below or near the ocean floor:**

**Following safety measures needs to be learnt before, during and after the occurrence of tsunami:**

### **Before**

- Be familiar with the tsunami warning signals. People living along the coast should consider an earthquake or a sizable ground rumbling as a warning signal. A noticeable rapid rise or fall in coastal waters is also a sign that a tsunami is approaching.
- Make sure all family members know how to respond to a tsunami. Make evacuation plans. Pick an inland location that is elevated.
- After an earthquake or other natural disaster, roads in and out of the vicinity may be blocked, so pick more than one evacuation route.
- Teach family members how and when to turn off gas, electricity, and water
- Children should be taught in advance about the evacuation plans
- Prepare emergency kit beforehand. The emergency kit should contain Flashlight and extra batteries, battery-operated radio and extra batteries, First aid kit
- Emergency food and water, Essential medicines etc

### **During**

- Listen to a radio or television to get the latest emergency information, and be ready to evacuate if asked to do so.
- If you hear a tsunami warning, move at once to higher ground and stay there until local authorities say it is safe to return home.
- Move in an orderly, calm and safe manner to the evacuation site

- Stay away from the beach. Never go down to the beach to watch a tsunami come in.
- If you can see the wave you are too close to escape it.
- Return home only after authorities advise it is safe to do so.

### **After**

- Stay tuned to a battery-operated radio for the latest emergency information.
- Help injured or trapped persons.
- Stay out of damaged buildings. Return home only when authorities say it is safe.
- Enter your home with caution. Use a flashlight/torch when entering damaged buildings. Check for electrical shorts and live wires. Do not use appliances or lights until an electrician has checked the electrical system.
- Open windows and doors to help dry the building.
- Shovel mud while it is still moist to give walls and floors an opportunity to dry.
- Check food supplies and test drinking water.
- Fresh food that has come in contact with flood waters may be contaminated and should be thrown out

### **Fire Safety & Fire Extinguisher Use**



### ***CATEGORIES OF FIRE***

<b>ABCD</b>	<b>CLASS</b>	<b>COMBUSTIBLE MATERIAL</b>
<b>A</b>	<b>Ordinary combustible solids</b>	<b>Paper, Wood, Cloth, etc.</b>
<b>B</b>	<b>Combustible liquids or liquifiable solids</b>	<b>Oils, Paints, Chemicals, Wax, etc.</b>
<b>C</b>	<b>Combustible gases</b>	<b>L.P.G., Acetylene, Hydrogen, Methane, Natural Gas, etc.</b>
<b>D</b>	<b>Combustible metals</b>	<b>Magnesium, Sodium, Uranium, Thorium, etc</b>
<b>E</b>	<b>Electrical equipment &amp; installations</b>	<b>Switch gears, Transformer, etc.</b>

## **Important Websites**

	<b>Department</b>	<b>Website</b>
1.	MHA	www.mha.nic.in
2.	NDMA	www.ndma.gov.in
3.	GSDMA	www.gsdma.org
4.	NIDM	www.nidm.net
5.	IDRN	http://idrn.gov.in
6.	SDRN	<a href="http://sdrn.gsdma.org/">http://sdrn.gsdma.org/</a> (on GSWAN)
7.	IMD	www.imd.gov.in
8.	ISR, Gujarat	http://dst.gujarat.gov.in/isr.htm
9.	BISAG	http://www.bisag.gujarat.gov.in
10.	GSWAN	http://www.gswan.gov.in

DETAIL TABLE OF INFORMATION ABOUT DAM

SR. NO.	NAME OF RIVER	DAM	DEPTH OF DAM		CAPACITY		NOs. OF GATE	CRASTE LEVEL		F.S.L.		RULE LEVEL (IN METER)		STORAGE CAPACITY		
			FT.	MTR,	M.C.F.	M.Q.M		FOOT	MTR	FOOT	MTR	1\7	1\8	70%	80%	90%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	SETRUNJI	KHODIYAR DAM	75.0037	22.86	1057.331	29.94	9	645.012	196.59	664.993	202.68	201.00	202.25	740.132	845.865	951.598
2	SANTALDI	MUNJIYASAR	24.4763	7.46	481.6966	13.64	ungated	206.47333	62.93	206.473	62.93	ungated		337.188	385.357	433.527
3	SURVO	VADIYA	16.5691	5.05	189.2884	5.36	5	407.33615	124.15	427.35	130.25	130.25	130.25	132.502	151.431	170.36
4	THEBI	THEBI	20.0141	6.10	376.1048	10.65	12	393.3919	119.9	413.406	126.00	119.90	119.90	263.273	300.884	338.494
5	VADI	VADIYA	19.522	5.95	375.0453	10.62	8	419.6399	127.9	439.654	134.00	133.50	134.00	262.532	300.036	337.541
6	SEL	SEL DEDUMAL	27.8885	8.50	276.1633	7.82	5	568.9254	173.4	588.94	179.5	175.50	177.50	193.314	220.931	248.547
7	DHATAR	DHATAVADI-1	37.7315	11.50	949.9735	26.90	ungated	266.51563	81.23	266.516	81.23			664.981	759.979	854.976
8	DHATAR	DHATARVADI-2	10.0399	3.06	359.8599	10.19	32	100.92356	30.76	112.899	34.41	33.00	33.50	251.902	287.888	323.874
9	RAYADI	RAYADI	28.3807	8.65	244.733	6.93	9	146.82475	44.75	166.839	50.85	49.00	49.55	171.313	195.786	220.26
10	SURAJVADI	SURAJVADI	0		376.4579	10.66	ungated	0		0		ungated		263.521	301.166	338.812

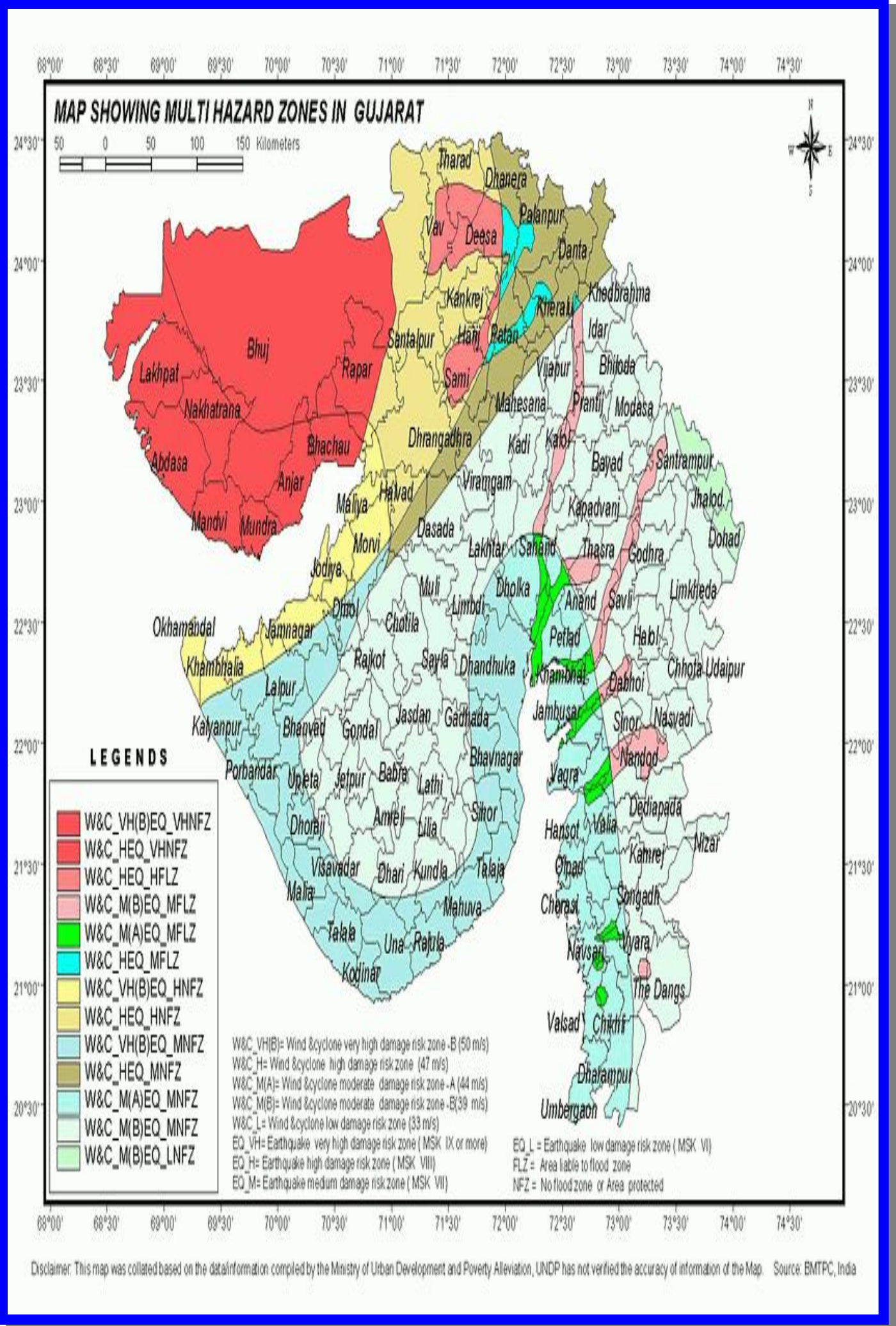
### Details of Minor & Medium Irrigation DAMs with Villages Located Under Catchments and Down Stream Area...

Sr	Taluka	Name of DAM / Scheme	Place of DAM Village/Taluka Name	Type of DAM Medium/ Small	Longitude	Latitude	Height of DAM (Mtr.)	Total Door	Flow Capacity (Cusecs)	Wire Less Yes/No	Catchments & Down Stream Area Villages
1	Dhari	Khodiyar	Dhari / Dhari	Medium	70°-52'-30"	21° - 26'-00"	22.86	9	90,000	Yes	<b>Catchment Area</b> :Chachai,Mithapur, Boradi Shivad Shemardi, , Dhari, Govindpur,Kubada, dalkhania,Gigasan, Kotada, <b>D/S Vilage</b> : Ambardi, Halariya, Hulariya, Sarambhada, Medhi, Taravada, Vankiya, Gavadka, Pithvajal, Gokhar vada, Kankot, Amba, Lonka, Shedhavadar, Krankach, Bavadi, Bavada, Ingorala, Borada, Junasavar, Khalpar, aankloda,Mekada, Fifad, Dhoba,
2	Bagasara	Munjyasar	Munjiyasar/ Bagasara	Medium	70°-55'-00"	21° - 26'-00"	7.47	Un gated	41812	Yes	<b>Catchment Area</b> : Bhader, Lungiya, Sudavad, Shapur, Rafaliya, Munjiyasar <b>D/S Vilage</b> : Bagasara, Jethavadar, Jamka, Shilana, Sanadiya, Timbla, Paniya, Babapur, Gavadaka
3	Kunkavav-Vadiya	Vadia	Vadia/ Kunkavav-Vadia	Minor	70°-49'-35"	21° - 40'-35"	12.75	5	54930	Yes	<b>Catchment Area</b> : Rampur, Arajan such, Tori, Khan Khijadia, Morvada, Dhundhiya <b>D/S Vilage</b> : Vadia, Charania, Charan Samadhiyala, Thana Galol.
4	Amreli	Vadi	Amreli/ Amreli	Medium	71°-10'-50"	21° - 38'-42"	9.40	8	77531	Yes	<b>Catchment Area</b> : Venivadar, Pipalag, Mota Ankadia, Jithudi, Jangar, Korada, Lunidhar <b>D/S Vilage</b> : Mangvapal, Varudi (Amarpur), Amreli, Fatepur, Vithalpur,Champathal,
5	Amreli	Thebi	Baxipur/ Amreli	Medium	71°-12'-30"	21° - 37'-00"	12.50	12	134126	Yes	<b>Catchment Area</b> : Chamardi, Gama Pipalia, Kuvargadh, Valardi, Pir Khijadia, Ingorala, Bhila-Bhiladi, Randhiya, Rikadia, Chtal, Jasvant Gadh, Toda, Shedhubar, Mota Machiyala, Nana Machiyala, Giriya, Sangaderi <b>D/S Vilage</b> : Amreli, Fatepur, Champathal
6	Savar Kundala	Shel Dedumal	Hathasani/ Savar Kundal	Medium	71°-14'-00"	21° - 19'-00"	15.00	5.0	49728	Yes	<b>Catchment Area</b> : Anida, Ingorala, Mota Samadhiyala, Ruganathpur-Khodi, <b>D/S Vilage</b> : Hathasani, Nesadi, Simaran, Karajala, Shel Khambhadia, Ditala
7	Rajula	Dhatarvadi-	Khakhbai/	Medium	71°-	21° -	10.00	32	295600	Yes	<b>Catchment Area</b> : Mobhnes, Piplava, Khambha, adsang,

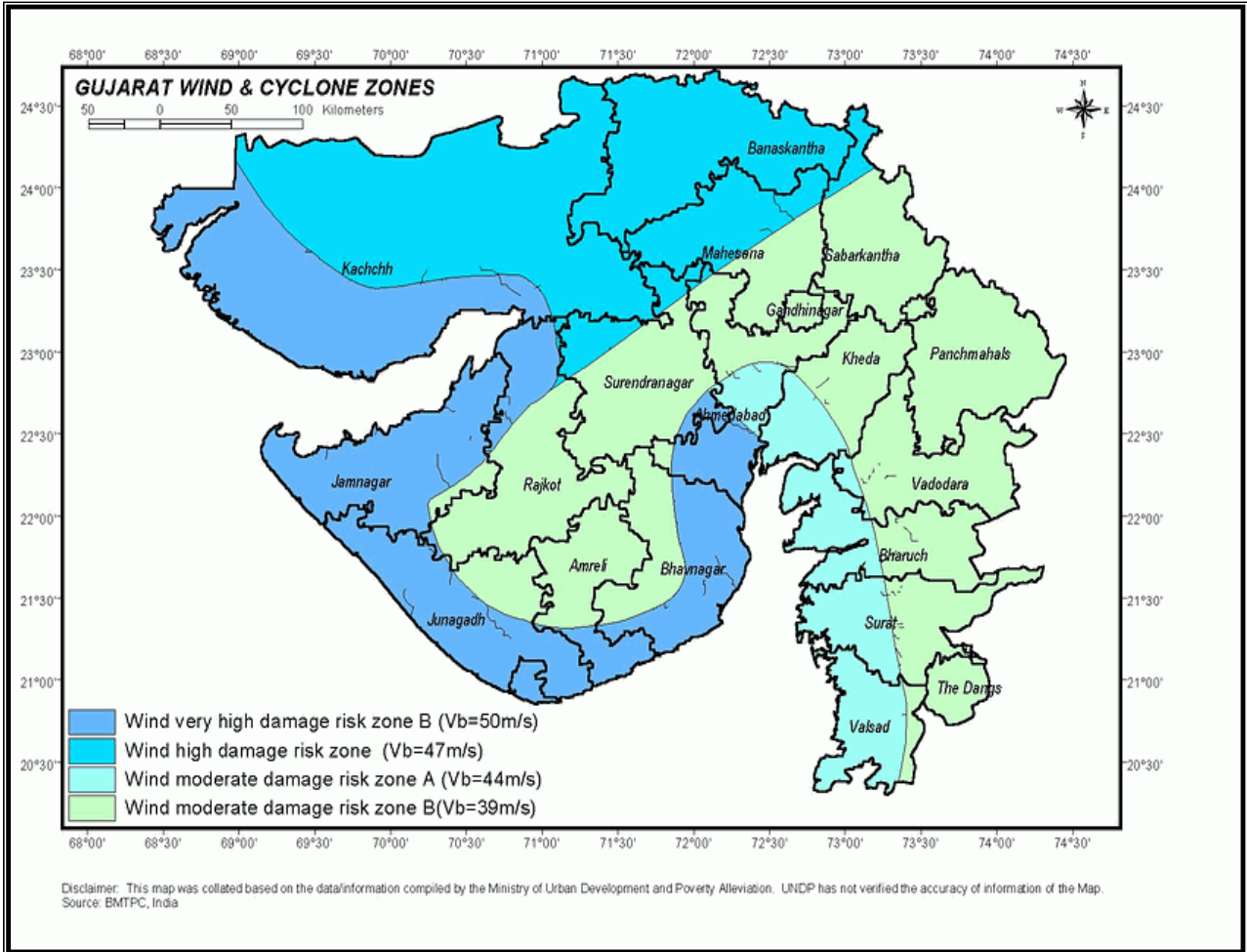
		II	Rajula		26° - 00''	02° - 00''					Detad, Khoiyana, Dolati, Bhamar, Badhada, Vijapadi, Chaapari, Vanot, Dipaliya, Thoradi Vavera, Dhairesvar, Govindpur, Kotadi, Agaria, <b>D/S Vilage</b> : Khakhbai, Hindorana, Chhatadiam, Bhachadar, Vad, Uchaiya, Rampara-2, Kovaya, Bar Patodi, Loth pur,
8	Khambha	Raidy	Bhundani/ Rajula	Minor	71° - 20° - 00''	20° - 55° - 00''	15.25	9.0	80000	Yes	<b>Catchment Area</b> : Dedan, Sarakadia, <b>D/S Vilage</b> : Mota Barman, Nana Barman, Chotra, Mithapur, Nageshri.
9	Rajula	Dhatrvadi-I	Bhaxi/ Rajula	Medium	71° - 26° - 00''	21° - 18° - 00''	25.05	9.0	153300	Yes	<b>Catchment Area</b> : Mobhnes, Piplava, Khambha, adsang, Detad, Khoiyana, Dolati, Bhamar, Badhada, Chaapari, Dipaliya, Thoradi Vavera, , <b>D/S Vilage</b> : Dhaireshvara, Rajula Khakhbai, Hindorana, Chhatadiam, Bhachadar, Vad, Uchaiya, Rampara-2, Kovaya, Bar Patodi, Loth pur,
10	Savar Kundala	Surajvadi	Luvara/ Savar Kundala	Minor	71° - 21° - 00''	21° - 12° - 00''	16.00	Un gated	49300	Yes	<b>Catchment Area</b> : Mobhnes, Piplava, Khambha, adsang, Detad, Khoiyana, Dolati, Bhamar, Badhada, Chaapari, Dipaliya, Thoradi Vavera, , <b>D/S Vilage</b> : Badhada, Dolati, Detad,

# Map

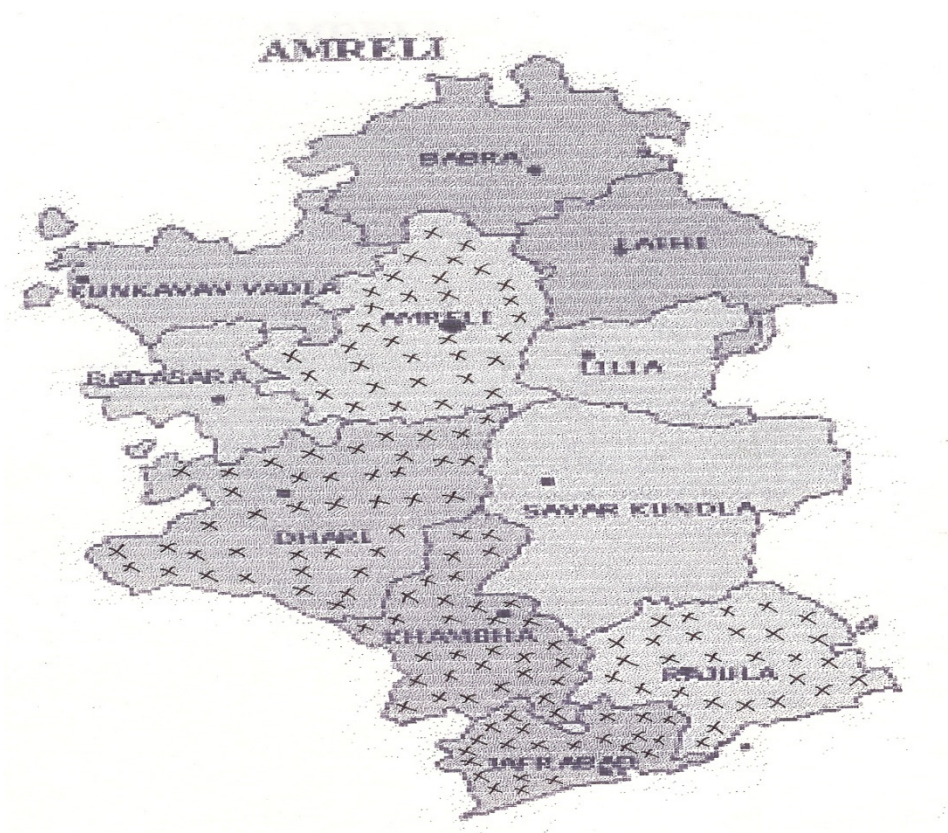
## Multi Hazard Map

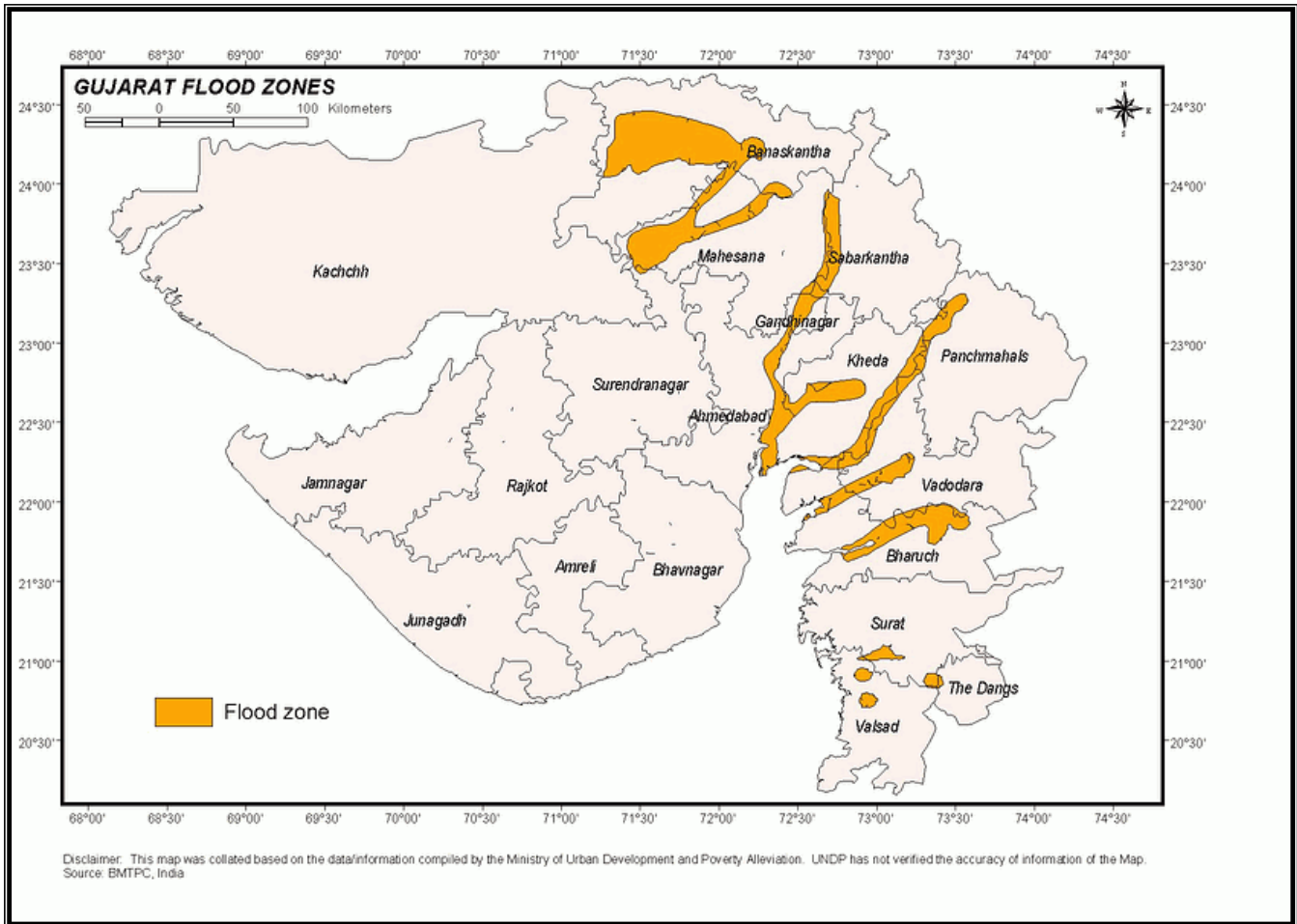




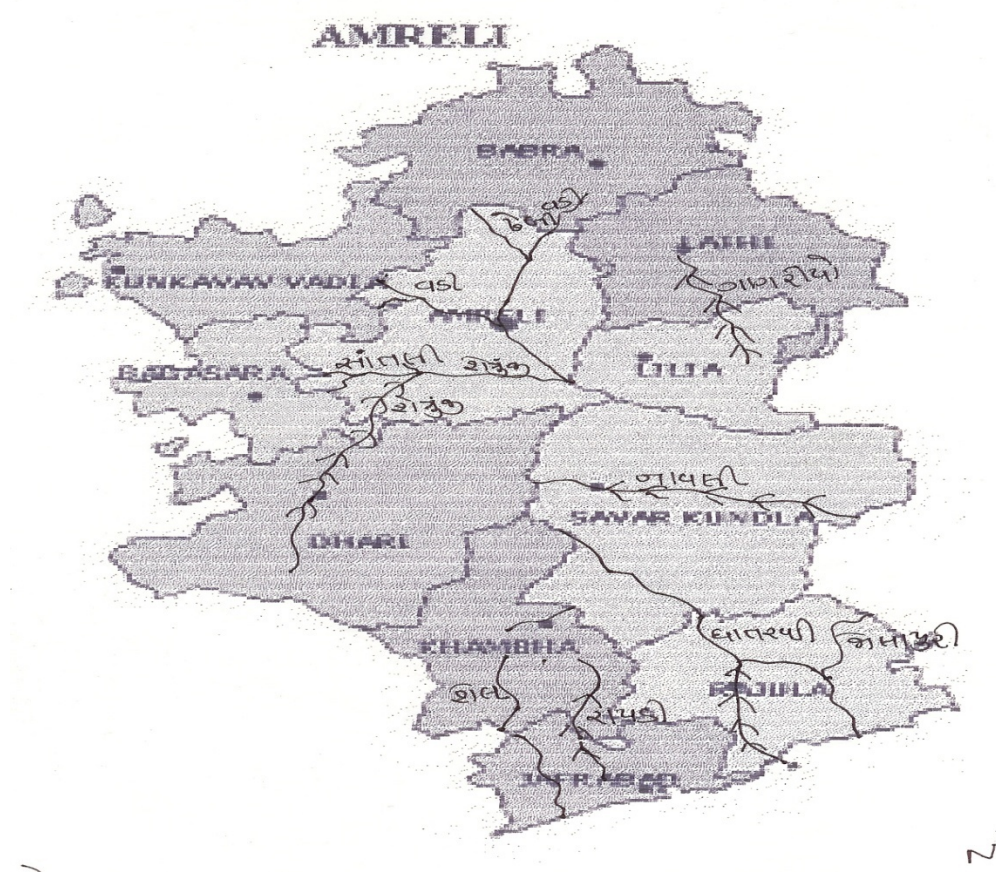


(Cyclone Hazard Prone Map)





(Flood Hazard Prone Map)







Map - 4 RAILWAY MAP



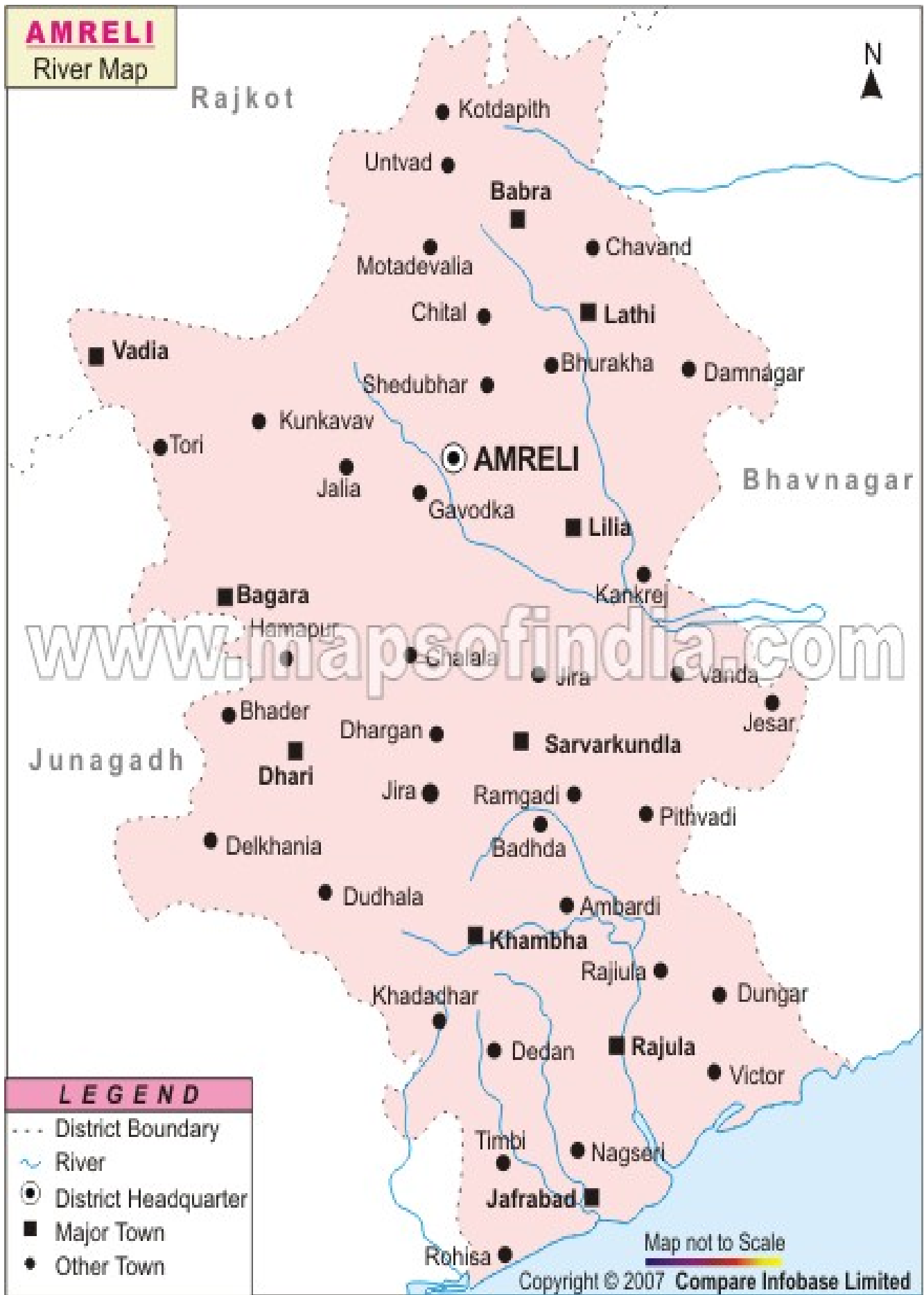


INDUSTRY AREA MAP



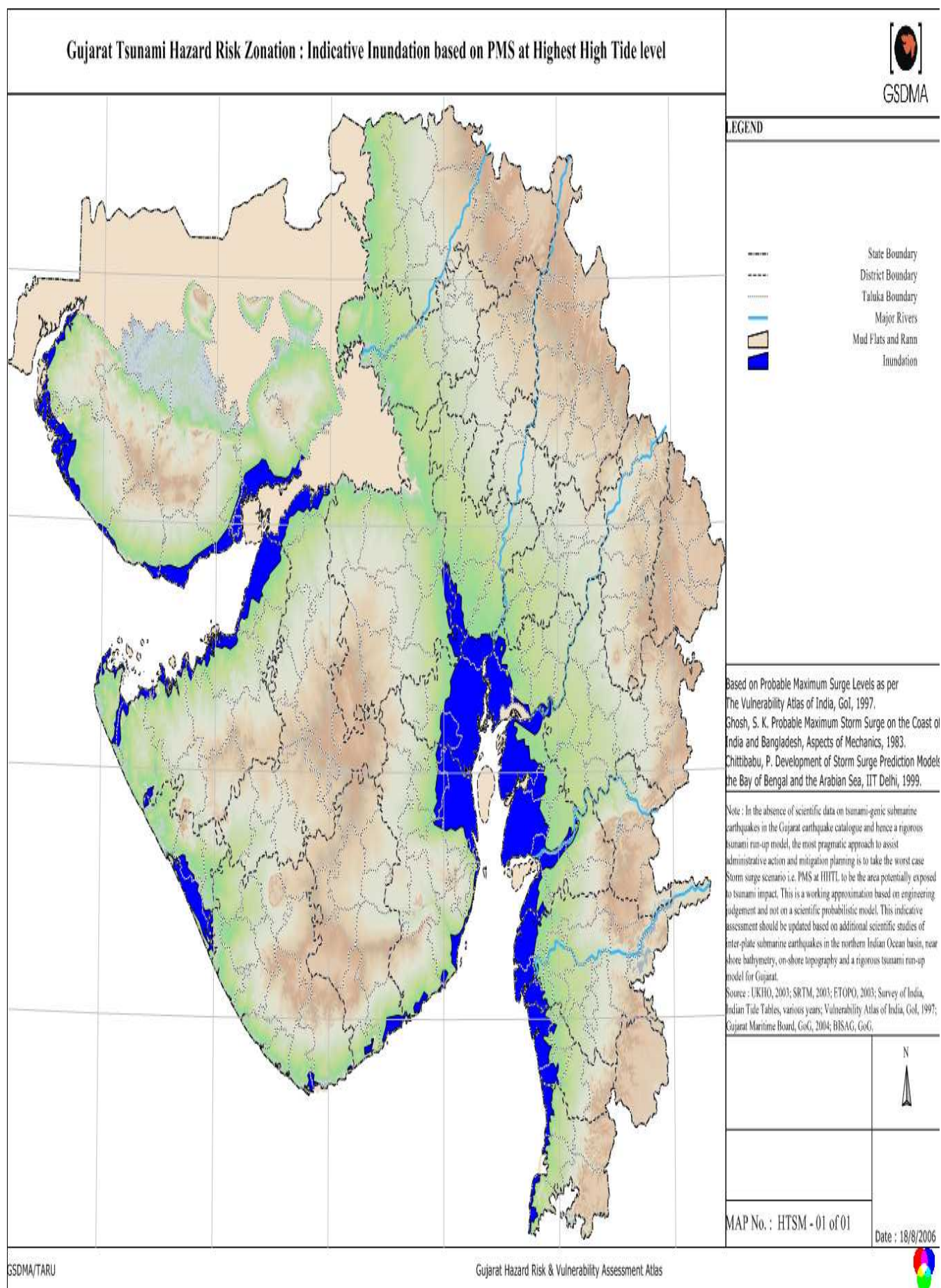
## AMRELI

### River Map



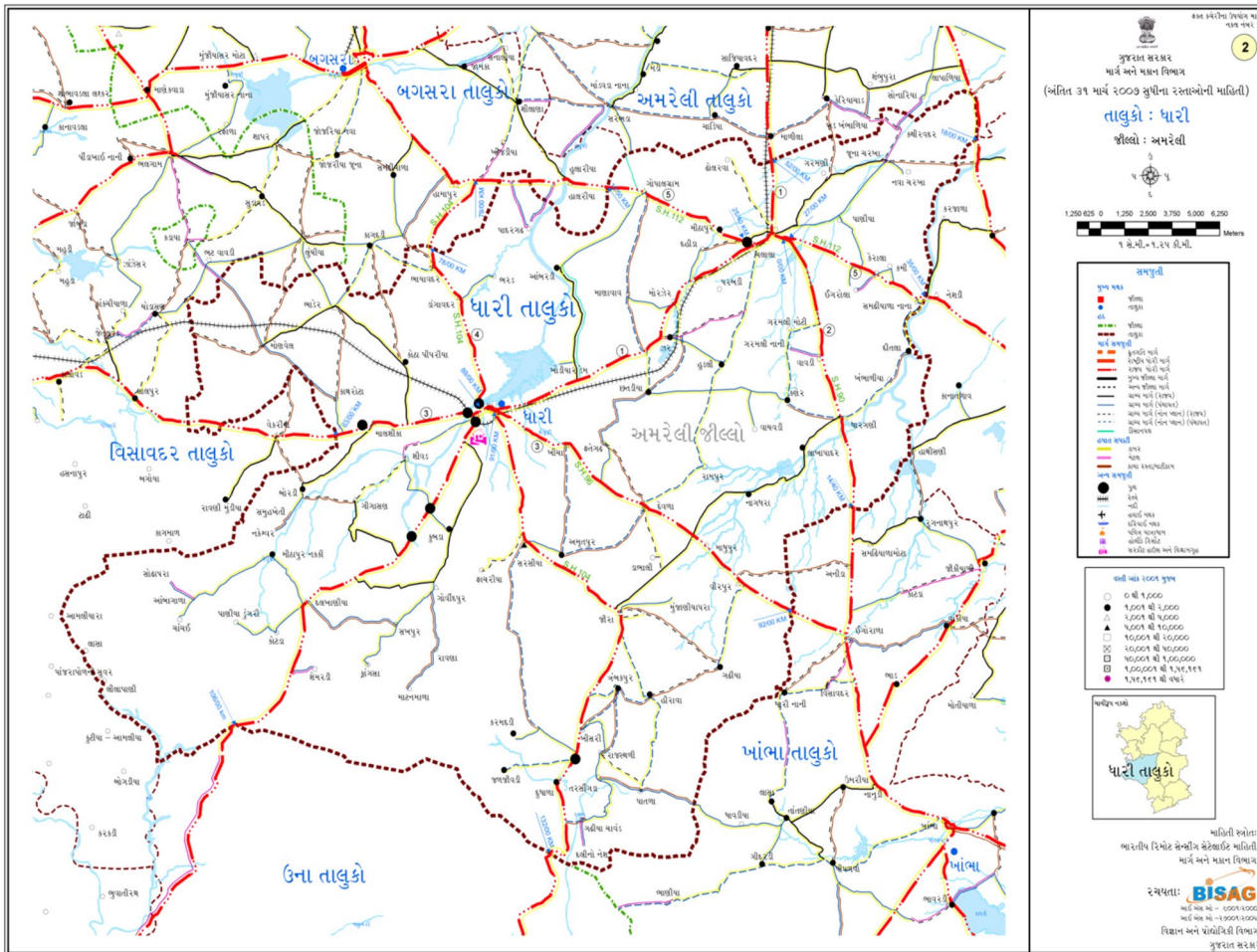
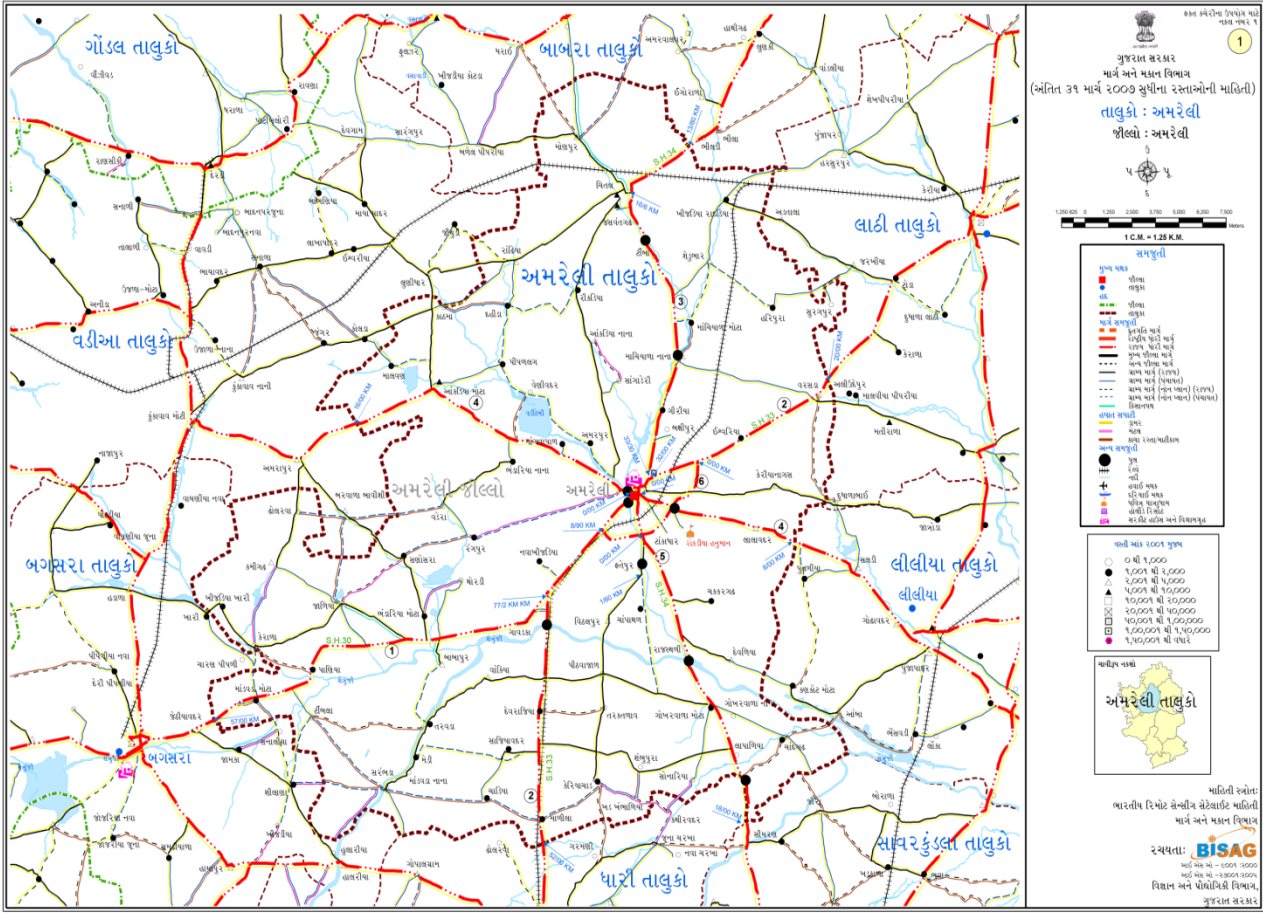


# TSUMANI AREA MAP





## District Taluka Map

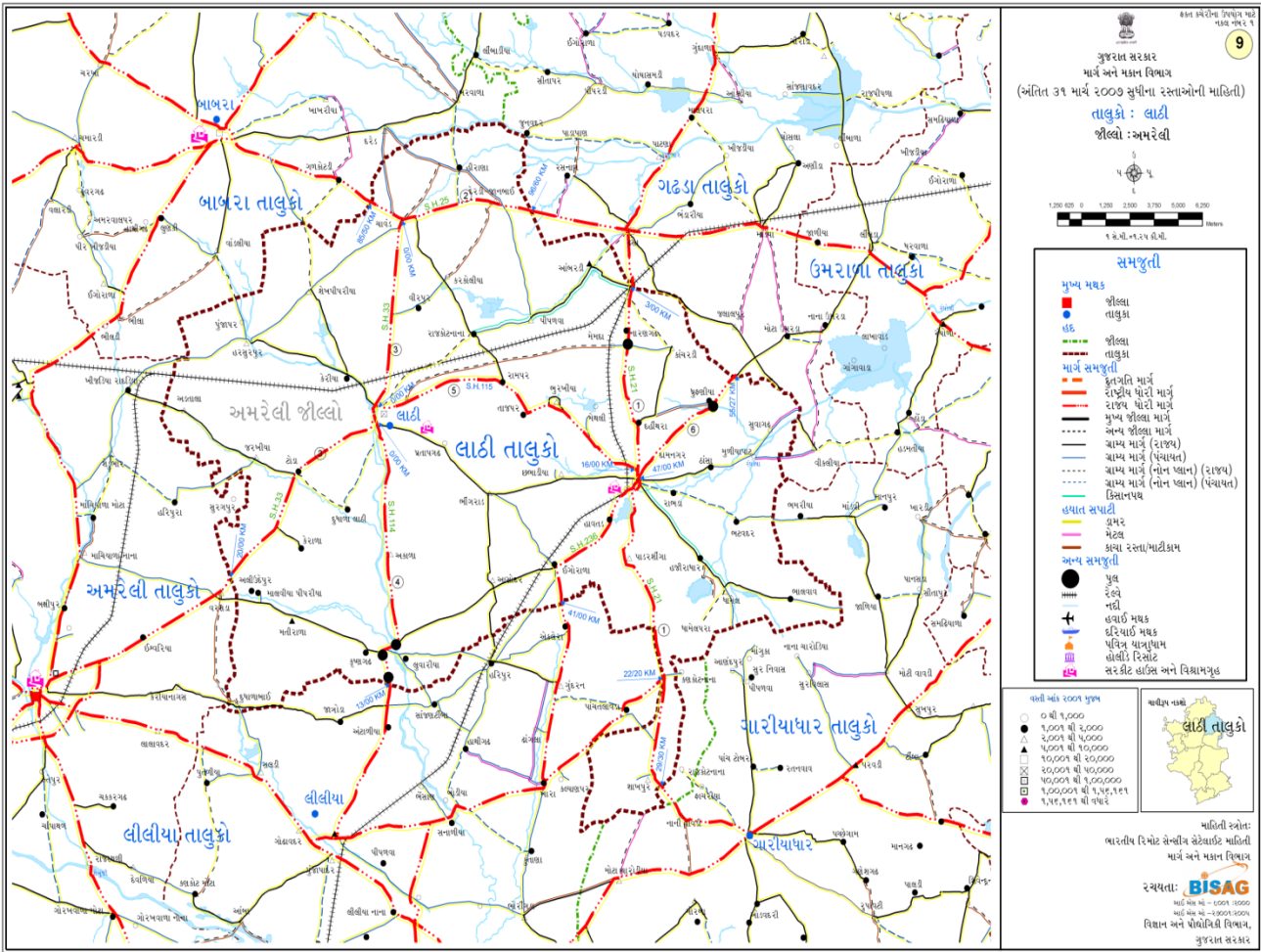
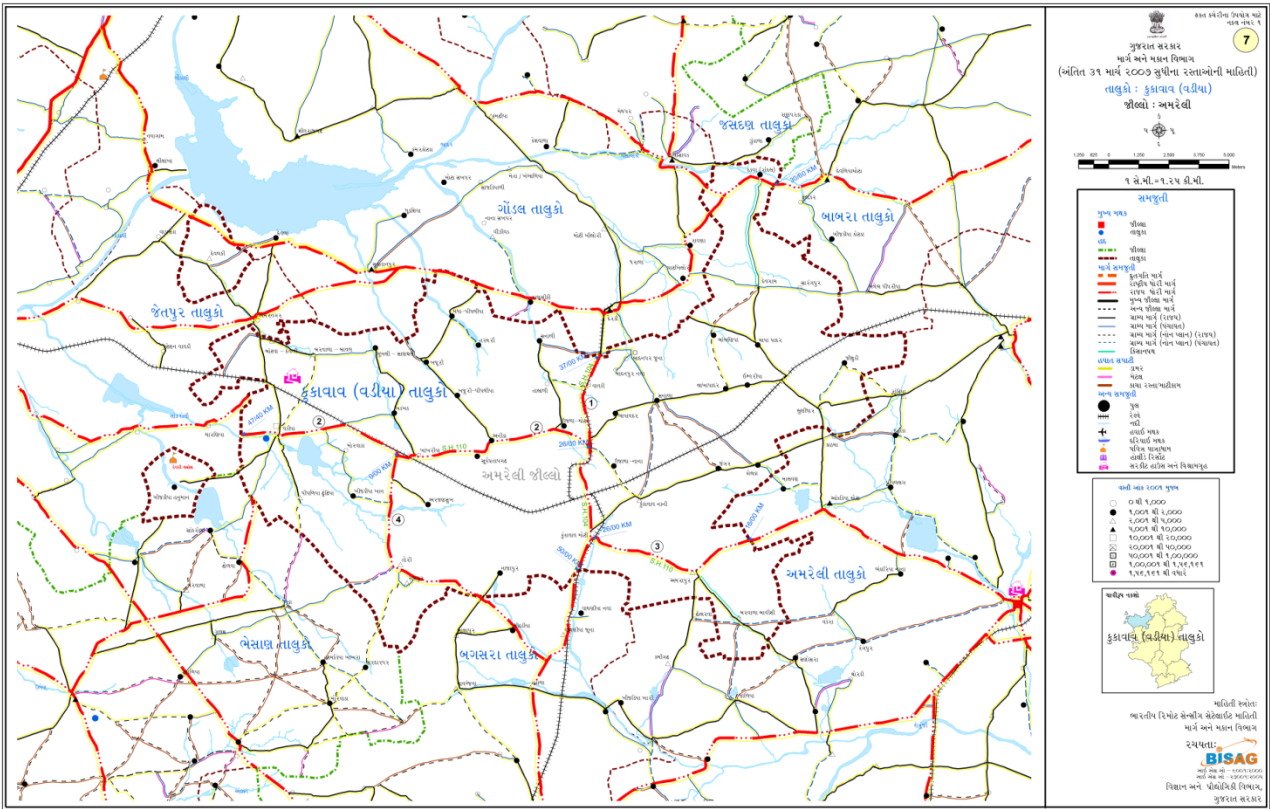














# **Gujarat State Disaster Management Authority**



**District Emergency Operation Center  
Collector Office  
Amreli**