



District Disaster Management Plan-2024

Amreli



District Disaster Management Authority
Collector Office–Amreli

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Amreli



FOREWORD

Each and every part of the world faces variety of disasters from time to time. At any moment some part of the earth and its habitants are attacked with some kind of disasters, Amreli District is a multi-hazard district. Time and again it is affected by Drought, Scarcity, Flood, Cyclone, Earthquake and of course by Industrial and Chemical Disasters. I am very happy to present the District Disaster Management Plan - 2024 of Amreli District. Apart from the Search and Rescue Training programme, there are other many important functions to be fulfilled during the occurrence of disasters to make a disaster management plan successful. After a long thought, team work has been created, where head to head responsibility has been decided. All the Taluka/Nagar Palika have been given details of Resource Inventories, Geographical conditions & skilled man *power and possible disaster*. They also have a search and rescue team, medical paramedical assistance, maintain of law and order during the disaster occurrence. Apart from Search, Rescue and First Aid, the schools have been given an action plan and their teachers have been trained for that. The Industrial sector of the District have been asked to prepare an action plans which can be implemented during the disaster. For this, " Mutual-Aid Scheme " is developed as an advanced preparation for the remedy of industrial accidents. The Home Ministry, Government of India and The Gujarat State Disaster Management Authority, (Disaster Risk Management Programme) have collectively worked in preparation of this plan. I hope that each and every administrative unit of the district, industrial stake holders and Mutual Aid Members will use this action plan in the true spirit. I wish that no disasters ever occur, but in case of their occurrence, this action plan indication preparedness of micro to macro level will be very helpful to the people of the district and state as a whole. Hope for safe world. I think this plan will useful to the entire department to understand the roles and responsibilities, SOP, District Hazard, Risk, and Vulnerability assessment of the district .

A blue ink signature of Ajay Dahiya (IAS) written in a stylized, cursive font.
Ajay Dahiya (IAS)

Dilipsinh M Gohil
Resident Additional Collector
District 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 advancement 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.

District - Amreli

Date : 04/05/2024


(Dilipsinh Gohil)

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
UNFCC	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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Part-1

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 man made 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.

Disaster Risk Reduction Post-2015

Post 2015, there has been a significant shift from the approach of Managing Disasters to Managing Risk. The three landmark global agreements viz. – the Sendai Framework for Disaster Risk Reduction 2015-30 (SFDRR), Sustainable Development Goals (SDG) and the Paris Agreement (CoP 21) set the stage for future global action on Disaster Risk Reduction (DRR), sustainable development and climate change.

Sendai Framework of Actions for Disaster Risk Reduction 2015-2030

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

The Four priorities of action are:-

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

The seven global targets are: -

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

disaster risk information and assessments to the people by 2030

Sustainable Developmental Goals

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

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

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

The State Disaster Management Plan (SDMP) has tried to envisage coherence across the states. Efforts for DRR, sustainable development, and the actions in response to climate change. Prime Minister’s 10-Point Agenda towards Disaster Risk Reduction

The Prime Minister, Shri Narendra Modi, listed a Ten -Point Agenda in his inaugural speech at the Asian Ministerial Conference on Disaster Risk Reduction 2016, held in New Delhi in November 2016 (AMCDRR), which has also been incorporated in the SDMP. The ten key elements consist of the following:

1. All development sectors to imbibe principles of Disaster Risk Management
2. Work towards risk coverage for all-starting from poor households to small and medium enterprises to multi-national corporations to nation states.
3. Encourage greater involvement and leadership of women in disaster risk management.
4. Invest in risk mapping globally related to hazards such as earthquakes based on widely accepted standards and parameters.
5. Leverage technology to enhance the efficiency of disaster risk management efforts.

6. Develop a network of universities to work on disaster issues.
 7. Utilize the opportunities provided by social media and mobile technologies.
 8. Build on local capacity and initiative. Response agencies need to interact with the communities and make them familiar with the essential drill of disaster response.
 9. Ensuring that disaster learning is well documented.
- Bring about greater cohesion in international response to disasters. 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.

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

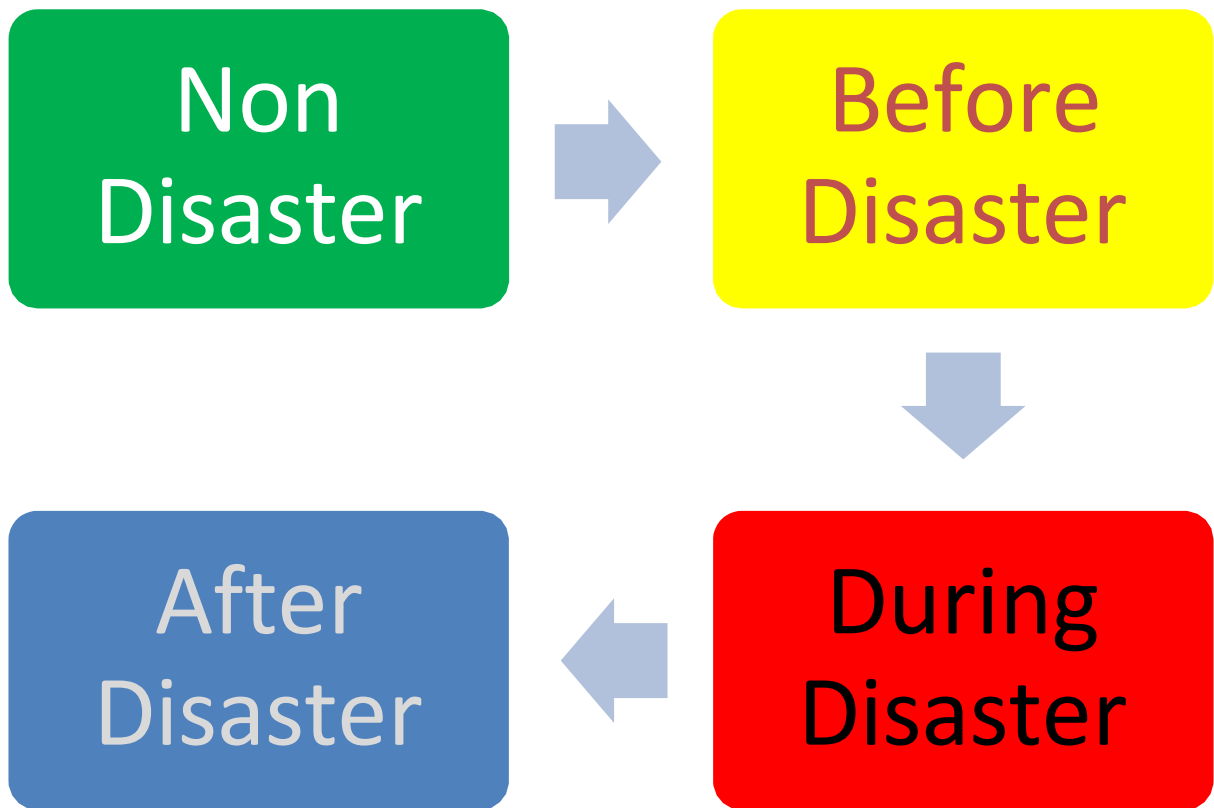
The Line Departments and other Stake Holders of District submits a copy of its disaster management plan, and of any amendment thereto to the Collector for Approval of that Plan.

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.



Chapter2

- **HazardRiskVulnerabilityAssessment(HRVA)**
- **TYPESOFHAZARDSTHEDISTRICTPRONETO**

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.

PROBABILITYPERIOD/SEASONALITYOFDISASTERS													
Nameof Disaster	Month												
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
Flood						←————→							
Cyclone					←————→								
Drought							←————→						
Earthquake	←————→												

- **HazardRiskVulnerabilityAssessment(HRVA)–Authoritythatcarriedout 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

Hazard	Probability	Impact	Vulnerability Rating (Probability times Impact)	Specific Locations and populations of concern area
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)	AnyWherein 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)	-
Lightning	3	2	6 (Low)	-
Thunderstorm	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 falls into Seismic Zone-III. Jafrabad, Rajula 2 Coastal Talukas are prone to Cyclone, 6 Talukas 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 been completed 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 "likelihood" 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 Mont/ 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**

No.	Name of Taluka Mamlatdar Office	Ring Boya	Article 1 Included in each ECRs			Generatos
			Life Saving Jacket	200ft. Ropes	100 ft. Ropes	
1	MamlatdarOffice–Amreli	50	40	03	05	01
2	MamlatdarOffice–Babra	09	11	01	01	01
3	MamlatdarOffice–Dhari	06	02	01	01	01
4	MamlatdarOffice–Lathi	14	15	01	06	01
5	MamlatdarOffice–Vadiya	10	10	05	00	01
6	MamlatdarOffice–Liliya	11	09	00	02	01
7	MamlatdarOffice–Bagasara	20	20	02	03	01
8	MamlatdarOffice–Khamabha	02	25	02	05	01
9	MamlatdarOffice–Rajula	17	18	03	05	01
10	MamlatdarOffice–SavarKundla	04	04	02	06	01
11	MamlatdarOffice–Jafrabad	16	10	04	04	01

Fire Tender Provided by Govt. at Various Levels

No	Municipalities Name	Water Bowser	Name of Equipment		
			MiniFire Tender	Boat	Bullet
1	Nagar Palika-Amreli	3	2	--	1
2	Nagar Palika- SavarKundla	1	1	--	1
3	Nagar Palika –Rajula	1	1	--	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	1	--	--
9	Nagar Palika-Damnagar	-	1	--	--

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/OutPosts 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 provide 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, monitory 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.

● **Hazardanalysis:**

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, Govtof

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 spiraling 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 rain fall 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. Thunderstorm arises 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.

Chapter3

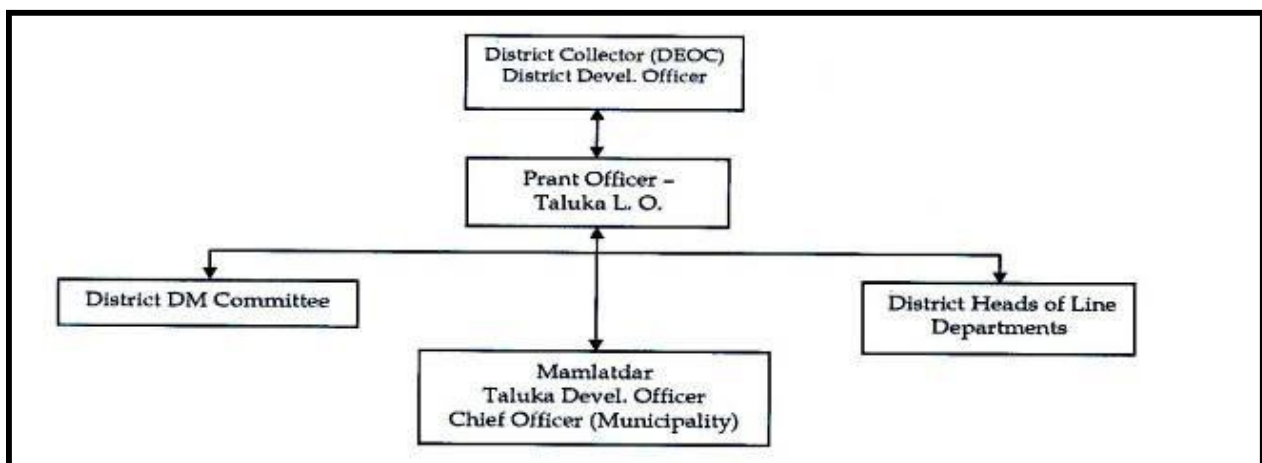
Institutional Arrangements:

Institutional Arrangement / Response

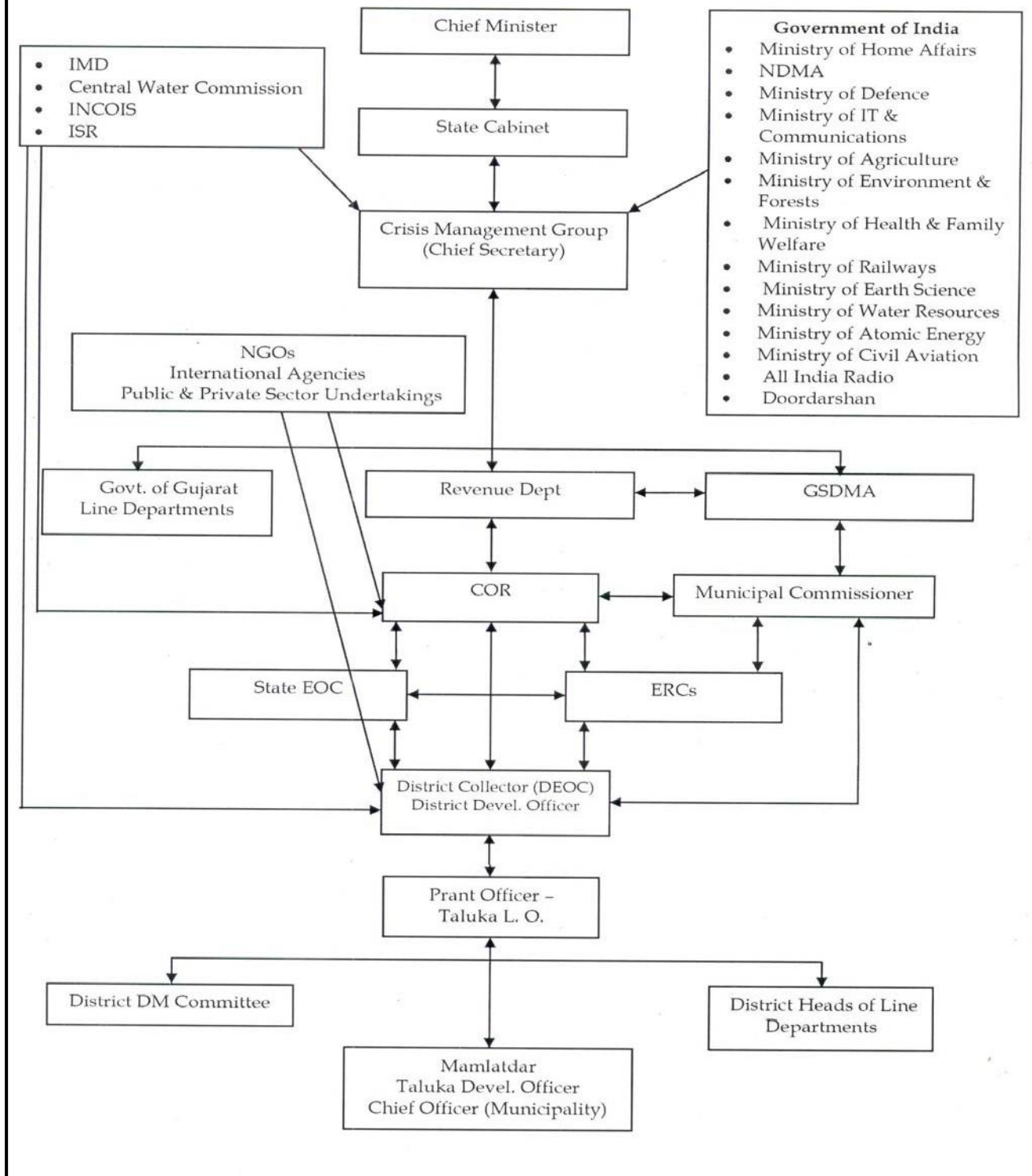
The plan incorporates multi level institutional as well as response planning mechanism at district level. that is.....

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 structurein the district.

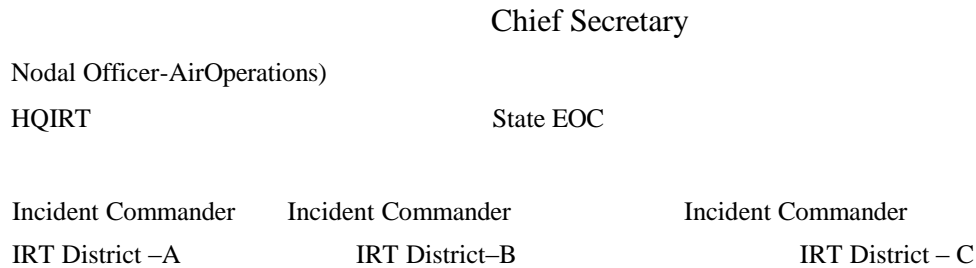


1.10 DM Structure in the State



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&BState
6	Exe.Engineer-R&BPanchayat
7	Exe.Engineer-R&BStateIrrigation
8	SuperintendingEngineer- PGVCL
9	DistrictHomeguardcommandant
10	Superintendent .Hospital
11	Port Officer-GMB
12	District forest Officer
13	Dy.Director-InformationDepartment
14	Chieffireofficer
15	RegionalOfficer-GPCB
16	DistrictAgricultureOfficer
17	SDM
18	Regional Transport officer
19	Divisional Controller-State transport
20	Dy. Controller –Civil Defense
21	District Education Officer
22	DistrictPrimaryEducation officer
23	NGOMember
24	Media Person

C.TDMC:-TalukaDisasterManagementCommittee:

TDMC LiasonOfficer(LO)		
TDO	Mamlatdar	LineDepartment(State)
AssistantTDO	Dy.Mamlatdar(Revenue)	Irrigation
ExtensionOfficer	Dy.Mamlatdar(CivilSupply)	Road&Building (State&Panchaya)
GramSevak/Talati	Dy.Mamlatdar(MidDayMeal)	Forest
KelavaniNirikshak	Dy.Mamlatdar(eDhara)	PGVCL
VeterinaryOffier	CircleOfficers	TalukaHealthOfficer
AgricultureOfficer	Talati(Revenue)	WaterSupply
SocialWelfareOfficer		Transportation
ChildDevelopmentProjectOfficer		Police
		CentralGovt.Department
		WesternRailway
		NHAI
		PortAuthrority
		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	TalukaDevelopmentOfficer
4	Dy.ExecutiveEngineer-R&B (State)
5	Dy. Executive Engineer-R & B (Panchayat)
6	Dy.ExecutiveEngineer-Irrigation
7	Dy.ExecutiveEngineer-GEB
8	Dy.ExecutiveEngineer-Water Supply
9	Junior Engineer-Telecom
10	MedicalOfficer(MotherPHC)
11	PoliceInspector/PoliceSubInspector
12	TalukaHomeGuard Commandant
13	Taluka KelvaniNirikshak
14	GodownManager-CivilSupplyCorporation
15	Depot Manager – S.T.
16	PortOfficer
17	RangeForestOfficer(HeadQuarter)
❖ <u>Non- Government Members</u>	
18	Present-Taluka Panchayat
19	M.P.
20	M.L.A.
21	Chairman-SocialJusticeCommittee(TalukaPanchayat)
22	WomanMember - Taluka Panchayat
23	NGORepresentative

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	ChiefOfficer
3	Chieffireofficer
4	Mamlatdar
5	TownplanningHead
6	Dy.Exe.Engineer-R&Bstate
7	Dy.Exe.Engineer-state-Irrigation
8	Dy.Exe.Engineer- PGVCL
9	Dy.Exe.Engineer-GWSSB
10	Junior Engineer Telecom
11	Medical Officer-C.H.C.
12	Medical Officer Municipality Health Centre
13	HeadTransportcommittee
14	PI/PSI
15	TalukaHomeguardCommandent
16	EducationOfficerMunicipalityEducationcommittee
17	ProjectCoordinator-UCD
18	Port officer
19	Rangeforestofficer-Extension
`NonGovernmentalMember	
20	President Municipality
21	MemberofParliament

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

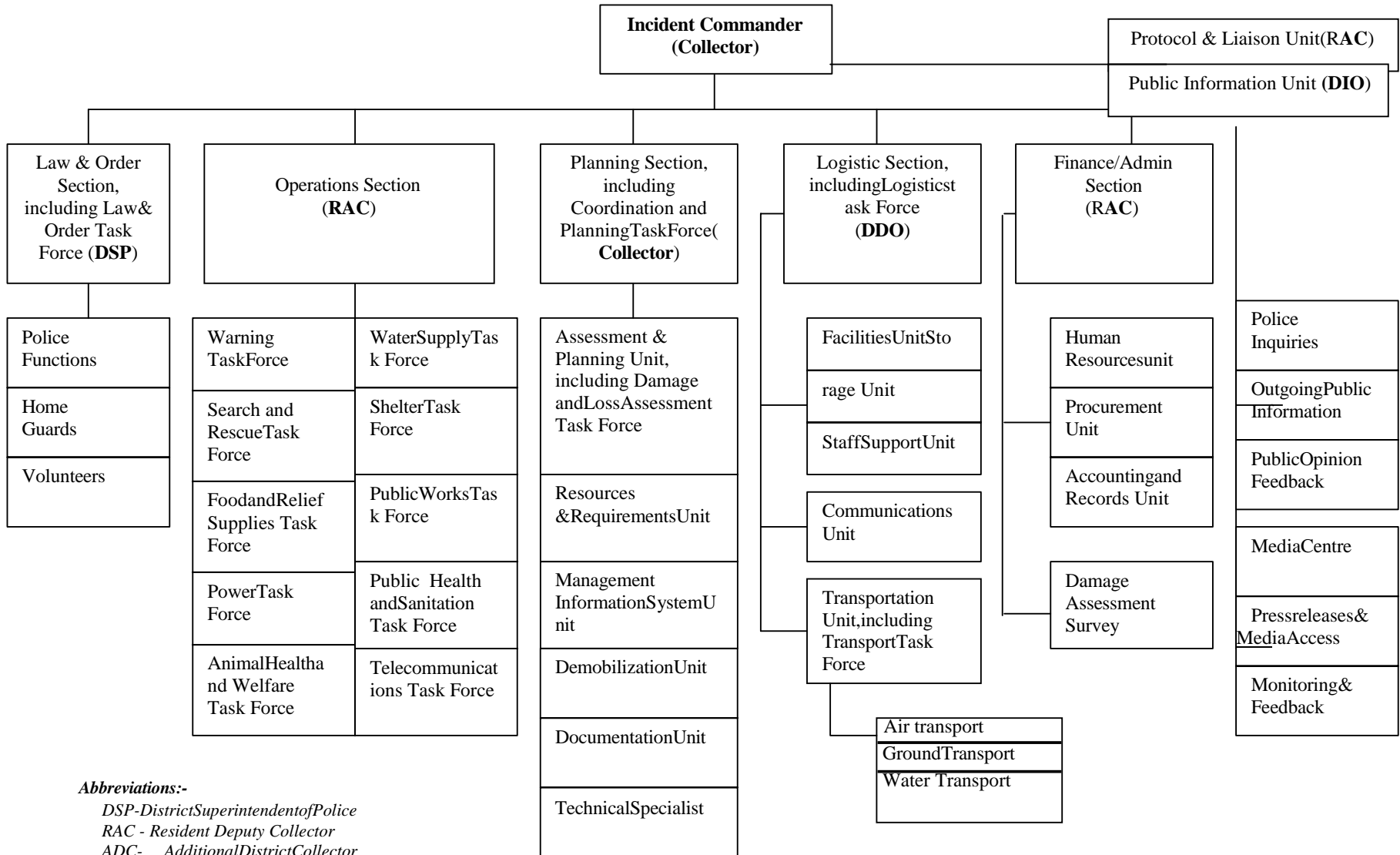
Each village shall have a Disaster Management Committee consisting of officials and nonofficials. The Committee will be constituted to oversee by the gram sabha. The Committee will be responsible for awareness generation, warning dissemination, community preparedness plan, adoption of safe housing practices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

CrisisGroups : Member Details: Amreli District

Sr No	Member Details
1	DistrictCollector&Magistrate (Chairman)
2	ExecutiveEngineer(Member)
3	Dy.InformationOfficer(Member)
4	DistrictHomeguard Officer(Member)
5	District Police Officer(Member)
6	Regional Officer(Member)
7	Factory Manager(Member)
8	Regional Transport Officer(Member)
9	ChairmanofLocalCrisisGroup (Member)Dy. Collector
10	Civil Surgeon (Member)
11	District Health Officer (Member)
12	Additional Magistrate & AdditionalCollector (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	ChiefOfficer (Member) Nagarpalika, Amreli
18	District Agriculture Officer (Member)
19	Member SHV Energy North West (I) Pvt.Ltd. Amreli
20	Manager(Member) ShellGas(LPG)(I)Pvt.Ltd. Pipavav Amreli
21	Dy. General Manager(Member) Gujarat CementWorksLtd.Koyava, Amreli
22	District Development Officer(Member)
24	Port Safety Manager, Pipavav,Rajula (Member)
25	Subdivisional Magistrate(Member) Deputy Collector, Amreli

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	Handset Held Walkie Talkie (No. Two)	2
2	AO-170LSD-Dell Optiplex 170E Small Desktop PCs	1
3	Diesel Generating Set with accessories	1
4	Satellite Phone	1
5	Computer	2
6	U.P.S.	1
7	Projector	1
8	Portable Light	3

- EERR kit allotted by GSDMA Gandhinagar for the District EOCs for up-scaling Aapdamitra DRM Programme :

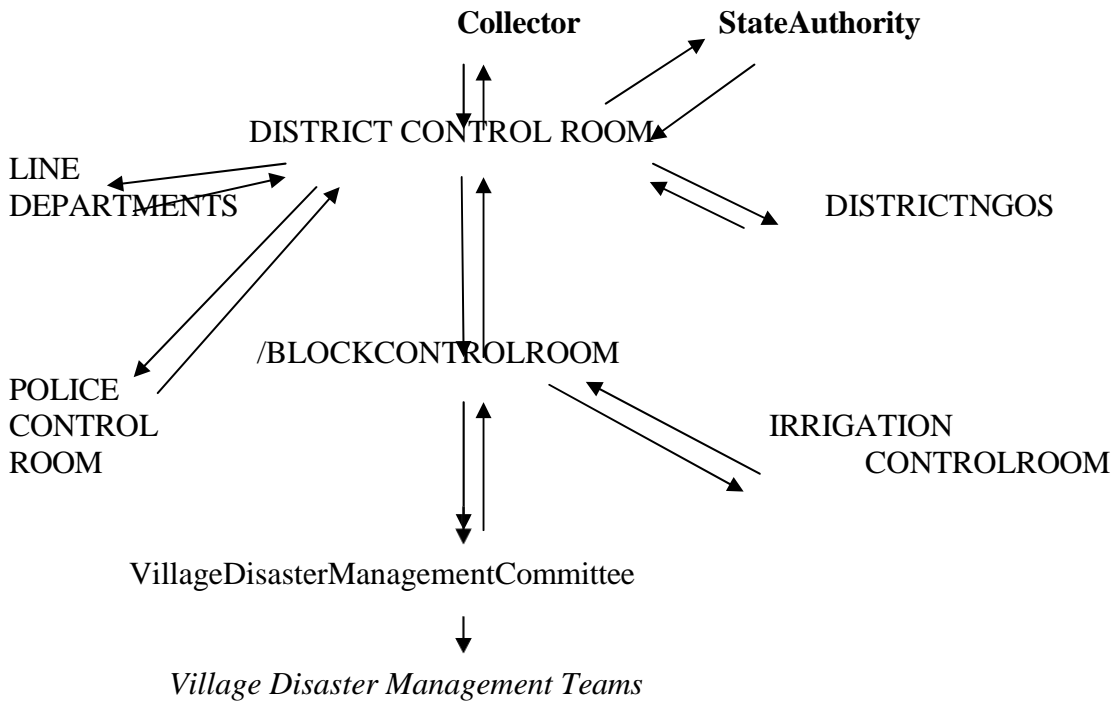
Sl. No.	Items	Quantity
1	Personal Floatation Device (Life Jacket made of polyurethane foam)	6
2	Torch or emergency light (Solar enabled)	12
3	Safety gloves (Canvas/leather)	12 pairs
4	30 mtrs 10/11 mm BOB Nylon rope	6
5	Lifebuoys	12
6	Oars & Rowlocks	3 pairs
7	Paddles	18
8	Anchors	4
9	Galvanized metal bucket or bailer	4
10	Outboard Motor Minimum 30 HP	2
11	DCP Fire Extinguisher	4
12	Emergency Spot light with minimum 12 hours run time	3
13	Tool kit (Colt cutter, wire cutter, Pliers, Screw driver set)	3
14	Axe/hatchet 3kg	3
15	Fibreglass Backboard Stretcher	6

16	Radio Walkie sets 5 watt	6
17	Blankets	12
18	Park pickets	12
19	First Aid Kit	6
20	Twin PrognedGraphel/ Cat Hooks	6
21	Throw Bag	6
22	GUM Boots	12 pairs
23	Safety Goggles	6
24	Safety Helmet (Water rafting)	6
25	GPS sets	4
26	Navigation lights	4
27	Maps, Charts and compass	As required
28	Chain Saw machine	4
29	Camping tent (water resistant) + Mosquito Net	4+4
30	Inflatable Rescue Boat	1

➤ 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 irrigationcontrolroom. 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.

<u>Disaster</u>	<u>Agencies</u>
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 in to 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 the 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.

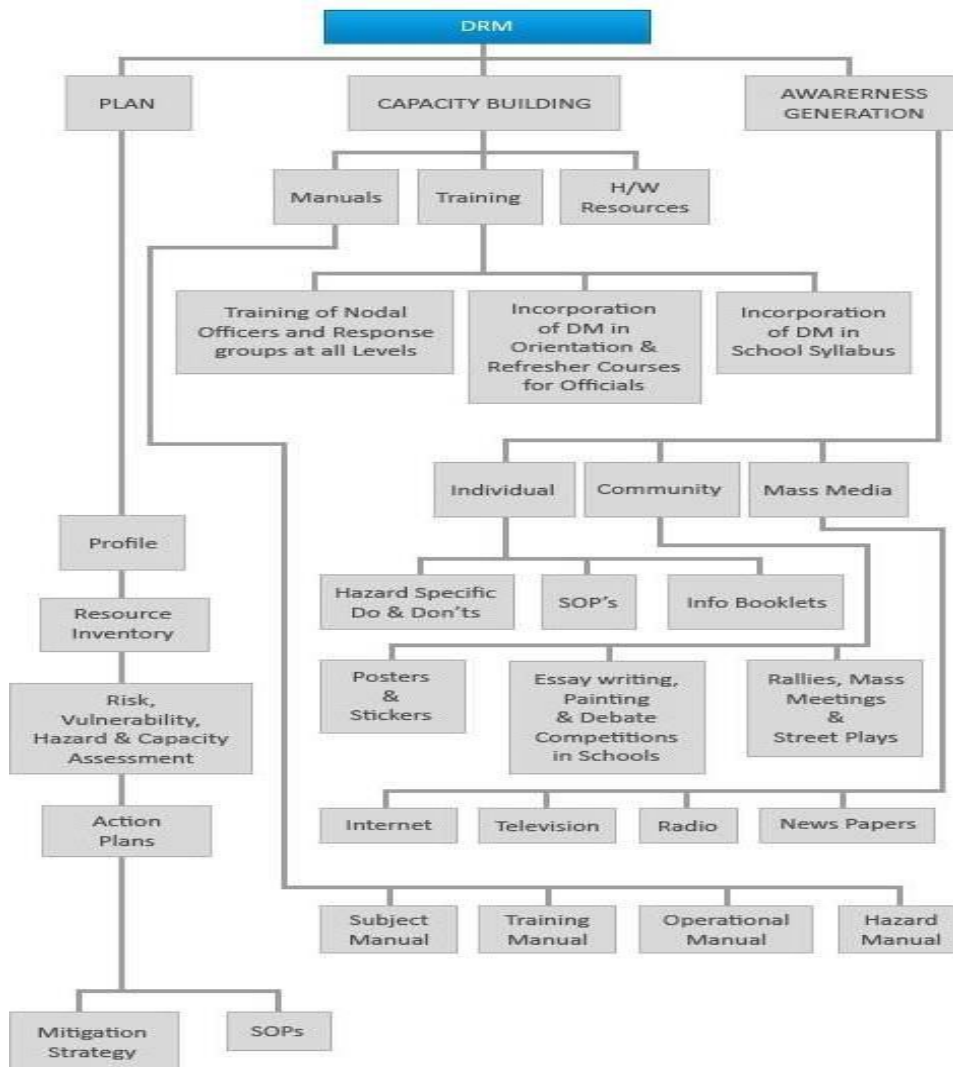
The Collector, assisted by the District Development Officer, is responsible for developing plans and activities to effect mitigation, preparedness and prevention using the mechanism noted above. Based on the in-terim assessment of risk and vulnerabilities, the Amreli District will focus on the following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

- **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 elected & School DMP 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 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 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 bye laws 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 damage 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**-Guide lines 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 include 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 MPHB in these efforts;
- Community awareness will be raised regarding 'do's and don'ts' in the event of an earthquake with the involvement of Panchayati Raj institutions and CBOs. Revenue department will be the nodal agency for this activity.

- **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 too ther parts of the district.
3. Leveling of lowlying areas during flood to a higher level to prevent those areas.
4. Construction of check dams and embankments and drainage systems to prevent flooding ofthose 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 peopleso that they can make use of it when required.

NRHM:

This scheme can be used to facilitate for voluntary first aidd uring disaster and training the local population to deal with minor injuriesso 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 Avasyojana:

The scheme can facilitate the rehabilitation programs among the affected villages or the ones that are likely to be affected and liein the vulnerable zone. They can comeup 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 campsare the places where lot of diseases and epidemics maybreak 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.

C1.1.3 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 the min 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.

C1.1.4 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 contain 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: multistoried buildings (masks aren't available), equipments for fire extinguishing in slum areas where fire brigade cannot enter.

Eco friendly water shed interventions to deal with drought situations, checkdams 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 an adjoining district the set 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 outflow 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 Incharge 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 under go periodic mockdrills 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 programme 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 [Statedatabase]:

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, boats 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 these sources 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)
- Homeguards (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 are as 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.

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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 site 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 Homeguards, 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 mention:

- The issuing authority, date and time of issue
- An accurate description of likely hazard and what is expected
- Possible impact on population, are at or been 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 killed 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 retro fitting 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	Home Dept. District Home Guards Commandant Dy. Controller Civil Defence
3. Training to NCC and NSS personal in various aspect of disaster management		Education Dep. NCC Collector Office
4. Training to educational and training institutions personal in various aspect of disaster management		DDMC
5. Training to civil society, CBOs and corporate entities in various aspect of disaster management		DDMC
6. Training to fire and emergency service personal in various aspect of disaster management		Fire Dept 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

Task	Activity	Responsibility
Information education And communication	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, -Planning and Design-Execution and Dissemination	Information Dept. Education Dept. All line dept. Dist. Collectors Municipal Com missioners Other Dist. Authorities

➤ **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 field work 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 distribute on 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 up on 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 aim stop utin 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:

- Fieldcommand
- Field information collection
- Interagency 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 hope fully 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 sources, 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 fire suppression 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-UPDation 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 time lines and out reach (For example, voice enabled SMS)	Contact of communities in remote locations (fisher folk,salt pan workers, Maldharisetc)

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,Maldharisetc)					
Measures required for Out reach	Contact of communities in remote locations (fisher folk, saltpan 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 laye redusing 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 rum ours 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>External</p> <ul style="list-style-type: none"> • Broadcast programs to raise people's awareness of disaster prevention measures • Develop news sources in emergency situation • Liaison with community leaders• • Publicize station frequency• • Broadcast public planning meetings • Outreach to the elderly, women, children, mentally and physically disabled people, as well as other marginalized and other vulnerable groups • Encourage stockpiling of (hand-powered) radio receivers • Compile local knowledge on signs of impending disaster and share it with community <p>Internal</p> <ul style="list-style-type: none"> • Backup important documents and files (including audio content) and store in a safe location • If possible, place set of minimum broadcast equipments such as a microphone, tape/CD player, transmitter and antennae in a safe location • Plan radio program to raise people's awareness of disaster prevention • First aid training for station personnel • Technical preparedness (generator, APS, securing, transmitter) • Guidelines for managing staff and volunteers • Arrange emergency drills in the station • Develop a contact list and post in station • Map community (ethnicity, religion, race, culture, vulnerability) • Prepare pre-recorded Emergency Response • Announcements and scripts and post in the studio
2.Mitigation
<ul style="list-style-type: none"> • Develop net works with local Disaster Management and Response (DMR) NGOs, local government and key stake holders: hold regular meeting with them • Arrange emergency drills in the community • Training of on-air personnel-what and how to broadcast
3. Response
<p>External-onair</p> <ul style="list-style-type: none"> • Broadcast pre-prepared announcements • Broadcast emergency public meetings • Broadcast emergency evacuation announcements • All announcements broadcast in a reassuring and calm manner

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

Internal-behind the scenes

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

4. Relief

- Establish Information Support Centre for information sharing and logistic distribution

5. Rehabilitation

External–Networking and Support

- Broadcast pre-prepared announcements Broadcast programs to heal victim’s psychology trauma.
 - Interview trauma 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

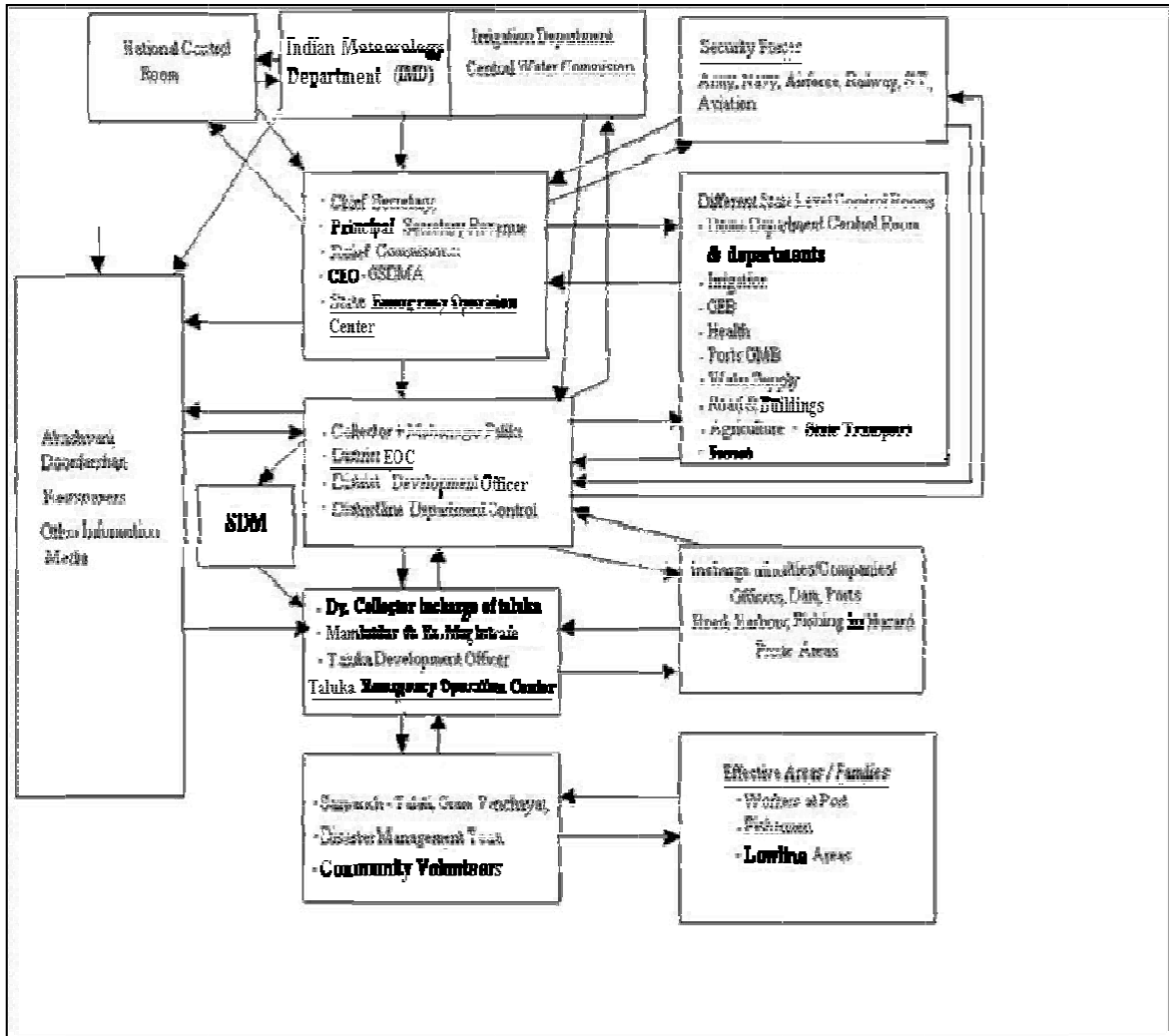
➤ **Documentation**

- 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 The Local Control room will be activated, in case of an L2 disaster DEOC will be activated along inform 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
- Taluka Development Officer
- 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

- Medical Officer (Mother PHC)
- Police Inspector/ Police Sub Inspector
- Taluka Home Guard Commandant
- Taluka Kelvani Nirikshak
- Godown Manager- Civil Supply Corporation
- Depot Manager – S.T.
- Port Officer

- Range Forest Officer (Head Quarter)

Non- Government Members

- Pramukhshri-Taluka Panchayat.
- MLA

- Chairman- Social Justice Committee (Taluka Panchayat)
- 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

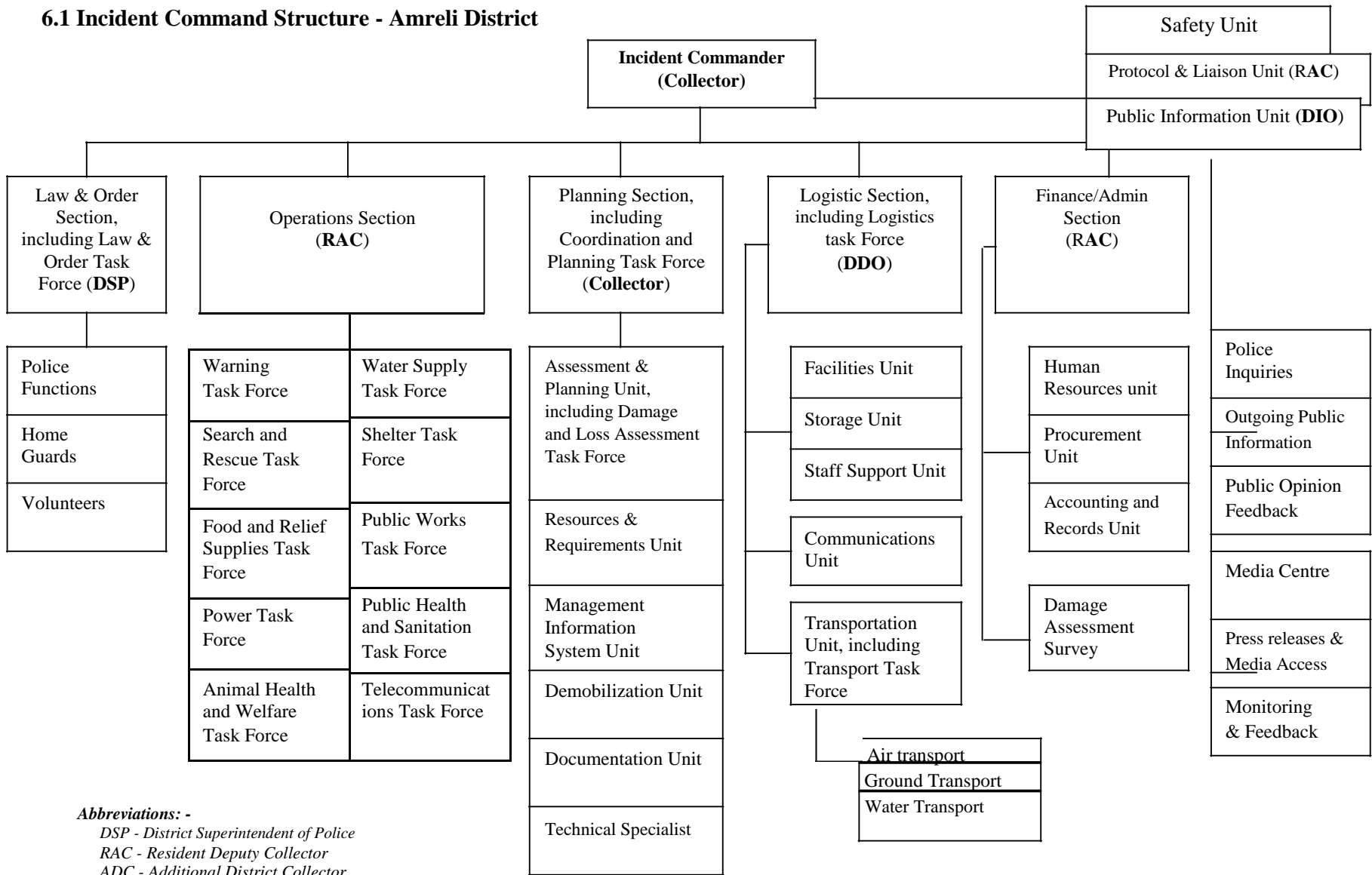
Disaster Response and District Incident Command System:

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

ICS-Basic Functions

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.

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 Operation Taskforce

1. Coordination and Planning

- Administration and Protocol
- Warning
- Law and Order
- Search and Rescue (including Evacuation)
- Public Works
- Water
- Food and Relief Supplies
- Power

<u>Administrative tasks needed to ensure effective and timely relief assistance</u>	
Functions Coordinate early warning, Response & Recovery	Collection and dissemination of warnings of potential disasters
	Assure the execution of all laws and maintenance of order in the area affected by the incident.
	Provide human and material resources needed to support local evacuation, search and rescue efforts.
Operations Support Disaster Operations by efficiently completing the paper work and other	Provide the personnel and resources needed to support local efforts to reestablish normally operating infrastructure.
	Assure the provision of sufficient potable water for human and animal consumption (priority), and water for industrial and agricultural uses as appropriate.
	Assure the provision of basic food and other relief needs in the affected communities.
	Provide the resources to reestablish normal power supplies and systems in affected communities.

➤ 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.
➤ Animal Health and Welfare	Provision of health and other care to animals affected by a disaster.
➤ Shelter	Provide materials and supplies to ensure temporary shelter for disaster-affected populations
➤ 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.
➤ 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.
➤ 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.
➤ 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:

- Assessment and planning
- Resources and Requirements
- Management information system
- documentation
- Demobilization and
- 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:

- storage and supply
- Facilities
- staff support
- communications
- 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)

TaskForce	Warning	Law & Order	SAR & Evacuation	Public Works	Water	Food & Relief Supplies	Power	Health	AnimalHealth	Shelter	Logistics	Damage Assessment	Tele-communications	Media
Coordination &														
Warning														
Law & Order														
SAR/Evacuation														
Public Works														
Water														
Food & Relief Supplies														
Power														
Health														
AnimalHealth														
Shelter														
Logistics														
DamageAssessment														
Telecommunications														

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, Port Office GMB, Police, Forests	Logistics
6	Media	District Information Officer	Information Department, Print, Media, TV, Journalists, NGOs	Public Information
7	Logistics	DDO	RTO, DSO, FPS, Private & Public sector, Municipal water supply board, Mamlatdar, Dist. Supply Mamlatdar	Logistics
8	Law & Order	DSP	Dy. SP, Home Guards Commandant, NGOs, Para-military and Armed Forces	Law & Order
9	Search & Rescue	Dy. Collector Civil 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

Sr.No.	EOCs/ Control rooms	Contact Numbers
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.	TaskForce/FunctionalArea	Channel#
1.	DCR	1
2.	Law & Order&its TFOR	2
3.	Search & Rescue & its TFOR	3
4.	PublicWorks & 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.

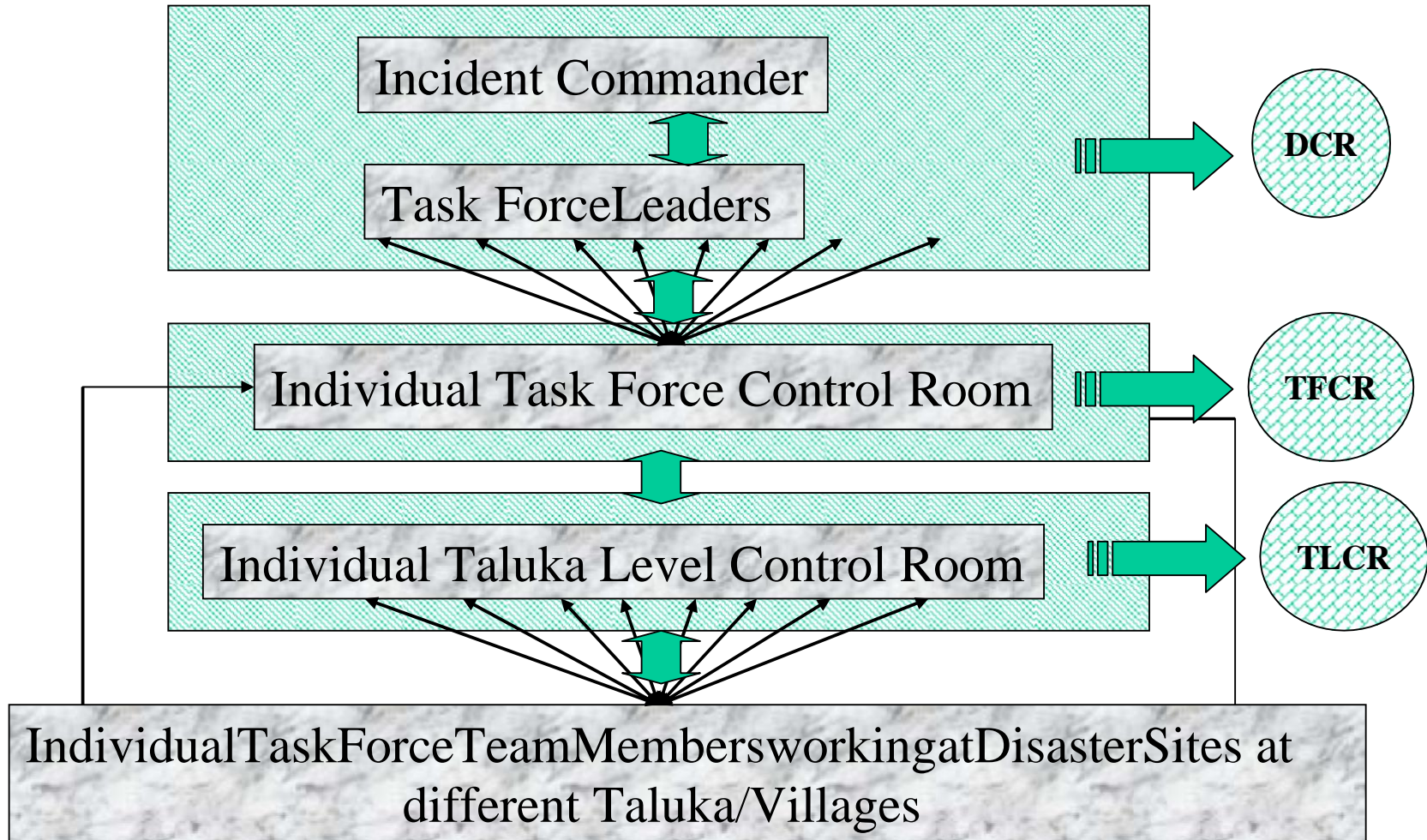
Communication shall be brief and simple.

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 an 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.

TASK FORCE ACTION PLANS

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

Task Force Leader: Collector

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Before a Disaster		
Establish a disaster management structure to the village level. (DDMC)	Link 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.
Warning		
Hold Crisis Management Committee (Collector)	Communications between Districts and with State Control Room.	On receipt of warning.
Mobilize task forces at all levels (District, Taluka, village depending on disaster) (CMC, Telecommunications, Media Task Forces)	Communications systems and procedures.	As decided by CMC.
Disseminate Information (CMC, Media Task Force)		As decided.
Mobilize resources to be positioned near vulnerable points depending on type of disaster.	Telecommunication systems, plans.	As decided.
Establish alternate communication system (Telecommunications Task Force)		As decided.

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

ProvidePublicInformation(CMC,MediaTaskForce).		shouldbestarted in 6 hours).
12Hours		
BeginregularreportingonactionstakenandstatusbyTaskForces.(Task Forces)	Operatingcommunicationssystem.	Started at 12 hours.
Reassessdamageinformation,resources,needsandproblemareas/activities.(CMC)		Started at 12 hours.
Beginrotationofstaff(CMC)		Startat12hours.
EstablishregularliaisonwithStateControlRoom.	Workingcommunicationssystem.	Startat12hours.
Shiftfocusofeffortstorelief.(CMC)		Open
Restorekeyinfrastructure(CMCthroughPublicWorksandotherTaskForces)		Before48hours.
48hours		
Continuereviewandreassessmentofoperations(CMC)	Information onoperations.	
Conductbroaddamageassessment(CMCandDamageAssessmentTaskForce)		
EstablishTemporaryRehabilitationPlan(CMC)		
Beginmobilizationbasedonsituation.(CMC)		
Focusoncreatingasenseofnormalcy.(CMC)		Before72hours.
Actionand(WhoShouldTakeIt)	RequirementsorConditionstobe met for the action can occur.	Timeframe
72hours		
StartRehabilitationactivities.(CMC)	Plan	
Conductdetailedsurveyofdamageandneeds.(CMCandDamage Assessment Task Force)		
Beginregularreportingonoperations.	Information onoperations.	As early as possible.
Restoreallpublicandprivatesectorservices.(CMC)		As early as possible.
LessonsLearnedmeeting.(CMCandothers)		After2weeks.
FinalReport/CaseStudy(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
Before a Disaster		
Verify communication and warning systems are functioning - drills		Every 15 days
Have warning messages prepared in advance.		
Warning		
Receive and dispatch warnings. (Task Force)	Coordinate with Telecommunications Task Force	As received.
Verify warnings received and understood. (Task Force)		Within 1-2 hours of dispatch.
Independently confirm warnings if possible (Task Force)		As time allows.

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

Task Force Leader: District Superintendent of Police

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Time frame
Before a Disaster		
Evaluate expected disaster needs versus 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.
Warning		
Verify communication system. (Wireless Inspector)		1-2 hours of

		warning.
Alert police and other Task Force members. (Superintendent of Police)		1-2 hours of warning.
Implement duty distribution SOP for personnel and other resources. (Superintendent of Police)		1-2 hours of warning.
Develop preliminary estimate of requirements to support other Task Forces. (Superintendent of Police)		1-2 hours of warning.
Disaster		
Get orders on deploying personnel from Control Room. (Superintendent of Police)	Operating communication system.	Immediately
Determine status of staff and facilities. (Superintendent of Police)	Operating communication 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
Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Establish VVIP unit. (Superintendent of Police)		Immediately.
Request additional resources, if needed. (Superintendent of Police)	Operating communication system.	4 hours of disaster.
12 hours		
Institute regular reporting. (Task Force)	Operating communication 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.
48 hours		
Implement a Force Management Plan (increase, reduction, redeployment, of forces). (Superintendent of Police)		From start of period.

Planforreturntonormal((SuperintendentofPolice,TaskForce,ControlRoom)		From72hours after the disaster.
ConductLessonsLearnedSession(TaskForcewithinputfromotherparties.)		1 week after the disaster.
FinalReport		2weeksafter the disaster.

SearchandRescue(includingevacuation):Providehumanandmaterialresourcestosupportlocalevacuation,searchandrescueefforts.

Task Force Leader: Chief Fire Officer

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Time frame
Before a Disaster		
Riskassessmentandvulnerabilitymapping.(TaskForce)		Before warning.
Developinventoryofpersonnelandmaterialresources.(TaskForce)		Before warning.
Training.(TaskForce)	InputandsupportfromGSDMA, UNDPproject.	Before warning.
Establishpubliceducationprogram.(TaskForce)	MediaTaskForce	
Establishadequatecommunicationssystem.(TaskForce)	Additionalerequipmentrequired.	
Drills.(TaskForce).		Before warning.
EstablishtransportarrangementsforlikelySARoperations.(Task Force)	WithLogisticsTaskForce.	Before warning.
DevelopRescueSOP.(TaskForce)		Before warning.
Warning		
MobilizeTaskForceandSARteams.(TaskForce).		Onwarning.
Verifyequipmentisready.(TaskForce).		On team activation.
Confirmtransportisready.(TaskForce)	LogisticsTaskForce.	Onwarning.
Undertakeprecautionaryevacuation.(TaskForce)	LogisticsandShelterTaskForces	Asdirected.

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.
Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Time frame
Disaster		
Assure safety of staff.		Immediately.
Restore own communications. (Task Force)		Immediately.
Dispatch rescue/evacuation teams based on assessments. (Task Force)	Input from Control Room.	Immediately.
Call for additional resources if needed. (Task Force)	Communications systems in operation.	3-4 hours of disaster.
Provide reports on operations. (Task Force)		Starting at 3-4 hours.
Begin handling of deceased per SOP. (Task Force)	Various Revenue officers and Police involved.	Starting at 3-4 hours.
12 Hours		
Begin staff rotations system. (Task Force).		Start 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.
48 hours		
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.
72 hours		
Lessons Learned meeting. (Task Force and others)		After 2 weeks.
Final Report. (Task Force)		After major activities completed.

Public Works: Provide the personnel and resources needed to support local effort 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.	Time frame
Before a Disaster		
Inventory of personnel, equipment and status of infrastructure. (Task force)	Link to UNDP project database 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)		
Warning		
Establish Control Room. (Task Force)		No later than 6 hours from warning.
Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
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.
Disaster		
Begin damage assessment and inspections.(Task Force)	Coordination with Damage Assessment Task Force.	Within 12 hours of disaster.
Develop operations plan and communicate to Control Room.		Within 12 hours of disaster.
Mobilize and dispatch teams based on priorities. Teams will (1) repair, (2) replace, (3) Build temporary structures (e.g., rest facilities, shelters).	Coordination with Logistics, Water, Power Task Forces and Control Room.	Within 12 hours of disaster.
Collaborate with other Task Forces.		Continuous.
12Hours		
Begin staff rotations system and man power planning.(Task Force).		Start 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.
48hours		
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.
72hours		
Develop long term restoration plan and start activities.(Task Force)		From 72 hours.
Lessons Learned meeting.(Task Force and others)		After 2 weeks.

FinalReport.(TaskForce)		After major activities completed.
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WaterSupply: Assure the provision of sufficient potable water for human and animal consumption (priority), and water for industrial and agricultural uses as appropriate.

Task Force Leader: Executive Engineer, Gujarat Water Supply Board

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Before a Disaster		
Establish water availability, capacities, reliabilities and 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.
Warning		
Establish staff rotation and shift system. (Task Force)		No later than 24 hours from warning.
Provide public awareness on use of water. (Task Force)	Media Task Force.	No later than 24 hours from warning.
Provide instructions to government and private sector on protection of water supplies. (Task Force)		No later than 24 hours from warning.
Mobilize Task Force members.		24 hours from warning.
Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Mobilize additional personnel and vehicles. (Logistics Task Force)	May be difficult to locate additional personnel locally. Recourse to outside or contractor sources may be required.	24 hours from warning.
Coordinate activities with Power and other Task Forces.	Involves District Control Room.	24 hours from warning.
Verify water source status and protection. (Task Force).		No later than 24 hours from warning.
Disaster		
Plan and prioritize supply of water to users. (Task Force)	Requires information on needs, damage and demand.	Completed by 24 hours into disaster.
Assess status and damage to water systems. (Task Force)	Coordination with Damage Assessment Task Force.	Completed by 24 hours into disaster.
Mobilize water tankers. (Task Force)	Coordination with Logistics Task Force and Control Room.	Started by 24 hours into disaster.

Repair/restore watersystems, 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.
Coordinated 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.
12 Hours		
Establish temporary water systems. (Task Force)		Upto 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 related needs in the affected communities.

Task Force Leader : District Supply Officer

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

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Warning		
Passonwarning.(TaskForce)		Within12hoursof receipt of warning.
AlertNGOstoppreparefood.(TaskForce)	ContactwithNGOs.	Within12hoursof receiptofwarning.
Verifystocklevelsandmakedistributionplan.(TaskForce)	Possible cooperation with Logistics Task Force.	Within48hoursof receipt of warning.
Alerttransportcontractorstoppreparefortransport.(TaskForce)	CoordinatewithLogisticsTaskForce.	Within5hoursof receipt of warning.
Mobilizestaff.(TaskForce)		Within6hoursof receiptofwarning.
Disaster		
ReceiveandrespondtoinstructionsfromControlRoom.(TaskForce)		Asreceived.
Monitorconditionsofstocksandfacilities.(TaskForce)	Needforcommunications.	
Developdistributionplan.(TaskForce)	Need information on needs and locations.	As requested by Control Room.
Orderfoodpacketsandprovidesuppliesasneeded.(TaskForce)	CoordinationwithLogisticsTaskForce.	Perdistributionplan.
Establishreliefsuppliesreceptionscenters.(TaskForce)	CoordinatewithControlRoomandLogistics Task Force.	Asrequired.

Actionand(WhoShouldTakeIt)	RequirementsorConditionstobe met for the action can occur.	Timeframe
12Hours		
Startdistributionoperations.(TaskForce)	IncoordinationwithLogisticsand Shelter Task Forces.	Atbeginningofperiod.
Formalizereporting,communicationsandmonitoring.(TaskForce)		Completedby48hours.
Startstaffrotation system. (Task Force)		Atbeginningofperiod.
Beginmobilizingandmanagingadditional supplies.	Coordination with Logistics and, Control Room.	Underwayin48hours.
Establishsecurityforall sites.(LawandOrderTaskForce)		Atbeginningofperiod.
Begin public announcement of distribution plan and standards. (Media Task Force)		Underwayin48hours.
48Hours		
Shifttonormaloperations.(TaskForce)		Within1 week.
Reconcilereceiptsanddistributionrecords.(TaskForce)		Within30days.

Continue providing relief to special areas/populations.(Task Force)		For 15 days from the disaster
72 Hours		
Restore Public Distribution System.(Task Force)		From 1 week after the disaster.
Lessons Learned meeting.		Within 14 days

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

Task Force Leader : Superintending Engineer, Gujarat Electricity Board

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

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

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

Task Force Leader : Chief District Health Officer

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

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

Developdemobilizationplan.		Bybeginningofpe riod.
LessonsLearnedmeeting.		Within14days of disaster.
FinalReport		Within14days ofdisaster.

Animal Health and Welfare: Provisionofhealthandothercaretoanimalsaffectedbyadisaster.

Task Force Leader:DeputyDirector,Veterinary and Animal Husbandry

Actionand(WhoShouldTakeIt)	RequirementsorConditionstobe met for the action can occur.	Timeframe
BeforeaDisaster		
Updateanimallist.Listofstaff&trainingfordisposalofcarcass. (Task Force)		Done.
Stockmedicallsuppliesandvaccines.(Task Force)		Done
Warning		
Alertstaff(byphone).(TaskForce)		As warnings received.
Distribute supplies tovulnerableareas.(TaskForce)		Duringwarningpe riod.
ContactControlRoom.(Task Force)		Asrequired.
Disaster		
Removeanddestroycarcasses. (Task Force)	Needfuelandlogistics.	As soon as possible.
Treat injuredanimals. (TaskForce)		As soon as possible.
Issuecertificationofdeath.(TaskForce)	Forinsurancepurposes.	Within 48 hours.
Callinstafffromotherdistrictsasneeded.(TaskForce)		Asneeded.
Assistlocalauthoritiesinsurveyofdamageandreconciliationofrecords.		Asrequired.
48HoursandBeyond		
Assistlocalauthoritiesinprovidingfodderasneeded.		Asrequired.
Collectfeedback.(TaskForce)		
FinalReport.(TaskForce)		In15days.

Shelter: Providematerialsandsuppliestoassuretemporaryshelterfordisaster-affectedpopulations.

Task Force Leader: District Primary Education Officer

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Before a Disaster		
Develop shelter operating procedures. (Task Force)		
Develop inventory of shelters (location, capacity,). (Task Force)	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.	
Warning		
Mobilize shelter managers. (Task Force)		Within 6 hours of warning.
Review shelter locations for operating status. (Task Force)	Communications needed.	Within 6 hours of warning.
Open shelters as instructed.	Coordination with Control Room.	Within 6 hours of warning.
Mobilize additional resources for shelters and camps. (Task Force)	Cooperation with Logistics, Food and Relief Supplies, Water and Power Task Forces.	Within 6 hours of warning.
Provide public announcement on locations and status of shelters. (Media Task Force)		Within 6 hours of warning.
Disaster		
Begin 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.	
12 Hours		
Continue operations. (Task Force)		Continuously
Monitor shelter status and movement of people. (Task Force)		Continuously
Mobilize additional resources. (Task Force)	Coordinate with Control Room and Logistics Task Force.	Continuous.
48 Hours and Beyond		

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

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

Task Force Leader: District Development Officer

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

Planforlogisticsbaseddependingonnatureofdisaster.(TaskForce)	CoordinatewithControlRoomandFoodandReliefSuppliesTaskForce.	Asneeded.
Disaster		
TakeactionbasedoninstructionfromControlRoom.(TaskForce)		Within2hours of receiving warning.
Actionand(WhoShouldTakeIt)	RequirementsorConditionstobe met for the action can occur.	Timeframe
Continuallyreviewrequirementsandresources.(TaskForce)		Continuous.
Developoperationsplan.(TaskForce)	CoordinatewithControlRoomandFoodandReliefSuppliesTaskForce.	Within2hours of receiving warning.
StrengthenliaisonwithControlRoomandkeyTaskForces.(TaskForce)		Within2hours of receiving warning.
Verifyqualityofservice.(TaskForce)	Requiresresetstandardofserviceand information on operations.	Daily.
12Hours		
Respondtoincreaseddemandforlogistics. (TaskForce)		Continuous.
Beginrotationofstaff.(TaskForce)		At start of period.
Establishlogisticsbasesasneeded.(TaskForce)	CoordinatewithControlRoomandFoodandReliefSuppliesTaskForce.	Continuous.
ReviewplansandcommunicatewithotherTaskForces.(TaskForce)		Continuous.
Beginregularreportinganddocumentation.(TaskForce)		At start of period.
48Hours		
Reassessneedsandrequirements.(TaskForce)		Continuous.
Beginmobilizationasappropriate.(TaskForce)		
72Hours		
LessonsLearnedmeeting.	IncludeShelter,FoodandRelief Supplies in meeting.	Within14days of disaster.
FinalReport		Within14days ofdisaster.

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

Task Force Leader : Resident Additional Collector

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

12Hours		
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.
48Hours		
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.
72Hours		
Lessons Learned meeting.	Include Shelter, Food and Relief Supplies in meeting.	Within 14 days of disaster.

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

Task Force Leader: Resident Additional Collector

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

Training in communication skills and methods. (Task Force)		
Warning		
Verify communication systems are working. (Task Force)		Within 24 hours of warning.
Mobilize Task Force.		Within 24 hours of warning.
Repair down systems and establish alternate communications systems. (Task Force)	Coordinate with Control Room.	Within 24 hours of warning.
Mobilize resources. (Task Force)		Within 24 hours of warning.
Facilitate telecom demands of other Task Force members. (Task Force)		
Disaster		
Check status of communications systems. (Task Force)		In 2-3 hours.
Identify damage to systems. (Task Force)		First information available in 2-3 hours.
Contact Control Room and other Task Forces on telecom needs. (Task Force)		In 2-3 hours.
Start repairs. (Task Force)		In 2 hours.
12 Hours		
Mobilize outside resources (may start earlier). (Task Force)		Continuous.
Complete plans for repairs and re-establishment of systems. (Task Force)	Coordinate with Control Room.	Continuous.
Liaise with Control Room and other Task Forces.		
Start shift system for staff. (Task Force)		At beginning of period.
48 Hours and Beyond		
Continue to assist other Task Forces. (Task Force)		
Continue repair work. (Task Force)		
Begin demobilization. (Task Force)		
Lessons Learned meeting.	Include Shelter, Food and Relief Supplies 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 ¹⁰³ 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.

Boundaries of the disaster(s).	Access point(s) to the disaster area(s).
Status of the transportation system.	Status of communication system
Disaster casualty information	Status of medical systems
Shelter / mass care information	Damage to utility system
Status of critical facilities	Status of security within the affected area(s)

Information on the humanitarian organisations within the area(s)

Conducting Detailed damage and loss assessment in the aftermath of sever 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:

- **Roads and Bridges:** This covers construction of all critical roads and bridges necessary to provide connectivity with immediate effect.
- **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.
- **Electricity:** Restoration of power supply is also critical to immediate recovery.
- **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.
- **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.
- **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 ¹⁰⁵temporary basis. Communities will have to be supported with relief shelter.
- **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 Aawas Yojna shall be sanctioned.
- **Food:** Supply of food in relief phase is more important. It becomes important to elicit support from various NGOs, Grain merchants and volunteers.
- **Debris Removal and Disposal of Dead Bodies:** Removal of debris or trees from transportation routes
for effective rescue and relief measures.

- 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.
- 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:

- Long term reconstruction of public infrastructures and social services damaged by the disaster.
- Re-establishment of adequate housing to replace that which has been destroyed.
- Restoration of jobs that was lost.
- 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 13th Finance Commission.

2. Prime Minister's Relief Fund:

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

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

3. Chief Minister Relief Fund:

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

4. Calamity Relief Fund

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

➤ **Finance and Budgeting**

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

- Line Department's own fund through various schemes and programmes;
- 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.-

- There shall be a plan for disaster management for every district of the State.
- 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.
- The District Plan shall be reviewed and updated annually.
- 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.
- The District Authority shall send a copy of the District Plan to the State Authority which shall forward it to the State Government.
- 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:

Drills and Rehearsals

Recommendations from all Depts. in their Annual DM Report

Lessons learnt from Disasters in other Districts, States and countries

Directions from GSDMA, Ministry of Home Affairs, NDMA, Government etc...

➤ **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.

➤ **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:

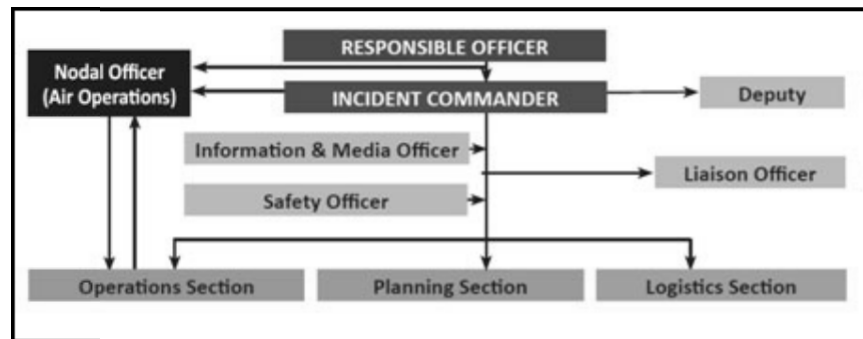
The Incident Response System (IRS) is an effective mechanism for reducing the scope for ad-hoc measures in response. It incorporates all the tasks that may be performed during DM irrespective of their level of complexity. It envisages a composite team with various Sections to attend to all the possible 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 R O 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 Conferance 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:

- 108 EMRI Ambulance have their Spot in every Taluka Hq. and all City..
- 8 Nagarpalika have their Fire Fighting Equipments.
- 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 Predictions, 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
INCIDENT COMMANDER	Resident Additional Collector	
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)	
OPERATIONS SECTION CHIEF	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	
Response Branch Director	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		
Transportation Branch Director	ARTO-Amreli	
Road Group		
Group in-charge		
Vehicle Coordinator	Sub inspector, RTO,Amreli	
Loading-in-charge/Unloading – in-charge	All Depo Manager, Bus Station	
Rail Group	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	
Air Operations Group	As Appointed by District	
Group in-charge-Air operations		
Helibase/Helipad-in-charge	Ex.Engineer R and B State	
Loading/Unloading –in-charge		
PLANNING SECTION CHIEF	Resident Additional Collector	
Resource Unit	DEOC Staff & District Project Officer-GSDMA	
Chief –in-status Recorder	Dy. Mamlatdar, Recode cell	
Situation Unit	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	
Documentation Unit	DEOC Staff & District Project Officer -GSDMA	
Demobilisation Unit	DEOC Staff & District Project Officer-GSDMA (
Technical Specialist		
LOGISTIC/ FINANCE SECTION CHIEF	Dy. DDO	
Service Branch Director		
Communication Unit	Ex. Eng. GEB/R&B, General Manager BSNL	
Medical Unit	CDHO	
Food Unit	DSO	
Support Branch Director	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	
Finance Branch Director	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.
- 5.

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

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

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

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

Each Department and 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 stockpiling of essential medicines, antivenom, 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 plan to progressively reduce various factors that contribute to high level of vulnerability to diseases of population affected by disasters

Epidemics

Preventive Activities:

- Supply of safe drinking water, water quality monitoring and improved sanitation
- Vector Control programme as a part of overall community sanitation activities
- Promotion of personal and community latrines
- Sanitation of sewage and drainage systems
- Development of proper solid waste management systems
- Surveillance and spraying of water bodies for control of malaria
- Promoting and strengthening Primary Health Centers with network of para professionals to improve the capacity of surveillance and control of epidemics
- Establishing testing laboratories at appropriate locations to reduce the time taken for early diagnosis and subsequent warning
- Establishing procedures and methods of coordination with the Health Department, other local authorities/departments and NGOs to ensure that adequate prevention and preparedness
- 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 camp sites in the probable areas
- Promotion of animal insurance
- Tagging of animals
- Arrangement of stand-by 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

- Stockpiling 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 Pranchayat 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 toolkits 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 of 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 GSDRAFs 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 camp etc.
- Senior police officers to be deployed in control rooms at State & district levels during L1
- level deployment onwards.
- Deploy personnel to guard vulnerable embankments and at other risk points.
- Arrangement for the safety.

- Coordinates 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 programme 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 fire proof techniques.
- Making clearance of building plans by fire services mandatory.

Response Activities:

- Rescue of person strapped 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
- Stockpiling 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 of staff, Review and documentation.
- Development of checklists and contingency plans.

Energy : PGVCL

Prevention Activities:

- Identification of materials/toolkits 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 campaign 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 areas 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 systems especially on Do's and Don'ts on receipt of weather related warnings.
- Assist in providing lifesaving 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 roads 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 apart of the damage survey and relief distribution team 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 bamboo 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 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 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 programmes.

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 logistics 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 lifesaving, 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:

Taskforce Leader: District Information Officer

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

➤ Activation of the Plan

The District Disaster Response structure is activated on warning or occurrence of a disaster. Task Forces are activated 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 provided 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 need 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 given 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 restored.

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 cancell 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 respons emeasures with period and responsibility matrix for major stake holders should be given in annexure

Responsibility matrix for response functions

TASK FORCE ACTION PLANS

Coordination and Planning:

Coordinate early warning, response and recovery operations.

Task Force Leader : Collector

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Before a Disaster		
Establish disaster management structure to the village level. (DDMC)	Link 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)	Involve ment of GSDMA	On-going
Check warning, communications and other systems (DDMC), including the use of drills		On-going
Warning		
Hold Crisis Management Committee (Collector)	Communications between Districts and with State Control Room	On receipt of warning.
Mobilize task forces at all levels (District, Taluka, village depending on disaster) (CMC, Telecommunications, Media Task Forces)	Communication 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.	Time frame
Disaster		
Start Search, Rescue and Evacuation activities. (CMC)	SAR Task Force operational	Immediately
Begin Collecting Information on extent of damage and areas affected. (CMC)	Assessment team 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 outsider resources (CMC)	Information on damage and needs	Started in 5 hours
Provide Public Information (CMC, Media Task Force)		should be started in 6 hours)
12 Hours		
Begin regular reporting on actions taken and status by Task Forces. (Task Forces)	Operating communication 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 communication systems	Start at 12 hours
Shift focus of effort to relief. (CMC)		Open
Restore key infrastructure (CMC through Public Works and other Task Forces)		Before 48 hours
48 hours		
Continue review and reassessment of operations (CMC)	Information on operations	
Conduct broad damage assessment (CMC and Damage Assessment Task Force)		
Establish Temporary Rehabilitation Plan (CMC)		
Begin demobilization based on situation. (CMC)		
Focus on creating a sense of normalcy. (CMC)		Before 72 hours
72 hours		
Start Rehabilitation activities. (CMC)	Plan	
Conduct detailed survey of damage and needs. (CMC and Damage Assessment Task Force)		
Begin regular reporting on operations	Information on operations	As early as possible
Restore all public and private sector services (CMC)		As early as possible
Lessons Learned meeting. (CMC and others)		After 2 weeks
Final Report/Case Study (CMC)		After activities completed

Warning:

Collection and dissemination of warnings of potential disasters

Task Force Leader: Resident Additional Collector

Actionand (Who Should Take It)	Requirements or Conditionstobemet for the action can occur.	Timeframe
Before a Disaster		
Verifycommunicationandwarningsystemsare functioning - drills		Every 15 days
Havewarningmessagespreparedinadvance.		
Warning		
Receiveanddispatchwarnings. (Task Force)	Coordinate with Telecommunications Task Force	As received.
Verify warnings received and understood. (Task Force)		Within 1-2 hours of dispatch.
Independentlyconfirmwarningsifpossible (Task Force)		As timeallows.

Law and Order:

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

Task Force Leader:District Superintendent of Police

Actionand (WhoShouldTakeIt)	Requirements or Conditionstobemet for the action can occur.	Timeframe
Before a Disaster		
Evaluate expected disaster needs verses normal resources. (Task Force)		Completedin8 days.
Estimate personnel and resources needed for disasters. (Task Force)	Based on standard for number of security personnel per population depending onseverityofdisaster	Completed in one week
PlanningandcoordinationwithRevenue Dept.(TaskForce)		
Conductdrills,includingpublicawareness raising. (Task Force)	Includesparticipation of Media Task Force	Every 45 days

Actionand (Who Should TakeIt)	Requirements or Conditionstobemet for the action can occur.	Timeframe
Warning		
Verifycommunicationssystem.(Wireless Inspector)		1-2hoursofwarning
AlertpoliceandotherTaskForcemembers (Superintendent of Police)		1-2hoursofwarning
Implement duty distribution SOP for personnel and other resources. (Superintendent of Police)		1-2hoursofwarning
Develop preliminary estimate ofrequirements to support other Task Forces. (Superintendent of Police)		1-2hoursofwarning
Disaster		
Getordersondeployingpersonnelfrom Control Room. (Superintendent of Police)	Operating communications system	Immediately
Determinestatusofstaffandfacilities.(Superintendent of Police)	Operating communications system	1-2hoursofdisaster
Deployadditionalstaff.(SuperintendentofPolice)	Transportavailable	2-3hoursof disaster
Monitor resources. (Superintendent of Police)		1 hour of disaster
EstablishVVIPunit.(Superintendentof Police)		Immediately
Request additional resources, if needed. (Superintendent of Police)	Operating communications system	4hoursofdisaster
12 hours		
Institute regular reporting. (Task Force)	Operating communications systems	At start of period
Begin staff rotation. (Task Force)		At start of period
Address crowd control problems. (Task Force)		As needed
Implementanti-looting/anti-theftSOP.(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.	Time frame
Provide information to public, e.g., road status. (Task Force)	Involves Control Room, Media Task Force, and Deputy Magistrate	As needed.
48 hours		
Implement a Force Management Plan (increase, reduction, redeployment, of forces). (Superintendent of Police)		From start of period
Plan for return to normal ((Superintendent of Police, Task Force, Control Room)		From 72 hours after the disaster
Conduct Lessons Learned Session (Task Force with input from other parties.)		1 week after the disaster
Final Report		2 weeks after the disaster

Search and Rescue (including evacuation):

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

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

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

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
48 hours		
Demolish/Stabilize damaged buildings in cooperation with Public Works Task Force.	Logistics Task Force, workers, 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.
72 hours		
Lessons Learned meeting. (Task Force and others)		After 2 weeks.
Final Report. (Task Force)		After major activities completed.

Public Works:

Provide the personnel and resources needed to support local effort 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.	Time frame
Before a Disaster		
Inventory of personnel, equipment and status of infrastructure. (Task force)	Link to UNDP project data based development.	One week before warning.
Identify critical infrastructure. (Task Force)	Need to define what is critical infrastructure.	Before warning.
Identify alternate transport routes and publish map. (Task Force)		Before warning.
Plan for prioritized post-disaster inspection of infrastructure. (Task Force)		
Establish and maintain a resources and staffing plan. (Task Force)		
Plan to provide sanitation and other facilities for shelters. (Task Force)		

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

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Begin reporting on operations (Task Force)		Starting at 3 days
Reconditioning, repair and replace equipment and other resources. (Task Force)		Based on nature of disaster
Plan and start demobilization. (Task Force)		Starting at 3 days
72 hours		
Develop long term restoration plan and start 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
Before a Disaster		
Establish water availability, capacities, reliabilities and portability. (Task Force)	Standard of 20 liters of drinking water per person per day.	3 months before warning.
Plan for alternate water delivery and storage (Task Force)	May need tankers, tanks, generator set.	3 months before warning.
Secure new and additional equipment. (Task Force)	Requires funding.	
Secure extra stocks of chemicals, expendable supplies and equipment. (Task Force)	May require additional funding.	3 months before warning.
Open Water Control Room in Monsoon. (Task Force)		Done.

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

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

Food and Relief Supplies:

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

Task Force Leader : District Supply Officer

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

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Warning		
Pass on warning. (Task Force)		Within 12 hours of receipt of warning.
Alert NGOs to prepare food. (Task Force)	Contact with NGOs.	Within 12 hours of receipt of warning.
Verify stock levels and make distribution plan. (Task Force)	Possible cooperation with Logistics Task Force.	Within 48 hours of receipt of warning.
Alert transport contractor to prepare for transport. (Task Force)	Coordinate with Logistics Task Force.	Within 5 hours of receipt of warning.
Mobilize staff. (Task Force)		Within 6 hours of receipt of warning.
Disaster		
Receive and respond to instructions from Control Room. (Task Force)		As received.
Monitor conditions of stocks and facilities. (Task Force)	Need for communications.	
Develop distribution plan. (Task Force)	Need information on needs and locations.	As requested by Control Room.
Order food packets and provide supplies as needed. (Task Force)	Coordination with Logistics Task Force.	Per distribution plan.
Establish relief supplies reception centers. (Task Force)	Coordinate with Control Room and Logistics Task Force.	As required.
12 Hours		
Start distribution operations. (Task Force)	In coordination with Logistics and Shelter Task Forces.	At beginning of period.
Formalize reporting, communications and monitoring. (Task Force)		Completed by 48 hours.
Start staff rotations 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 Conditionstobemet for the action can occur.	Timeframe
Begin public announcement of distribution plan and standards. (Media Task Force)		Underwayin48 hours.
48 Hours		
Shifttonormaloperations.(Task Force)		Within1week.
Reconcilereceiptsanddistributionrecords. (Task Force)		Within30days.
Continue providing relief to special areas/populations.(Task Force)		For15daysfrom the disaster
72 Hours		
Restore Public Distribution System. (Task Force)		From 1 weekafte rthedisaster.
Lessons Learned meeting.		Within14days

Power:

Provideresourcestore-establishnormalpowersuppliesandsystemsinaffected communities

TaskForceLeader:SuperintendingEngineer,GujaratElectricityBoard

Action and (Who Should Take It)	Requirements or Conditionstobemet for the action can occur.	Timeframe
Before a Disaster and Warning Phases		
Developinventoryofcurrentstatusofpowersystema ndresources.(GujaratElectricityBoard –GEB)		
Establishminimumstocklevelsandprocure necessary additional stocks. (GEB)		
Conductmonthlymeetings.(GEB)		On-going
Developcontactlists.(GEB)		
Conductinformalhazardandriskassessment. (GEB)		Completed.
Developdisasterplan.(GEB)		
Disaster		
AssessimpactaccordingtoSOP. (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

	Conditionstobemet for the action can occur.	
Collectmoreinformation.(GEB)		
Mobilizeadditionalresources. (GEB)	Coordination with ControlRoomandother Task Forces.	
Check for unforeseen contingencies.		
12 Hours		
Reviseplansbasedonfeedbackandassessments. (GEB)		Continuous
Monitorstatusofactions. (GEB)		Continuous
Beginstaffrotationplan.(GEB)		Atbeginningofperiod.
Disseminatepublicinformation.(MediaTask Force)		Atbeginningof period.
Securesupportforstaff(food,lodging)from NGOs. (GEB)		
Assure security as needed. (Law and Order Task Force)	CoordinatewithControlRoom.	
Establish constant communications on needs, requirements and resources with Control Room and GEB/HQ.		
48 Hours		
Lookforimprovementsinefforts. (GEB)		
Reinforcecentralcoordination.(GEB)		
Conductregularcoordinationmeetingswith other actors. (GEB)		
Beginformaldocumentationofefforts. (GEB)		
72 Hours		
Reviewshiftplanforsafety.(GEB)		
Planforreturntonormal,includingadditional security if needed. (GEB)	InvolvementofLawand Order Task Force.	

Public Health and Sanitation

(Including first aid and all medical care):

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

Task Force Leader: Chief District Health Officer

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

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

Animal Health and Welfare:

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

Task Force Leader: Deputy Director, Veterinary and Animal Husbandry

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

Shelter:

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

Task Force Leader : District Primary Education Officer

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Timeframe
Before a Disaster		
Develop shelter operating procedures. (Task Force)		
Develop inventory of shelters (location, capacity,). (Task Force)	SDRN updating, project inventory.	On going
Provide information to other Task Forces on location of shelters. (Task Force)	Logistics, Water, Power, SAR, Food/Relief Supplies Task Forces and Control Room	
Training for shelter managers. (Task Force)	Need training module.	
Warning		
Mobilize shelter managers. (Task Force)		Within 6 hours of warning.
Review shelter locations for operating status. (Task Force)	Communications needed.	Within 6 hours of warning.
Open shelters as instructed.	Coordination with Control Room.	Within 6 hours of warning.
Mobilize additional resources for shelters and camps. (Task Force)	Cooperation with Logistics, Food and Relief Supplies, Water and Power Task Forces.	Within 6 hours of warning.
Provide public announcements on locations and status of shelters. (Media Task Force)		Within 6 hours of warning.
Disaster		
Begin 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
Providesupportandassistancetooccupants. (Task Force)	Liaise with Animal Task Force on management of animal and with Health Task Force on health care.	
12 Hours		
Continue operations. (Task Force)		Continuously
Monitor shelter status and movement of people. (Task Force)		Continuously
Mobilizeadditionalresources.(TaskForce)	CoordinatewithControlRoomandLogisticsTask Force.	Continuous.
48 Hours and Beyond		
BeginDemobilizationasappropriate.(Task Force)		
Beginreconditioning/repairstoshelters.(Task Force)	In cooperation with Public Works Task Force.	As needed.
LessonsLearnsession.(Task Force)	Involvement of other Task Forces and evacuees.	14 days after completion of operations.
Final Report. (Task Force)		1 month after completion of activities.

Logistics:

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

Task Force Leader : District Development Officer

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

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

Damage Assessment and Survey:

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

Task Force Leader: Resident Additional Collector

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

	Conditionstobemet for the action can occur.	
12Hours		
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.	
CoordinatewithotherTaskForces.(TaskForce)		
Beginstaffrotationandsecuremorestaffasneeded.		Atbeginningofperiod.
48Hours		
Prepare detailed damage, losses, needs assessment and long term recovery plans. (Task Force)	Coordinate with other Task Forces.	3-5 days afterdisaster.
Coordination of requirements, plans and activities.	WorkingthroughControl Room and Coordination and Planning Task Force.	Continuous.
72Hours		
Lessons Learned meeting.	IncludeShelter,Foodand Relief Supplies in meeting.	Within14days of disaster.

Telecommunications:

Coordinateandassureoperationofallcommunications systems (e.g.,radio,TV,phones,wireless)requiredtosupportearlywarningorpost-disasteroperations.

TaskForceLeader:ResidentAdditionalCollector

Actionand(WhoShouldTakeIt)	Requirements or Conditionstobemet for the action can occur.	Timeframe
BeforeaDisaster		
Develop telecommunications inventory and SOPs. (Task Force)	Telecommunications training.	
CoordinatewithotherTaskForces.(TaskForce)		
Identifysitesofvulnerablesystemcomponents (e.g., switches). (Task Force)		
Ensureredundancyincommunicationssystemss. (Task Force)	May require close liaison with private sector providers.	
Actionand(WhoShouldTakeIt)	Requirementsor	Timeframe

	Conditionstobemet for the action can occur.	
Trainingincommunicationskillsandmethods. (Task Force)		
Warning		
Verifysystemcommunicationsareworking. (Task Force)		Within24hours of warning.
Mobilize Task Force.		Within24hours of warning.
Repairdownsystemsandestablishalternate communicationssystems.(TaskForce)	CoordinatewithControl Room.	Within24hours of warning.
Mobilizeresources.(Task Force)		Within24hours of warning.
Facilitate telecom demands of other Task Force members. (Task Force)		
Disaster		
Check status of communications systems. (Task Force)		In 2-3 hours.
Identifydamagetosystems.(Task Force)		First information available in 2-3 hours.
ContactControlRoomandotherTaskForceson telecomneeds. (Task Force)		In 2-3 hours.
Startrepairs.(TaskForce)		In 2 hours.
12 Hours		
Mobilizeoutsideresources(maystartearlier). (Task Force)		Continuous.
Complete plans for repairs and re-establishment of systems. (Task Force)	CoordinatewithControlRo om.	Continuous.
LiaisewithControlRoomandotherTask Forces.		
Startshiftsystemforstaff.(TaskForce)		Atbeginningofperi od.
48HoursandBeyond		
ContinuetoassistotherTaskForces.(Task Force)		
Continue repair work. (Task Force)		
Begin demobilization. (Task Force)		
Lessons Learned meeting.	IncludeShelter,Foodand Relief Supplies	Within14days of disaster.
Final Report. (Task Force)	Involve other Task Forces.	Within one months of end of operations.

Chapter 11

MRO (Mass Rescue Operation) at Sea

1. Introduction

A mass rescue operation (MRO) is one that involves the need for immediate assistance to large numbers of persons in distress such that capabilities normally available to search and rescue (SAR) authorities are inadequate. Flooding, earthquakes, terrorism, casualties in the offshore oil industry, accidents involving releases of hazardous materials and major aircraft or ship incidents are examples which, because of their magnitude, may need to use the same resources as would be needed to carry out mass maritime or aeronautical rescue operations.

MROs are relatively low-probability high-consequence events. Effective response to such major incidents typically requires immediate, well-planned and closely co-ordinated large-scale actions and use of resources from multiple organizations. Intense and sustained high priority lifesaving efforts may need to be carried out at the same time and place as major efforts to save the environment and property. Huge amounts of selected information will need to be readily available at the right times and the right places not only to support the response efforts, but to meet the needs of the media, public and families of the persons in distress, which may number in the hundreds or thousands.

2. Policy

It is the policy of the signatory agencies to provide anational plan for coordinating Maritime Search and Rescue (M-MAR) services to meet the national needs as well as regional and international commitments. Guidance for implementing this plan is amplified in the National Maritime Search and Rescue (MAR) manual, International Aeronautical and Maritime Search and Rescue (IAMMAR) manual and other relevant directives of the agencies to this plan.

3. Purpose

This plan construes by inter-agency agreement, the effective use of all available resources and facilities to assist persons and property in potential or actual distress at sea within the Indian Search and Rescue Region (ISRR) regardless of the nationality or circumstances in which that person is found.

4. Objectives

Having known the obligations under several international conventions, agreements and instruments to render assistance to persons in distress at sea and to the establishment of effective MAR services, the participating agencies to this plan recognise the need for cooperation and co-ordination of activities regarding safety on and over the sea and desire to :-

- (a) Provide a national plan for co-ordinating MAR services, effective use of all available resources, mutual assistance and efforts to improve such co-operation and services for greater protection of life and property with economy of effort.
- (b) Support in implementing the provisions of International Maritime MAR

5. Terms and Definitions

Following are the terms and definitions based on International Maritime Organization usage for M-MAR:-

- (a) **MAR Coordinator.** A person or agency with overall responsibility for establishing and providing MAR services within the SRR and ensuring that planning for those services is properly co-ordinated for which India is obliged under Maritime MAR Convention 1979.
- (b) **Search and Rescue Region (SRR).** An area of defined dimensions recognized by International Maritime Organisation (IMO) and International Civil Aviation Organisation (ICAO) or other cognizant international body and associated with a Rescue Co-ordination Centre, within which MAR services are provided.
- (c) **Search and Rescue Sub-region (SRS).** A specified area within a SRR associated with a rescue sub-centre.
- (d) **MAR Services.** The performance of distress monitoring, communication, coordination and MAR functions, including provision of medical advice, initial medical assistance or medical evacuation, through the use of public and private resources including co-operating aircraft, vessels and other craft and installations.
- (e) **Maritime Rescue Co-ordination Centre (MRCC).** A unit responsible for promoting efficient organisation of MAR services at sea and coordinating the conduct of maritime - MAR operations within a SRR.
- (f) **Maritime Rescue Sub-Centre (MRSC).** A unit subordinate to a MRCC established to complement the latter according to particular provisions of the responsible authorities.
- (g) **Search and Rescue Unit (SRU).** A unit composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations.
- (h) **On-scene Co-ordinator (OSC).** A person designated to co-ordinate MAR operations within a specified area.
- (j) **MAR Mission Co-ordinator (SMC).** An official temporarily assigned to coordinate response to an actual or apparent distress situation.
- (k) **Search and Rescue Point of Contact (SPOC).** Rescue Co-ordination Centers and other established and recognized national points of contact which can accept responsibility to receive COSPAS-MARSAT alert data to enable the rescue of persons in distress.

(l) Mission Control Centre (MCC). Part of the COSPAS-MARSAT System that accepts alert messages from the local user terminal(s) and other mission control centers to distribute to the appropriate Rescue Co-ordination Centers or other search and rescue points of contact.

(m) Search and Rescue Data Provider (SDP). A source for a Rescue Coordination Centre to contact for obtaining data to support search and rescue operations, including emergency information from communications equipment registration databases, ship reporting systems and environmental data systems (e.g. weather or sea current).

Amreli district coastal Geographical Sea Area.

Region	Saurashtra
Headquarter	Amreli
Coastal area	Rajula and Jafrabad Taluka
Location of Port	Pipavav Port

6. Participating Agencies

The participating agencies to this plan are:-

(a) **Ministry of Shipping.** Ministry of Shipping carries out broad responsibility w.r.t. Navigation and Port State Control of vessels and transportation safety. The Director General of Shipping, implementing agency for international conventions on maritime matters, shall promulgate all MAR preventive programmes on advice from the National Maritime MAR Board for commercial vessels operating in the Indian waters. They also maintain a database of Maritime Mobile Service Identity (MMSI) numbers of all vessels registered with them.

(b) **Indian Coast Guard.** Indian Coast Guard has been designated as the national coordinator for the conduct of maritime MAR operations on and over these sea areas of the Indian SRR. Towards this, the Indian Coast Guard develops, establishes, maintains and operates MAR facilities for maritime MAR operations. The operation is coordinated through Maritime Rescue Co-ordination Centres (MRCCs) and Maritime Rescue Sub Centres (MRSCs) located in maritime states of India.

(c) **Indian Navy.** Indian Navy has facilities and resources that are used to support their own operations. These facilities may be used for maritime MAR needs on a 'not-to-interfere' basis with military missions.

(d) **Indian Air Force.** Indian Air Force has MAR facilities for their own operations over land and sea. These facilities may be used for maritime MAR needs on a 'not-to-interfere' basis with military missions.

(e) **Shipping Industry.** Shipping industry operates a fleet of merchant ships for national use and promotes a safe merchant marine, which should assist and support when called upon in maritime MAR operations, in accordance with the national and international conventions and provisions.

(f) **Airports Authority.** Airports Authority of India undertakes air traffic control and maintains flight service facilities and shall provide information to assist in maritime MAR operations.

(g) **Meteorological Department.** Meteorological Department shall support MAR operations through timely input of weather messages, marine environment forecasts and warnings for the coastal and high seas and provide weather information on demand to co-ordinator and coordinating agency.

(h) Department of Space (DoS). Department of Space (DoS) shall provide satellite “alert” services as per the guidelines of COSPAS-MARSAT, for detection and location of aircraft, ships and individuals in potential distress situation that carry recommended distress beacons. DoS also maintains beacon registration data base, through web based access, containing unique identity of the beacon, vessel/aircraft type, owner and emergency contact details as provided by the users and also distributes the same to concerned rescue co-ordination centre for MAR mission planning.

(j) Chief Hydrographer. Chief Hydrographer to Govt of India shall assist the maritime MAR agencies by timely promulgation of navigational warnings through NAVAREA and other measures.

(k) Customs and Excise. Customs and Excise provide rescue facility assistance, and equipment clearance during MAR operation involving foreign crew / passengers.

(l) Major Ports. Major Ports provide rescue facility assistance to the MAR agencies during MAR operations occurring near ports and offshore areas. The major ports shall also provide berthing, towing, tug assistance to MAR agencies, when requested.

(m) Department of Telecommunication (DoT). Department of Telecommunication (DoT) on advice from the coordinating agency, promulgates rules and regulations for non-government use of wireless and radio facilities for promoting safety of life and property and co-operation in MAR operations by relaying inputs obtained from Coast Radio Stations.

(n) Coastal State Government. Coastal State Government shall provide assets, emergency medical and other facilities that would contribute to the effective MAR operations when requested by the coordinating agencies.

(p) Fishing Community. Fishing Community representing fisher- folk and operating around our coasts shall provide assets to the coordinating agencies, when requested to augment MAR effort.

(q) Sailing Vessel Operators. Sailing vessels operating around our coasts for commercial purposes shall provide assistance to the coordinating agencies, when requested to augment MAR effort.

(r) Director General of Civil Aviation (DGCA). Director General of Civil Aviation (DGCA) is to provide an updated list of civil aircraft registered in India, coordinate flexi-use of air space by civil and military air traffic and issue air safety notices during a particular MAR operation involving various air units.

(s) Bureau of Immigration. Bureau of Immigration to provide rescue facility by expediting immigration clearance during MAR operation involving foreign crew /passengers and also provide Regional and Foreign Language Experts whenever requisitioned by MAR agencies.

(t) Minor Ports. Minor Ports to provide rescue facility assistance to the MAR agencies during MAR operations occurring near ports and offshore areas. The minor ports shall also provide priority berthing, towing, and tug assistance to MAR agencies when requested.

(u) Private Ports. Private Ports to provide rescue facility assistance to the MAR agencies during MAR operations occurring near ports and offshore areas. The private ports shall also provide priority berthing, towing, tug assistance to MAR agencies when requisitioned by MAR agencies.

(v) Oil Exploration Agencies. Oil Exploration agencies (Government, PSUs and Private) to provide offshore Supply Vessels, Tugs, helicopters, extend helipad of oil platforms/drill ships, medical facility whenever requisitioned by MAR agencies.

(w) Airlines. Airlines (Government, PSUs and Private) are to extend facilities to maritime MAR agencies whenever requisitioned. The airlines to provide passenger list of the aircraft in distress at sea and diversion of other aircraft, if feasible, to locate vessel/aircraft in distress.

(x) Marine Police/Coastal Security Police (CSP). Marine Police/ Coastal Security Police (CSP) shall provide boats and other assistance to the coordinating agencies, when requested to augment MAR effort.

7. Indian Search and Rescue Region (ISRR)

- SRR is established by a country solely to ensure the primary responsibility for coordinating or providing effective MAR services, communication network and routing of distress alerts to MRCC responsible for that geographic area. SRR should, as far as possible, be contiguous and not overlap.
- India's maritime and aeronautical SRR will be harmonised with each other to the extent practicable, recognising that the lines separating SRR must be agreed by the countries having neighbouring SRRs. The delimitation of SRR is not related to and shall not prejudice the delimitation of any maritime boundary between neighbouring countries. The Indian SRR limits need to be resolved with the neighbouring countries for publishing in the documents of the IMO and ICAO.
- SRR may be sub-divided into sub-regions as long as delimitation coincides with relevant SRR limits. Where this is not practicable, changes to the international limits should be taken up with the appropriate international organisation through proper channel by the maritime MAR Co-ordinator.
- Each SRR is to be associated with a MRCC. The MRCC is responsible for coordinating the conduct of MAR operations within a SRR. The standards and guidance for the MRCCs has been developed by the IMO and can be found in international conventions and IAMMAR manual. They are to be kept in the MRCCs for reference.

8. PARTICIPANT RESPONSIBILITIES

Primary Responsibility

MAR coordinator is responsible for arranging MAR services and establishing the MRCCs within the SRR. The system established should meet International standards and to facilitate integration into the global maritime MAR system support outside Indian Search and Rescue Region.

1. MAR co-ordinator may support maritime MAR operations outside the Indian SRR when requested, consistent with the expertise, capabilities and legal authority. This is in keeping with India's concern for safety of life at sea and the humanitarian nature of MAR and the advantages of national and international co-operation.
2. The Rescue Co-ordination Centre compatible with their capabilities and expertise will support maritime MAR operations in the neighbouring States territorial and international waters beyond Indian SRR when requested, in accordance with the international laws. In such cases, MAR

operations shall, as far as practicable, be co-ordinated by the MRCC, which has authorised entry, or such other authority designated by the State concerned.

3. In carrying out Maritime MAR support functions with other nations, such as training, exercises, and liaison, each Participant will co-ordinate its activities with other Participants having maritime MAR expertise with respect to the support concerned.
4. While it is appropriate, that the Participants have the authority to do so, to co-operate and maintain liaison with maritime MAR authorities of other nations, such support should be dealt in co-ordination with the maritime MAR Co-ordinator and neighbouring MAR authorities. Such co-ordination will normally include Indian Coast Guard Headquarters, New Delhi, to ensure consistency with India's obligations under international agreements to which India is a Party, and compliance with the IAMMAR Manual and other relevant international guidance relevant to implementing such agreement.
5. Participants should not accept MAR Coordinator or MRCC role for maritime MAR operations of SRRs for which other nations are responsible. However, the Participants may provide and support maritime MAR operations in such areas when:
 - a) Assistance is requested (normally this should be in accordance with MRCC to MRCC procedures prescribed in the IAMMAR Manual).
 - b) Indian citizens are involved or Indian facilities become aware of a distress situation to which no other suitable facilities are responding, or where other available MAR services appear to be inadequate.
6. When assisting maritime MAR authorities of other nations, or agencies or organisations supporting these authorities, Participants to this Plan should ensure that : -
 - (a) Have expertise and appropriate agreement to do so.
 - (b) Provisions of conventions or agreements to which India is a Party are not violated.
 - (c) Relevant procedures set forth in the IAMMAR manual, National Maritime MAR manual and other relevant directives are known and complied.
 - (d) Such efforts are carried out in consultation with Participants to this Plan.
 - (e) Authorities assisted in that country are responsible for the MAR functions.
7. Policies on rendering assistance in neighbouring States' territorial waters must have the objective of balancing concerns for saving Lives, for sovereignty, and for national security. Provisions for territorial entry should be addressed in international MAR

agreements as discussed below, and care should be taken to ensure that such agreements are compatible with the national policies.

8. Participants to this Plan if addressing maritime MAR-related inquiries or proposals from other nations or organisations outside India, or when hosting or attending international meetings on maritime MAR, care should be taken that interested Indian agencies, organizations, or persons are consulted and involved as appropriate.

National Search and Rescue Board

The National Search and Rescue Board is the patron of this Plan. The Board, in consistent with applicable laws and executive orders is to :-

- a) Formulate and promulgate National MAR Plan.
 - b) Co-ordinate measures to be adopted by Participating agencies and formulate contingency plan.
 - c) Review and update matters relating to the Plan affecting more than one Participant, including recommendations for Plan revision or amendment.
 - d) Define functions to be performed by participating agencies.
 - e) Attending to matters relating to Maritime MAR as per IMO requirements in consultation with Ministry of Shipping.
9. The Board in particular, is intended to accomplish the following:-
 - a) Oversee this Plan and develop and maintain National Maritime MAR Manual. The applicability of the rules for MAR for defence forces should be in conformity with the provisions as enshrined in their respective Acts and practice in vogue.
 - b) Provide a standing national forum for co-ordination of administrative and operational Maritime MAR matters.
 - c) Provide an interface with other national, regional, and international organisations involved with providing or supporting maritime MAR services.
 - d) Develop and maintain suitable guidance for implementation of this Plan, such as a National Maritime MAR manual, supplement to the IAMMAR Manual.
 - e) Promote effective use of all available national resources for support of M-MAR.

- f) Promote close co-operation and co-ordination with Armed Forces and other MAR communities for provision of effective maritime MAR services.
- g) Improve co-operation among Maritime and Aeronautical MAR communities for the provision of effective Maritime MAR services.
- h) Determine other ways to enhance the overall effectiveness and efficiency of M-MAR services, and to standardize procedures, equipment, and personnel training where practicable.

Maritime MAR Services

- 10. This Plan covers maritime MAR operations such as:-
 - a) Provision of initial assistance at or near the scene of a distress situation. (e.g., initial medical assistance or advice, medical evacuations, provision of needed food or clothing to survivors etc)
 - b) Delivery of survivors to place of safety or where follow up assistance can be provided.
 - c) Saving of property when it can be done in conjunction with saving lives.
- 11. Maritime MAR does not include operations such as:-
 - a) Air ambulance services, which did not result from a rescue or recovery operation.
 - b) Military operations, such as combat MAR or other types of recovery by military operations to remove military or civilian personnel.
 - c) Salvage operations.
 - d) Overall response to natural or man-made disasters or terrorist incidents.

Mutual Assistance

- 12. The Participants agree to co-operate:-
 - a) Support each other by pooling relevant facilities and resources as appropriate for M-MAR operations within the SRR
 - b) e, and respond to, requests for operational assistance between the designated MRCCs, MRSCs, of the Participants as capabilities permit.
 - c) Develop procedures, communications, and databases appropriate for coordination of facilities responding to distress incidents, and for co-ordination between the MRCCs, MRSCs of the Participants.
 - d) Follow applicable guidance of the IMO or other relevant international laws regarding M-MAR operational procedures and communications.

Charging for M-MAR Services

13. In accordance with customary international laws, when a nation requests help from another nation to assist a person(s) in danger or distress, if such help is provided, it will be done voluntarily, and India will neither request nor pay reimbursement of cost for such assistance.
14. Participants agree that maritime MAR services they provide to persons in danger or distress will be without subsequent cost-recovery from the person(s) assisted.
15. Participants are to fund their own activities in relation to this Plan unless otherwise arranged by the Participants in advance, and will not allow a matter of reimbursement of cost among them to delay response to any person in danger or distress.

PRINCIPLES ACCEPTED BY THE PARTICIPANTS

General

16. Participants coordinating operations should, consistent with applicable laws and executive orders, organise existing agencies and their facilities through suitable agreements into a basic network to assist military and non-military persons and property in actual or potential danger or distress, and to carry out obligations under customary international laws and instruments to which India is or may become a Party.
17. Participants will seek to keep political, economic, jurisdictional, or other such factors as secondary when dealing with lifesaving matters, i.e., where possible, what is best for lifesaving will govern their decisions.
18. Consistency and harmonisation will be fostered wherever practicable among plans, procedures, equipment, agreements, training, terminology, etc., for the various types of lifesaving and recovery operations, taking into account terms and definitions adopted internationally as much as possible.
19. If a distress situation appears to exist or may exist, rescue or similar recovery efforts will be based on the assumption that a distress situation does actually exist until it is known differently.
20. Assistance will always be provided to persons in distress without regard to their nationality, status, or circumstances.

21. Generally, cost-effective safety, regulatory, or diplomatic measures that tend to minimize the need for M-MAR services will be supported.
22. Recognising the importance of reduced response time to the successful rescue and similar recovery efforts, a continual focus will be maintained on developing and implementing measures to reduce the time required for :-
- a) Receiving alerts and information associated with distress situations.
 - b) Planning and coordinating operations.
 - c) Facility transits and searches.
 - d) Rescues or recoveries.
 - e) Providing immediate assistance, such as medical assistance, food and clothing to survivors, as appropriate.

Research and Development

23. Research and development efforts for MAR need to be undertaken for improvements in MAR services. The focus of such efforts usually, is to develop data, procedures or equipment which enables MAR services to be more effective. Finding ways to exploit new and emerging technologies for MAR to make it a common focus for research and development.
24. Research and development results should be shared with other maritimes to reduce the risk of duplicated efforts and to maximize the benefits of the results.

Training, Qualification and Certification

25. Training and experience are crucial for effective MAR response and efficient conduct of any operations. Officer-in-charge, MRCCs and MRCC/ MRSC staffs need specialized training in watch keeping, coordination of available resources, search planning and rescue planning. MAR co-ordinator has the responsibility to ensure an effective overall training programme. It will normally be the responsibility of the Officer-in-Charge (O i/c) of the MRCCs to ensure that personnel manning RCCs/MRCCs are adequately trained for undertaking MAR Operations. Qualification and certification processes are to be ensured, so that, sufficient experience, maturity and judgments are gained. During a qualification process, the individual must, by demonstration of abilities, show mental and physical competence to perform as part of a team. Officer-in-charge, MRCCs/MRSCs need to issue a certificate to all personnel prior independent watch keeping in MRCCs/MRSCs.

Validation of National MAR Plan

26. (a) The requirement of a MAR mission is called for without any prior notice or appointment. The agencies likely to be involved in the MAR operations are to be geared up in all respects so as to be ready to render assistance, if required. Also, the procedures involved in undertaking such an operation with various agencies on the scene are to be very well known to the agencies and also to the personnel of every faculty. Therefore, to ensure that everyone is prepared in all respects and work in cohesion, MAR training and exercises involving all the agencies are to be conducted periodically by simulating a MAR scenario. This will enhance the capabilities of the MAR system further and allow every agency to evaluate their capabilities to respond to any actual MAR requirement. The frequency of exercises will be as follows:-

(i) National level exercise - biennially

Involving national and international participants

(ii) Regional level exercise - annually

(b) Inter Agency Liaison

(i) All personnel involved in the MAR operations should maintain constant liaison with the MRCC and the co-ordinating MRCC should, in turn, maintain constant touch with the military authorities providing SRUs and other MAR agencies involved in the operation to help coordinate the activities, provide briefing and debriefing and keep Search & Rescue Mission Co-ordinator (SMC) informed on the SRU availability. Adequate background information must be provided so as to develop a picture on, what actions might have been taken by the missing craft and provide expertise about the craft to aid in search planning during all joint operations. This will also enable conduct of co-ordinated studies, review of procedures and equipment and recommendation of better method of operation. Any development in this regard should be informed to the SMC in an ongoing operation.

(ii) The inter agency liaison will enable review of MAR matters affecting more than one agency, including recommendations of participating agencies for revision and amendment of the plan. This will also encourage all the agencies involved to develop equipment and procedures to enhance the national MAR capability and promote coordinated development of all national MAR resources.

Maritime Search and Rescue (M-MAR)

27. Personnel associated with the MAR activities should be familiar with the International Convention on Maritime Search and Rescue, IAMMAR manual, National maritime MAR manual and other information applicable to M-MAR.
28. MAR principles and procedures of relevant customary international Conventions and IAMMAR Manual will serve as guidelines for co-ordination and conduct of MAR operations especially when dealing with other countries, organisations or jurisdictions. National maritime MAR manual and the MAR plan will be consistent with these international provisions to the extent practicable.
29. Indian Coast Guard will operate and maintain a ship reporting system (INDMAR) exclusively for maritime MAR operations, which is voluntary for ships transiting the Indian SRR. The information collated would enable identification of potential ship in the area to quickly respond to the distress situation. The ships send their data through the INMARSAT on entering SRR and every 24 hours thereafter and prior exiting the SRR. (This system will be used only for MAR with its information being treated as “commercial proprietary” as promised to the ships reporting).
30. Operational responsibilities for maritime MAR will generally be associated with internationally recognised geographic maritime SRR. Indian Coast Guard has been” assigned the responsibility for co-ordinating M-MAR operations in Indian SRR with other agencies and organisations providing support as appropriate.
31. Distress situations involving airborne aircraft ditching in sea, will be handled by the maritime MAR authorities (i.e. Coast Guard) in co-ordination with the aeronautical MAR authorities.
32. Agencies responsible for MAR operations under this Plan will:-
 - a. Keep information readily available on the status and availability of key MAR facilities or other resources, which may be needed for MAR operations.
 - b. Keep each other fully and promptly informed of operations of mutual interest, or which may involve use of facilities of another Participant.

33. MAR Co-ordinator will delegate to their MRCC the authority to:-
- a. Request assistance via the MRCC/MRSC of other nations, and to provide all pertinent information on the distress situation and the scope of assistance needed.
 - b. Promptly respond to requests for assistance from other MRCC/MRSC, including those of other nations.
 - c. Grant permission for entry into Indian waters for MAR facilities of other nations if need arises.
 - d. Make arrangements with customs, immigration, health or other authorities to expedite entry of foreign MAR facilities as appropriate.
34. MAR Co-ordinator will authorise the MRCCs to arrange promptly or in advance for entry of foreign rescue units into India should it ever become necessary. Such arrangements should involve appropriate authorities in India as well as proper authorities of the nation or MAR facility involved with the entry. Such entry may include over flight or landing of MAR aircraft, and similar for surface MAR units as circumstances dictate for fuelling, medical, or other appropriate and available operational support, or delivery of survivors. It could also be in response to a request made by the Indian MRCC to the MRCC of another nation for assistance of those facilities.
35. Operations of MAR facilities committed to any MAR mission normally should be coordinated, and directed, by an appropriate MRCC or MRSC consistent with the provisions of this plan.
36. On-scene co-ordination may be delegated to any appropriate unit participating in a particular incident by the MAR mission coordinator of a MRCC.
37. No provision of this Plan or any supporting plan is to be construed as an obstruction to prompt an effective action by any agency or individual to relieve distress whenever and wherever found.
38. MAR Co-ordinator shall arrange for the receipt of distress alerts originating from within SRR for which they are responsible, and ensure that every MRCC and MRSC can communicate with persons in distress, with MAR facilities, and with other MRCCs/MRSCs.

Armed Forces -Civilian Relationships

39. Arrangements between Armed Forces and civilian agencies should provide for co-operation among themselves, consistent with statutory responsibilities and assigned MAR functions.
40. Co-operative arrangements involving Navy, Air Force and Coast Guard commands should provide for the effective use of their facilities for maritime MAR on a not-to interfere basis with military missions, consistent with statutory responsibilities and assigned agency functions.
41. Participants with operational responsibilities should develop plans and procedures for effective use of all available MAR facilities and for contingencies to continue maritime MAR operations if military forces are withdrawn because of another emergency or a change in military missions.
42. Navy and Air force responsibilities under this Plan include support of maritime MAR on a not-to-interfere basis with primary military duties, in accordance with applicable national directives, plans, guidelines, agreements, etc.
43. To optimise delivery of efficient and effective MAR services, and, where practicable and consistent with agency authorities, provide the organisations and persons interested in supporting these services the opportunity to do so, all available resources will be used for maritime MAR. Certain state and local governments, civil and volunteer organisations, and private enterprises have facilities, which contribute to the effectiveness of the over-all MAR network, although they are not participants to this Plan.
44. To help identify, locate and quantify primary MAR facilities, Navy, Air force and Coast Guard commands may designate facilities which meet international standards for equipment and personnel training as MAR units (SRUs). (Such facilities need not be dedicated exclusively to the associated type of operations, and this designation is not intended to preclude use of other resources).
45. Recognising the critical role of communication in receiving information about distress Situations and co-coordinating responses, and noting that such responses sometimes involve multiple organisations and jurisdictions, the participants will work aggressively to develop suitable MAR provisions for :-

- a) Interoperability.
- b) Means of sending and receiving alerting.
- c) Means of identification.
- d) Effective provisions for equipment registration and continual access to registration data by MAR authorities.
- e) Rapid, automatic, and direct routing of emergency communications.
- f) High system reliability.
- g) Pre-emptive or priority processing of distress communications.

Assistance During National Disasters

46. National Disasters Management (NDM) Policy 2009 also stipulates general responsibilities for the armed forces during a national disaster. The NMMAR Board forms an important part of the Government's response capacity and the resource agencies are the immediate responders in all serious disaster situations along the coast and at sea. On account of its vast potential to meet any adverse challenge, speed of operational response and the resources and capabilities, the NMMAR Board through its resource agencies in past, has played a major role in emergency support functions including communication, search and rescue operations, health & medical facilities and transportation, especially in the immediate aftermath of a disaster. NMMAR Board will always remain prepared and will coordinate Search and Rescue (MAR) operation at sea by the resource agencies during national disasters like Tsunami and provide assistance to neighbouring countries whenever called upon by the Government.

Mass Rescue Operation (MRO)

47. Mass Rescue Operations (MROs) often need to be carried out and co-ordinated within a broader emergency response context that may involve hazards mitigation, damage control and salvage operations, pollution control, complex traffic management, larger-scale logistics, medical and coroner functions, accident-incident investigation, and intense public and political attention, etc. Efforts must often start immediately at an intense level and be sustainable for days or weeks.

48. MAR Authorities should co-ordinate MRO plans with companies that operate aircraft and ships designed to carry large number of persons. Such companies should share in preparation to prevent MROs and to help ensure success if they become necessary.

49. Since opportunities to handle actual incidents involving mass rescues are rare and challenging, exercising MRO plans is particularly important.

Suspension or Termination of Operations

50. Maritime MAR operations shall normally continue until all reasonable hope of rescuing survivors or victims has lapsed.

51. The responsible MRCC/MRSC concerned shall decide when to discontinue these operations. If no such centre is involved in coordinating the operations, the OSC may take this decision. If there is no OSC involved, the decision will be made at appropriate level of the chain-of-command of the MAR facility conducting the operations.

52. When a MRCC/MRSC or an appropriate authority considers, on the basis of reliable information that a rescue or recovery operation has been successful, or that the emergency no longer exists, it shall terminate the MAR operations. The authority terminating should inform the authority, facility or service which has been activated or notified.

53. If an operation on scene becomes impracticable and the MRCC/MRSC or an appropriate authority concludes that survivors might still be alive, it may temporarily suspend the on-scene activities pending further developments. They should promptly inform the authority, facility or service which has been activated or notified. Information subsequently received shall be evaluated and operations resumed when justified based on the information.

Entry in to Force Amendment or Termination

This Plan:-

- a. Shall enter into force effective from 05 Apr 2013.
- b. May be amended by written agreement among the Participants.
- c. May be terminated or superseded by a new Plan or by written agreement among the Participant.
- d. This Plan will be reviewed after five years.

1. Some of the important crisis area sunder

- (a) Hostage or terrorists situation requiring specialized handling.
- (b) Attempts by terrorists/extremists to create a major scare of poisoning or use of nuclear / biological / chemical weapons.
- (c) Assassination or attempted assassination or kidnapping or disappearance of an Indian or Foreign high dignitaries.
- (d) Mutiny.
- (e) Migration/Exodus/Infiltration.

2. Composition and Function of the various committees

(1) State crisis management committee: -

To deal with the crisis situation in the state, Gujarat State Government has constituted the state crisis management committee with the following members.

Sr. No.	Name & Address (Member)	Name & Address (Alternate Member)
1	Chief Secretary, Block-1, III Floor, Sachivalaya Gandhinagar, T.No.(O) 079-23250313, Mob.No.9974806112	Addl.Chief Secretary, Home, Block-2, Ist Floor, Sachivalaya Gandhinagar, T.No.(O) 079-23250502, 3,5 Mob.No.9974806117
2	Addl.Chief Secretary, Home, Block-2, Ist Floor, Sachivalaya Gandhinagar, T.No.(O) 079-23251501, 591, 507 Mob.No.9974806117	Secretary L&O, Block-1 9th Floor, Sachivalaya Gandhinagar, T.No.079-232522156 Mob.No.9978406119
3	Principal Secretary (Revenue) & Rilif Commissioner, Block-11 IV Floor, Sachivalaya Gandhinagar, T.No.079-23251509, 06, Mob.No.9974806109	Director of Rilif/Dy.Sec.Rilif, Block-11 7th Floor, Sachivalaya Gandhinagar, T.No. 079-23251611, 12 Mob.No.997406087,
4	C.E.O., G.S.D.M.A Udhog Bhuvan Gandhinagar, T.No.079-23259502, Mob.No.9978407002	Addl. C.E.O. G.S.D.M.A, Udhog Bhavan Gandhinagar, Mob.No., 9978405655

5	DGP&IGP,PoliceBhavanIst Floor Gandhinagar,T.No.079- 23246333,23259989, Mob.No. 9978406195	Addl. D.G.P. L & O, Police Bhavan Ist Floor Gandhinagar,T.No.079-23254222, Mob. 9978406198
6	TheI.G.P.Inte.,PoliceBhavanIstFloor Gandhinagar,T.No.079-23254301,Mob. 9978406251	DIGP(CoastalSecurity),DafnanaAhmedabad, T.No.079-23254314,Mob.No.9978405299
7	Joint Director, Central IB, Sagar Appartment,SVPenclave,Bodakdev, Ahmedabad. T.No.079-22685880,	Dy. Director, Central IB, Sagar Appartment, SVPenclave,Bodakdev,Ahmedabad.T.No.079- 22685880.

State level police control room is activated at Gandhinagar whose telephone No,is079-23251914,23251912,23251900,23251916,23251902and Fax no.is 079-23246329.It could be contacted anytime during any typeof crisis.

The Nodal department will be meanly responsible for taking all action to deal with a particular crisis situation. Home Department will be the Nodal Department for the above crisis situation.

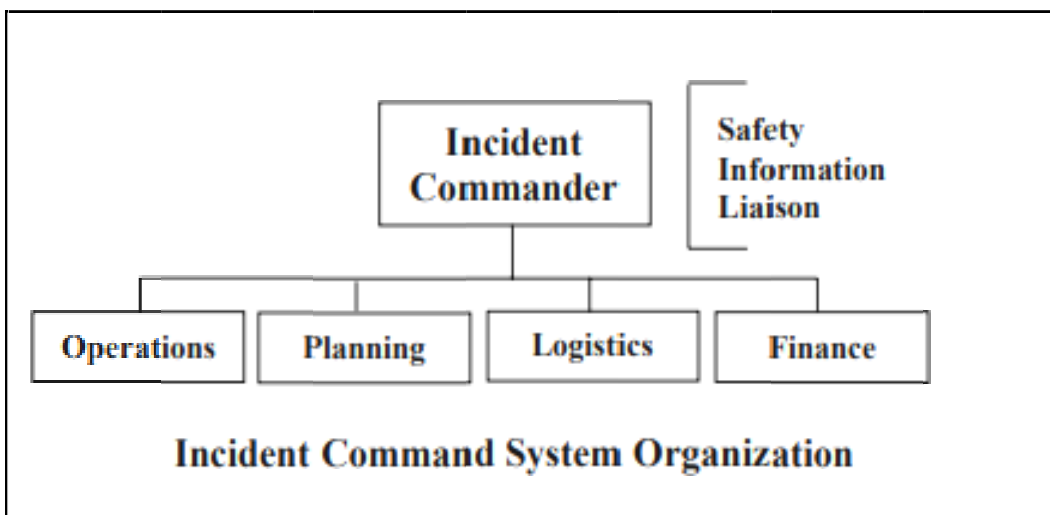
Nodal Department will establish a crisis group for dealing with crisis which fall within the ambit of its responsibility. The crisis group will be mainly responsible for dealing with a crisis situation and for reporting all developments to the state crisis management committee seeking its direction and guidance as and when necessary. Nodal Department will have a well-equipped Control Room for quick receipt of information and dissemination of command instructions. As soon as a crisis situation develops and it warrants attention of the state crises management committee it will be the responsibility of the secretary of the Nodal Department to report it to the state crisis management committee, who in turn will inform to the Intern:" Crisis Management Committee and the District Crisis Management Committee.

INCIDENT COMMAND SYSTEM OVERVIEW

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

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

The following Figure illustrates the basic ICS organization.



District Crisis Management Committee

To deal with the crisis situation in Amreli District, the District Crisis Management Committee will consist of the following members.

Sr. No.	Committee
1	District Collector (Chairman) Office of the District Collector, Amreli.
2	DSP Office of the Supdt. Of Police, Amreli
3	Superintendent Civil Hospital, Amreli

post of Addl. Collector and other officers can be co-opted in need basis.

Amreli District Crisis Management Committee will function from the D.M. Office or Amreli District Control Room. Immediately on the occurrence of the crisis the local action plan would be put into effect by the District Committee. Most of the action in a crisis situation will be taken at the district level hence district committee will remain in contact with Internal Committee and state crisis management committee and give information regarding crisis situation and will follow the instruction received from the above committees and will act according to the advise and other of the above committees. The District Committee will meet minimum once in every six months in normal circumstances and will discuss the problems likely to arise during crisis situations and suggest measures for modernization of different plans.

(1) Search and Rescue Team :-

If any crisis situation rise, 'E' Coys of SRP will work as search and rescue team. They will be called through Addl. DG of Police Arms, G.S, Gandhinagar. Telephone No. of SRP group- V, is02876-262859.

(2) Chetak Commandos:-

Four units of SRP Group-v, Gandhinagar are prepared and trained as Chetak Commandos they are capable to drill with heavy crisis like terrorist attack. If this type of crisis raise in this district these commandos will be called through Addl. DG of Police Arms, GS, Gandhinagar. Telephone No. of SRP group- V, is 02672-262859.

(3) Trigger Mechanism:-

If any such situation arises, district crisis management plan will be implemented as per the directions of the Chairman, District Crisis Management Group

(4) E.O.C.

As per emergency management planning, EOC which is established in the office of the DM will be treated as main EOC when any crisis takes place as also when the law and order situation in the district is jeopardized, the District Control Room will act in coordination with the District EOC Control Room. The incharge of this EOC Control Room will the not Granted but Disaster Dy Mamlatdar, District level EOC will be manned by Disaster Mamlatdar, DPO-GSDMA, Deputy Mamlatdar, Clerk and Equipments. All taluka has their own control room.

(5) Media Management:-

In consultation with Director of Information, Amreli immediate steps will be taken for media management.

Chapter 12

Miscellaneous:

Evacuation plan

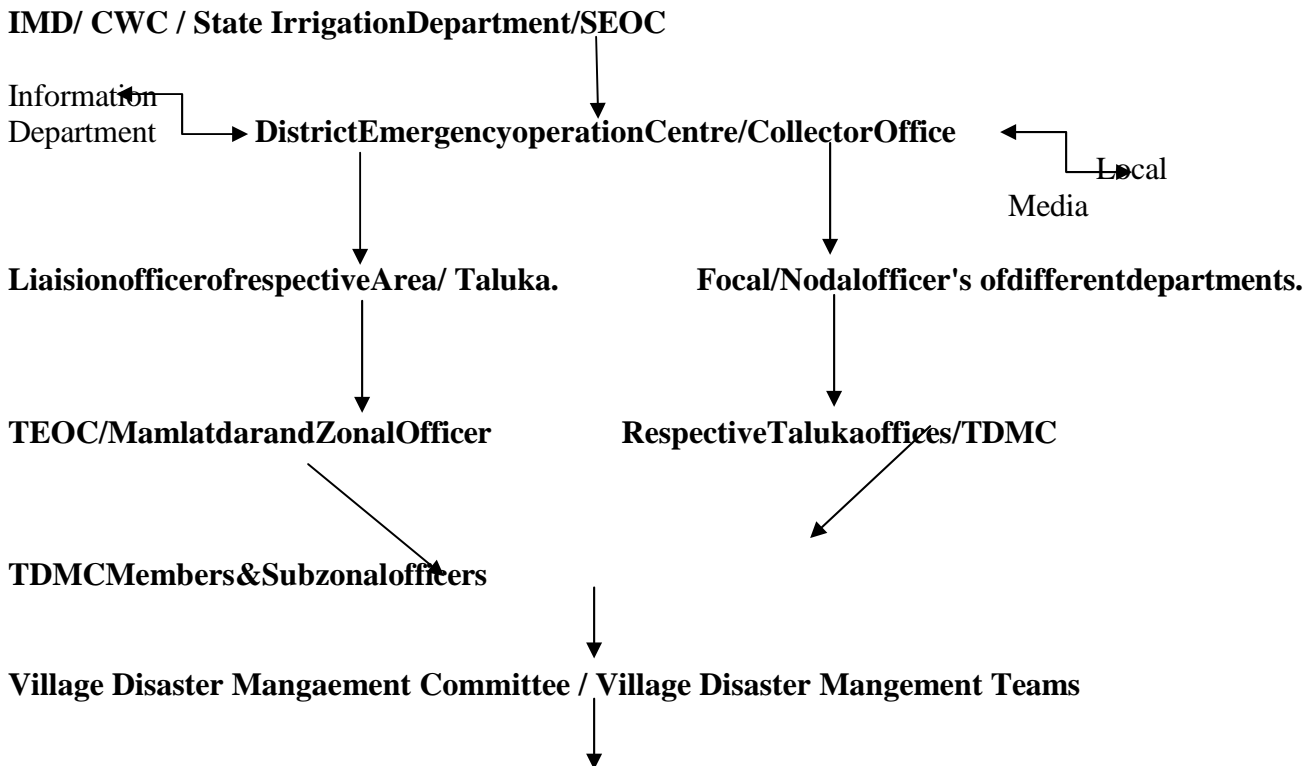
- (1) White Signal - Alert condition
- (2) Blue Signal - Ready for Evacuation
- (3) Red Signal - Immediate Evacuation

As and when the warning come from Indian Metrological department (IMD) , or from Irrigation department regarding heavy rainfall or water release the following channel has been intimated and appropriate message conveyed to the concerned department / official / control rooms /community members using tele communication , wireless message , by fax or in written by DEOC.

In city area the route has been finalized for early warning , accordingly early warning task force leading by fire and emergency services personals spread the message of alert in respective low line areas , in villages local methodologies of early warning has been used (by bitting up of drums etc.) to communicate the message of alert to the affected population of the village.

The following channel has been intimated and appropriate message conveyed to the concerned.

Early Warning & Communication Chart :



Shelter Management plan

Temporary Shelter:

Urban Area:-

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

Village area:

Mainly village area looking by District and Taluka Panchayat with the support of Liaison officer and Respective mamlatdar. Also already Identified Village wise Safe Shelter at village level, like school/communityhall/Samajvadietc.Detail List in VDMPP Plan.Also find list on SDRN.District /Taluka/Village Level - District /Taluka /Village Disaster Management Team directly responsible to Evacuate affected people at Safe Place

Medical and Hospital Management plan

Disaster: Health Impacts

Disaster causes negative impact on the overall health of the community besides interfering in its sustainable development. Direct health implications of disaster are death and injury. Disruption of human ecology and environmental concerns are of prime importance due to:

Disruption / damage to sanitation and sewage facilities creates enabling environment favorable for occurrence of vector borne and water borne diseases,

The affected communities living in temporary shelters / resettlements have limited or no access to safe drinking water, food etc. In addition, prevailing unhygienic sanitary conditions make it conducive for spread of food and water – borne disease.

Overcrowding in temporary shelters results in spread of communicable diseases.

Effects on mental health include Post Traumatic Stress Disorder; excessive grief, sleep disorders; exaggeration of existing illness; death wish & suicidal ideation.

Reproductive Health –Pregnant mothers and newborns become vulnerable and require additional care.

Among all the adverse health impacts, the impact of communicable disease is often delayed for weeks or months after the acute event. Water and food-borne disease transmission potential increases immediately and weeks after the disaster. Vector-borne diseases may appear after four weeks or more due to disruption of vector control efforts, washing away of residual insecticides, increased number of vector breeding sites and more man-vector contact. Nutritional problems appear after months. Table (see next slide) gives the summary of health effects according to the type of hazard.

Post disaster public health intervention

Emphasis on post disaster public health measures is necessitated by the following additional factors:

Destruction of health care infrastructure.

Interference in public health services especially for:

Safe drinking water

Sanitation measures

Immunization

Rodent/mosquito control

Ecological changes and its effect on vector populations

High population density due to displacement Public health intervention to prevent disease outbreaks after disaster should

Essentially focus on:

Post disaster sanitation measures for:

Safe water supply

Food hygiene

Proper sewage systems/disposal of excreta

Vector/rodent control

Public health education

Media Management Plan

Preparedness

External

Broadcast program to raise people's awareness of disaster prevention measures Develop news sources in emergency situation

Liaison with community leaders

Publicize station frequency

Broadcast public planning meetings

Outreach to the elderly, women, children, mentally and physically disabled people, as well as other marginalized

and other vulnerable groups

Encourage stockpiling of (hand-powered) radioreceivers

Compile local knowledge on signs of impending disaster and share it with community

Internal

Backup important documents and files (including audio content) and store in a safe location

If possible, place a set of minimum broadcast equipment such as a microphone, tape/CD player, transmitter and antennae in a safe location

Plan radio program to raise people's awareness of disaster prevention First aid training for station personnel

Technical preparedness (generator, UPS, securing, transmitter)

Guidelines for managing staff and volunteers

Arrange emergency drills in the station

Develop a contact list and post in station

Map community (ethnicity, religion, race, culture, vulnerability)

Prepare pre-recorded Emergency Response

Announcements and scripts and post in the studio

Mitigation

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

Arrange emergency drills in the community

Training of on-air personnel - what and how to broadcast

Response

External-on air

Broadcast pre-prepared announcements

Broadcast emergency public meetings

Broadcast emergency evacuation announcements

All announcements broadcast in a reassuring and calm manner

Dispel myths and rumors and provide timely and accurate updates

Broadcast updates on damage situation

Produce programs in which victims can express themselves

Establish contact with the meteorological office and broadcast weather information

Internal-behind the scenes

Ensuresafetyofallstationpersonnel Call

station briefing meeting

NotifyCRnetworksof status

Monitorallofficialannouncementsandactivitiesof national government, local government and aid agencies(NGOs)

Enactstationevacuationplanifneeded

Log all communications for reference

Stay calm

Divideinformationworkssothatallvoicesofthecommunity can be heardand not just male leaders.

Relief

EstablishInformationSupportCentreforinformationsharingandlogistic distribution

Rehabilitation**External–NetworkingandSupport**

- Broadcastpre-prepared announcements
- Broadcastprogramstohealvictim'spsychologytrauma.
- Interviewtraumacounselors,monks,Imamsand priests
- Broadcastrecoveryannouncements
- CooperatewithDMRNGOs,localgovernmentandkeystakeholders
- Broadcastrecoverypublicmeetings
- Providecallinortalk-backprogramsforpeopletopeopleinteractions
- Broadcastpositiveentertainment programming

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 ::

1. Name of Applicant
2. Name of Village & Location of House / Hut
3. a. Ward No.
4. 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. Damages time 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 :

Signature of Applicant

Date:

Rojkam

Shri..... resident of Amreli has residential building/Hut which is demolished/heavily damaged during the (type of Calamities). Which has been 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 reference 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:

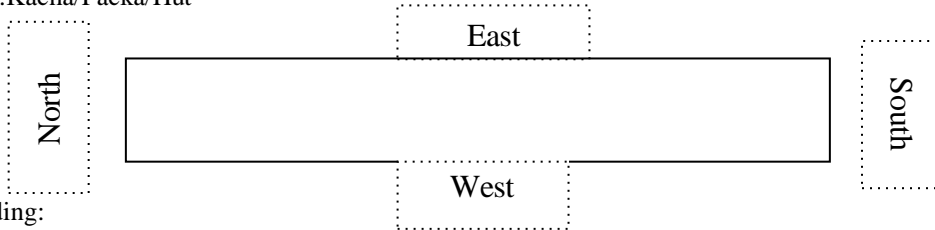
Team Leader : Signagture

Shri..... Residence house/hut damaged 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 granted as a help for to repair/rebuilt. House/ Hut.

Date:

Mamlatdar

Place:

SOP-Role 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 agroclimatic 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 large network of soil and water testing laboratories.
- Establishment of pest 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

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:**
- Stockpiling 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.

- Disinfection 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 stand by 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**
- Stockpiling 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
- 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
- **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 foreffective 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 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
- 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.
- Emergency traffic managemen.
- Maintenance of law and order in the affected areas

7. Civil Defence

Prevention Activities

- Organize training programmers 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

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.
- PRLs to be 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 bamboo etc for construction of shelters.
- **Recovery Activities:**
- Take up plantation to make good the damage caused to tree cover.

8. Information & Public Relations Department

Prevention Activities

- Creation of public awareness regarding various types of disaster through media campaigns.
- Dissemination of information to public and others concerned regarding do's and don'ts 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 assistance and recovery programmes.

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

Home Department

- Requisition, deployment and providing necessary logistics 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 lifesaving, 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)

Part-2

Annexure-1

Amreli District Profile

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 Nautical 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 2001 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:-

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 up on 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 Chavd 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.

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.

Area & Administration:-

Area wise Amreli is the Minimum Largest District of the state. The District has 11 Taluka. The information of taluka is as under:

Taluka wise Total Area of District

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	AMRELI	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

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

Taluka wise No. of Villages and Population (2011)

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. There are 592 Gram Panchayat. It has 9 Municipalities in the District; Amreli, Savarkundla, Lathi, Chalala, Damnagar, Jafrabad, Bagasara, Babra, Rajula.

Annexure-2

District Latitude-Longitude

Amreli:-

Taluka	VillageName	Latitude	Longitude	Latitude	Longitude
		In Decimal		DegMinSec	
AMRELI	Amarpur(Varudi)	71.19	21.58	7111'24"	2134'48"
AMRELI	Amreli	71.21	21.55	7112'36"	2133'0"
AMRELI	AnkadiyaMota	71.1	21.6	716'0"	2136'0"
AMRELI	AnkadiyaNana	71.19	21.62	7111'24"	2137'12"
AMRELI	Babapur	71.11	21.48	716'36"	2128'48"
AMRELI	Baxipur	71.21	21.59	7112'36"	2135'24"
AMRELI	BhandariyaMota	71.1	21.5	716'0"	2130'0"
AMRELI	BhandariyaNana	71.14	21.57	718'24"	2134'12"
AMRELI	Chadiya	71.13	21.42	717'48"	2125'12"
AMRELI	Chakkargadh	71.25	21.5	7115'0"	2130'0"
AMRELI	Champathal	71.22	21.5	7113'12"	2130'0"
AMRELI	Chandgadh	71.29	21.45	7117'24"	2127'0"
AMRELI	Chital	71.21	21.69	7112'36"	2141'24"
AMRELI	Dahida	71.15	21.64	719'0"	2138'24"
AMRELI	Devaliya	71.26	21.48	7115'36"	2128'48"
AMRELI	Devrajiya	71.17	21.47	7110'12"	2128'12"
AMRELI	Dholarva	71.03	21.55	711'48"	2133'0"
AMRELI	Fattepur	71.22	21.51	7113'12"	2130'36"
AMRELI	Gavadka	71.16	21.5	719'36"	2130'0"
AMRELI	Giriya	71.23	21.59	7113'48"	2135'24"
AMRELI	GokharvalaMota	71.25	21.46	7115'0"	2127'36"
AMRELI	GokharvalaNana	71.26	21.46	7115'36"	2127'36"
AMRELI	Haripura	71.28	21.64	7116'48"	2138'24"
AMRELI	Ishvariya	71.26	21.58	7115'36"	2134'48"
AMRELI	Jaliya	71.06	21.51	713'36"	2130'36"
AMRELI	Jasvantgadh	71.2	21.69	7112'0"	2141'24"
AMRELI	Kamigadh	71.02	21.52	711'12"	2131'12"
AMRELI	Kathma	71.11	21.63	716'36"	2137'48"
AMRELI	Kerala	71.02	21.49	711'12"	2129'24"
AMRELI	Keriyachad	71.2	21.43	7112'0"	2125'48"
AMRELI	Keriyaganas	71.29	21.55	7117'24"	2133'0"
AMRELI	KhedKhambhaliya	71.21	21.42	7112'36"	2125'12"
AMRELI	KhijadiyaKhari	71	21.5	710'0"	2130'0"
AMRELI	KhijadiyaRadadiya	71.27	21.69	7116'12"	2141'24"
AMRELI	Lalavadar	71.28	21.54	7116'48"	2132'24"
AMRELI	Lapaliya	71.26	21.44	7115'36"	2126'24"
AMRELI	MachiyalaMota	71.24	21.63	7114'24"	2137'48"
AMRELI	MachiyalaNana	71.24	21.62	7114'24"	2137'12"
AMRELI	Malila	71.18	21.42	7110'48"	2125'12"
AMRELI	Malvan	71.08	21.61	714'48"	2136'36"

AMRELI	MandavdaMota	71.02	21.46	711'12"	2127'36"
AMRELI	MandavdaNana	71.1	21.42	716'0"	2125'12"
AMRELI	Mangvapal	71.17	21.58	7110'12"	2134'48"
AMRELI	Medi	71.1	21.44	716'0"	2126'24"
AMRELI	Monpur	71.2	21.72	7112'0"	2143'12"
AMRELI	Navakhijadiya	71.16	21.53	719'36"	2131'48"
AMRELI	Paniya	71.04	21.48	712'24"	2128'48"
AMRELI	Piplag	71.14	21.61	718'24"	2136'36"
AMRELI	Pithavajal	71.18	21.49	7110'48"	2129'24"
AMRELI	Rajasthali	71.22	21.47	7113'12"	2128'12"
AMRELI	Randhiya	71.15	21.66	719'0"	2139'36"
AMRELI	Rangpur	71.13	21.54	717'48"	2132'24"
AMRELI	Rikadiya	71.18	21.65	7110'48"	2139'0"
AMRELI	Sajiyavadar	71.13	21.43	717'48"	2125'48"
AMRELI	Sangaderi	71.2	21.6	7112'0"	2136'0"
AMRELI	Sanosara	71.09	21.53	715'24"	2131'48"
AMRELI	Sarambhda	71.09	21.42	715'24"	2125'12"
AMRELI	Shambhupura	71.22	21.44	7113'12"	2126'24"
AMRELI	Shedubhar	71.26	21.66	7115'36"	2139'36"
AMRELI	Sonariya	71.24	21.43	7114'24"	2125'48"
AMRELI	Suragpur	71.31	21.65	7118'36"	2139'0"
AMRELI	Taraktalav	71.19	21.46	7111'24"	2127'36"
AMRELI	Taravda	71.11	21.45	716'36"	2127'0"
AMRELI	Thordi	71.12	21.52	717'12"	2131'12"
AMRELI	Timba	71.22	21.66	7113'12"	2139'36"
AMRELI	Timbla	71.05	21.45	713'0"	2127'0"
AMRELI	Vadera	71.11	21.55	716'36"	2133'0"
AMRELI	Vankiya	71.13	21.48	717'48"	2128'48"
AMRELI	Varasda	71.3	21.6	7118'0"	2136'0"
AMRELI	Venivadar	71.16	21.6	719'36"	2136'0"
AMRELI	Vithalpur	71.19	21.51	7111'24"	2130'36"

Babra:-

BABRA	Amarvalpar	71.25	21.77	7115'0"	2146'12"
BABRA	Babra	71.31	21.81	7118'36"	2148'36"
BABRA	BalelPipariya	71.12	21.71	717'12"	2142'36"
BABRA	Barvala	71.43	21.82	7125'48"	2149'12"
BABRA	Bhila	71.25	21.72	7115'0"	2143'12"
BABRA	Bhildi	71.24	21.71	7114'24"	2142'36"
BABRA	Chamardi	71.23	21.8	7113'48"	2148'0"
BABRA	Charkha	71.24	21.83	7114'24"	2149'48"
BABRA	Dared	71.39	21.81	7123'24"	2148'36"
BABRA	DevaliyaMota	71.1	21.77	716'0"	2146'12"
BABRA	Dharai	71.15	21.76	719'0"	2145'36"
BABRA	Fuljhar	71.09	21.75	715'24"	2145'0"
BABRA	Galkotdi	71.37	21.78	7122'12"	2146'48"

BABRA	Gamapipaliya	71.16	21.81	719'36"	2148'36"
BABRA	Garni	71.13	21.88	717'48"	2152'48"
BABRA	Ghughrala	71.18	21.82	7110'48"	2149'12"
BABRA	Hathigadh	71.26	21.76	7115'36"	2145'36"
BABRA	Ingorala	71.24	21.74	7114'24"	2144'24"
BABRA	Isapar	71.13	21.84	717'48"	2150'24"
BABRA	Ishvariya	71.37	21.87	7122'12"	2152'12"
BABRA	Jivapar	71.17	21.76	7110'12"	2145'36"
BABRA	Kalorana	71.23	21.95	7113'48"	2157'0"
BABRA	Kariyana	71.35	21.85	7121'0"	2151'0"
BABRA	Karnuki	71.18	21.89	7110'48"	2153'24"
BABRA	Khakhariya	71.36	21.82	7121'36"	2149'12"
BABRA	Khambhala	71.35	21.92	7121'0"	2155'12"
BABRA	Khanpar	71.2	21.95	7112'0"	2157'0"
BABRA	KhijadiyaKotda	71.11	21.74	716'36"	2144'24"
BABRA	Kidi	71.39	21.87	7123'24"	2152'12"
BABRA	KotdaPitha	71.21	21.91	7112'36"	2154'36"
BABRA	KundalNani	71.44	21.88	7126'24"	2152'48"
BABRA	Kunvargadh	71.22	21.78	7113'12"	2146'48"
BABRA	Lalka	71.3	21.97	7118'0"	2158'12"
BABRA	Lonkotda	71.06	21.82	713'36"	2149'12"
BABRA	Lunki	71.28	21.77	7116'48"	2146'12"
BABRA	MiyaKhijadiya	71.16	21.85	719'36"	2151'0"
BABRA	Nadala	71.1	21.84	716'0"	2150'24"
BABRA	Navaniya	71.18	21.87	7110'48"	2152'12"
BABRA	Nilavala	71.29	21.87	7117'24"	2152'12"
BABRA	Nonghanvadar	71.07	21.86	714'12"	2151'36"
BABRA	Pansada	71.15	21.87	719'0"	2152'12"
BABRA	PirKhijadiya	71.23	21.76	7113'48"	2145'36"
BABRA	Ranpar	71.1	21.85	716'0"	2151'0"
BABRA	Raypar	71.24	21.89	7114'24"	2153'24"
BABRA	Samadhiyala	71.26	21.88	7115'36"	2152'48"
BABRA	Sirvaniya	71.41	21.86	7124'36"	2151'36"
BABRA	Sukavala	71.27	21.9	7116'12"	2154'0"
BABRA	Sukhpar	71.33	21.92	7119'48"	2155'12"
BABRA	Taivadar	71.32	21.86	7119'12"	2151'36"
BABRA	Thorkhan	71.08	21.85	714'48"	2151'0"
BABRA	Tramboda	71.12	21.81	717'12"	2148'36"
BABRA	Untvad	71.21	21.87	7112'36"	2152'12"
BABRA	Valardi	71.21	21.77	7112'36"	2146'12"
BABRA	Vandaliya	71.3	21.75	7118'0"	2145'0"
BABRA	Vankiya	71.3	21.93	7118'0"	2155'48"
BABRA	Vavda	71.23	21.92	7113'48"	2155'12"
BABRA	Vavdi	71.17	21.78	7110'12"	2146'48"

Bagasara:-

Taluka	VillageName	Latitude	Longitude	Latitude	Longitude
		In Decimal		DegMinSec	
BAGASARA	Adpur	70.9	21.46	7054'0"	2127'36"
BAGASARA	Bagasara	70.94	21.43	7056'24"	2125'48"
BAGASARA	Balapur	70.9	21.53	7054'0"	2131'48"
BAGASARA	Charanpipali	71.01	21.48	710'36"	2128'48"
BAGASARA	DeriPipaliya	70.88	21.48	7052'48"	2128'48"
BAGASARA	Ghantiyan	70.81	21.45	7048'36"	2127'0"
BAGASARA	Hadala	70.95	21.51	7057'0"	2130'36"
BAGASARA	Halariya	71.06	21.38	713'36"	2122'48"
BAGASARA	HaliyadJuni	70.85	21.47	7051'0"	2128'12"
BAGASARA	HaliyadNavi	70.85	21.46	7051'0"	2127'36"
BAGASARA	Hamapur	71	21.38	710'0"	2122'48"
BAGASARA	Hulariya	71.04	21.39	712'24"	2123'24"
BAGASARA	Jamka	71	21.44	710'0"	2126'24"
BAGASARA	JanjariyaJuna	70.94	21.39	7056'24"	2123'24"
BAGASARA	JanjariyaNava	70.93	21.41	7055'48"	2124'36"
BAGASARA	Jethiavadar	70.98	21.45	7058'48"	2127'0"
BAGASARA	Kadaya	70.86	21.36	7051'36"	2121'36"
BAGASARA	Kagdadi	70.95	21.35	7057'0"	2121'0"
BAGASARA	Khari	70.98	21.5	7058'48"	2130'0"
BAGASARA	Khijadiya	71.03	21.41	711'48"	2124'36"
BAGASARA	Manekvada	70.83	21.43	7049'48"	2125'48"
BAGASARA	Mavjinjva	70.9	21.5	7054'0"	2130'0"
BAGASARA	MunjiasarMota	70.9	21.44	7054'0"	2126'24"
BAGASARA	MunjiasarNana	70.86	21.43	7051'36"	2125'48"
BAGASARA	Natvarnagar	70.95	21.46	7057'0"	2127'36"
BAGASARA	PipaliyaNava	70.91	21.48	7054'36"	2128'48"
BAGASARA	Pithadiya	70.92	21.53	7055'12"	2131'48"
BAGASARA	Rafala	70.88	21.41	7052'48"	2124'36"
BAGASARA	Samadhiyala	70.97	21.38	7058'12"	2122'48"
BAGASARA	Sanaliya	71.02	21.44	711'12"	2126'24"
BAGASARA	Shilana	71.03	21.42	711'48"	2125'12"
BAGASARA	VaghaniyaJuna	70.96	21.53	7057'36"	2131'48"
BAGASARA	VaghaniyaNava	70.99	21.56	7059'24"	2133'36"

Dhari:-

Taluka	VillageName	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' 36"	21 14'24"
DHARI	Chalala	71.17	21.37	71 10' 12"	21 22'12"
DHARI	Chhatradiya	71.1	21.3	716'0"	2118'0"
DHARI	Dabhali	71.1	21.22	71 6'0"	21 13'12"
DHARI	Dahida	71.11	21.35	716'36"	2121'0"
DHARI	Dangavadar	71	21.33	71 0'0"	21 19'48"
DHARI	Devla	71.1	21.25	716'0"	2115'0"
DHARI	Dhargani	71.2	21.28	7112'0"	2116'48"
DHARI	Dhari	71.02	21.29	71 1'12"	21 17'24"
DHARI	Dholarva	71.14	21.4	718'24"	2124'0"
DHARI	Ditla	71.22	21.32	71 13' 12"	21 19'12"
DHARI	Fategadh	71.07	21.27	714'12"	2116'12"
DHARI	GaramaliMoti	71.17	21.32	71 10' 12"	21 19'12"
DHARI	GaramaliNani	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	716'0"	2123'24"
DHARI	Govindpur	70.98	21.2	70 58' 48"	21 12'0"
DHARI	Hudli	71.13	21.31	717'48"	2118'36"
DHARI	Ingorala(Dungri)	71.2	21.34	7112'0"	2120'24"
DHARI	JunaCharkha	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	719'36"	2117'24"
DHARI	Kathirvadar	71.23	21.42	71 13'	21 25'12"

				48"	
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	713'0"	2116'12"
DHARI	KothaPipariya	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	717'48"	2113'48"
DHARI	Manavav	71.08	21.34	714'48"	2120'24"
DHARI	Mashika	70.96	21.28	70 57' 36"	21 16'48"
DHARI	MithapurNakki	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	NavaCharkha	71.24	21.39	71 14' 24"	21 23'24"
DHARI	Padargadh	71.03	21.37	71 1'48"	21 22'12"
DHARI	PaniyaDungri	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	717'12"	2115'36"
DHARI	SamadhiyalaNana	71.23	21.34	71 13' 48"	21 20'24"
DHARI	Sarasiya	71.04	21.2	712'24"	2112'0"
DHARI	Shivad	70.96	21.26	70 57' 36"	21 15'36"
DHARI	Vaghvadi	71.15	21.28	719'0"	2116'48"
DHARI	Vavdi	71.19	21.31	71 11' 24"	21 18'36"
DHARI	Virpur	71.14	21.21	718'24"	2112'36"
DHARI	Zar	71.12	21.31	717'12"	2118'36"

Lathi:-

Taluka	VillageName	Latitude	Longitude	Latitude	Longitude
		In Decimal		DegMinSec	
LATHI	Akala	71.39	21.61	7123'24"	2136'36"
LATHI	Aliudepur	71.32	21.6	7119'12"	2136'0"
LATHI	Ambardi	71.49	21.74	7129'24"	2144'24"
LATHI	Ansodar	71.43	21.61	7125'48"	2136'36"
LATHI	Bhalvav	71.6	21.6	7136'0"	2136'0"
LATHI	Bhatvadar	71.57	21.63	7134'12"	2137'48"
LATHI	Bhingrad	71.44	21.64	7126'24"	2138'24"
LATHI	Bhurakhiya	71.48	21.68	7128'48"	2140'48"
LATHI	Chavand	71.41	21.76	7124'36"	2145'36"
LATHI	Chhabhadiya	71.48	21.65	7128'48"	2139'0"
LATHI	Dahinthara	71.52	21.68	7131'12"	2140'48"
LATHI	Damnagar	71.52	21.65	7131'12"	2139'0"
LATHI	Derdi-Janbai	71.44	21.76	7126'24"	2145'36"
LATHI	Dhamel	71.57	21.6	7134'12"	2136'0"
LATHI	Dhrufania	71.55	21.67	7133'0"	2140'12"
LATHI	Dudhala Bai	71.31	21.62	7118'36"	2137'12"
LATHI	Dudhala Bai	71.31	21.62	7118'36"	2137'12"
LATHI	DudhalaLathi	71.36	21.63	7121'36"	2137'48"
LATHI	Hajiradhar	71.55	21.61	7133'0"	2136'36"
LATHI	Harsurpur	71.33	21.69	7119'48"	2141'24"
LATHI	Havtad	71.51	21.63	7130'36"	2137'48"
LATHI	Hirana	71.42	21.78	7125'12"	2146'48"
LATHI	Ingorala	71.47	21.61	7128'12"	2136'36"
LATHI	Jarakhiya	71.32	21.66	7119'12"	2139'36"
LATHI	Kanchardi	71.54	21.71	7132'24"	2142'36"
LATHI	Karkoliya	71.42	21.73	7125'12"	2143'48"
LATHI	Kerala	71.34	21.62	7120'24"	2137'12"
LATHI	Keriya	71.36	21.69	7121'36"	2141'24"
LATHI	Krishnagadh	71.37	21.58	7122'12"	2134'48"
LATHI	Lathi	71.4	21.67	7124'0"	2140'12"
LATHI	Luvariya	71.4	21.57	7124'0"	2134'12"
LATHI	MalaviyaPipariya	71.32	21.57	7119'12"	2134'12"
LATHI	Matirala	71.34	21.59	7120'24"	2135'24"
LATHI	Memda	71.51	21.7	7130'36"	2142'0"
LATHI	Methli	71.5	21.68	7130'0"	2140'48"
LATHI	Muliyapat	71.58	21.66	7134'48"	2139'36"
LATHI	Narangadh	71.51	21.71	7130'36"	2142'36"
LATHI	Padarshinga	71.51	21.61	7130'36"	2136'36"
LATHI	PartofLC-29	71.32	21.57	7119'12"	2134'12"
LATHI	Pipalva	71.46	21.72	7127'36"	2143'12"
LATHI	Pratapgadh	71.44	21.67	7126'24"	2140'12"
LATHI	Punjapar	71.32	21.71	7119'12"	2142'36"
LATHI	Rabhda	71.54	21.64	7132'24"	2138'24"

LATHI	RajkotNana	71.43	21.7	7125'48"	2142'0"
LATHI	Rampar	71.44	21.69	7126'24"	2141'24"
LATHI	Shakhpur	71.51	21.52	7130'36"	2131'12"
LATHI	Shekhipariya	71.34	21.73	7120'24"	2143'48"
LATHI	Suvagadh	71.59	21.66	7135'24"	2139'36"
LATHI	Tajpar	71.46	21.67	7127'36"	2140'12"
LATHI	Thansa	71.56	21.66	7133'36"	2139'36"
LATHI	Toda	71.35	21.65	7121'0"	2139'0"
LATHI	Virpur	71.4	21.72	7124'0"	2143'12"

Liliya:-

Taluka	VillageName	Latitude	Longitude	Latitude	Longitude
		In Decimal		Deg Min Sec	
LILIA	Antaliya	71.39	21.53	7123'24"	2131'48"
LILIA	Bavada	71.48	21.39	71 28'48"	21 23'24"
LILIA	Bavadi	71.47	21.39	7128'12"	2123'24"
LILIA	Bhensan	71.4	21.51	71 24'0"	21 30'36"
LILIA	Bhensvadi	71.34	21.45	7120'24"	2127'0"
LILIA	Bhoringda	71.46	21.45	7127'36"	2127'0"
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	7120'24"	2130'0"
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	7125'48"	2131'12"
LILIA	Ingorala	71.51	21.4	7130'36"	2124'0"
LILIA	Jatroda	71.36	21.54	71 21'36"	21 32'24"
LILIA	Kalyanpar	71.48	21.51	7128'48"	2130'36"
LILIA	KankotMota	71.3	21.47	71 18'0"	21 28'12"
LILIA	KankotNana	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	7127'0"	2125'12"
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	PanchTalavda	71.51	21.54	71 30'36"	21 32'24"
LILIA	Pipalva	71.39	21.48	7123'24"	2128'48"
LILIA	Punjapadar	71.36	21.48	71 21'36"	21 28'48"
LILIA	Putaliya	71.29	21.51	7117'24"	2130'36"

LILIA	Rajkot Nana	71.54	21.51	7132'24"	2130'36"
LILIA	Saldi	71.34	21.53	7120'24"	2131'48"
LILIA	Sanaliya	71.42	21.49	7125'12"	2129'24"
LILIA	Sanjantimba	71.42	21.54	71 25'12"	21 32'24"
LILIA	Sedhavadar	71.39	21.42	7123'24"	2125'12"
LILIA	Timbdi	71.43	21.46	71 25'48"	21 27'36"
LILIA	Vaghaniya	71.4	21.46	7124'0"	2127'36"

Savarkundala:-

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	7121'36"	2122'48"
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	7117'24"	2113'12"
SAVAR KUNDLA	Dhar	71.42	21.36	71 25'12"	21 21'36"
SAVAR KUNDLA	Fachariya	71.47	21.36	7128'12"	2121'36"
SAVAR KUNDLA	Fifad	71.54	21.37	7132'24"	2122'12"
SAVAR KUNDLA	Gadhakda	71.39	21.23	71 23'24"	21 13'48"
SAVAR KUNDLA	Ghoba	71.57	21.37	7134'12"	2122'12"
SAVAR KUNDLA	Ghobapati	71.55	21.35	71 33'0"	21 21'0"
SAVAR KUNDLA	Hathasani	71.25	21.25	7115'0"	2115'0"
SAVAR KUNDLA	Hipavadli	71.6	21.35	7136'0"	2121'0"
SAVAR KUNDLA	Jejad	71.52	21.3	7131'12"	2118'0"
SAVAR KUNDLA	Jira	71.3	21.4	71 18'0"	21 24'0"
SAVAR KUNDLA	Juna Savar	71.38	21.39	7122'48"	2123'24"
SAVAR KUNDLA	Kanatalav	71.25	21.3	7115'0"	2118'0"
SAVAR KUNDLA	Kantrodi	71.6	21.31	71 36'0"	21 18'36"
SAVAR KUNDLA	Karjala	71.25	21.36	7115'0"	2121'36"
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	7121'0"	2124'36"
SAVAR KUNDLA	Khalpar	71.47	21.38	7128'12"	2122'48"
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	7131'12"	2112'36"
SAVAR KUNDLA	Mekda	71.51	21.36	7130'36"	2121'36"

SAVAR KUNDLA	Mevasa	71.46	21.29	71 27'36"	21 17'24"
SAVAR KUNDLA	Moldi	71.38	21.34	7122'48"	2120'24"
SAVARKUNDLA	Mota Bhamodra	71.57	21.34	71 34'12"	21 20'24"
SAVARKUNDLA	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"
SAVARKUNDLA	Nana Bhamodra	71.3	21.36	71 18'0"	21 21'36"
SAVARKUNDLA	Nana Zinzuda	71.39	21.3	71 23'24"	21 18'0"
SAVAR KUNDLA	Nani Vadal	71.47	21.26	7128'12"	2115'36"
SAVAR KUNDLA	Nesdi	71.24	21.32	71 14'24"	21 19'12"
SAVAR KUNDLA	Oliya	71.26	21.36	7115'36"	2121'36"
SAVAR KUNDLA	Piparadi	71.6	21.37	7136'0"	2122'12"
SAVAR KUNDLA	Pithvadi	71.41	21.29	71 24'36"	21 17'24"
SAVAR KUNDLA	Piyava	71.44	21.34	7126'24"	2120'24"
SAVAR KUNDLA	Rabarika	71.55	21.25	71 33'0"	21 15'0"
SAVAR KUNDLA	Savarkundla	71.3	21.3	7118'0"	2118'0"
SAVAR KUNDLA	Senjal	71.43	21.28	71 25'48"	21 16'48"
SAVAR KUNDLA	Shelana	71.51	21.34	7130'36"	2120'24"
SAVAR KUNDLA	Simaran	71.27	21.39	71 16'12"	21 23'24"
SAVAR KUNDLA	Thavi	71.54	21.29	7132'24"	2117'24"
SAVAR KUNDLA	Vanda	71.47	21.35	71 28'12"	21 21'0"
SAVAR KUNDLA	Vanshiyali	71.49	21.29	7129'24"	2117'24"
SAVAR KUNDLA	Vijayanagar	71.36	21.24	7121'36"	2114'24"
SAVAR KUNDLA	Virdi	71.55	21.31	7133'0"	2118'36"
SAVAR KUNDLA	Zadkala	71.62	21.32	71 37'12"	21 19'12"

Kunkavav&Vadiya:-

Taluka	VillageName	Latitude	Longitude	Latitude	Longitude
		InDecimal		DegMinSec	
KUNKAVAV VADIA	Anida	70.93	21.64	7055' 48"	2138' 24"
KUNKAVAV VADIA	Arjansukh	70.89	21.6	7053' 24"	2136'0"
KUNKAVAV VADIA	BadanpurJuna	71	21.68	710'0"	2140' 48"
KUNKAVAV VADIA	Badanpur Nava	70.99	21.67	7059' 24"	2140' 12"
KUNKAVAV VADIA	Bambhaniya	71.05	21.7	713'0"	2142'0"
KUNKAVAV VADIA	Bantwa-Devli	70.79	21.67	7047' 24"	2140' 12"
KUNKAVAV VADIA	BarvalaBaval	70.82	21.68	7049' 12"	2140' 48"
KUNKAVAV VADIA	Barvala Bavishi	71.06	21.54	713'36"	2132' 24"

KUNKAVAV VADIA	Bhayavadar	70.99	21.65	7059' 24"	2139' 0"
KUNKAVAV VADIA	Bhukhli-Santhali	70.86	21.67	7051' 36"	2140' 12"
KUNKAVAV VADIA	Dadva(Randal)	71.08	21.77	714'48"	2146' 12"
KUNKAVAV VADIA	Devalki	70.77	21.73	7046' 12"	2143' 48"
KUNKAVAV VADIA	Devgam	71.07	21.72	714'12"	2143' 12"
KUNKAVAV VADIA	Ishvariya	71.06	21.66	713'36"	2139' 36"
KUNKAVAV VADIA	Jithudi	71.12	21.68	717'12"	2140' 48"
KUNKAVAV VADIA	Jungar	71.05	21.62	713'0"	2137' 12"
KUNKAVAV VADIA	Khadkhad	70.87	21.65	7052' 12"	2139' 0"
KUNKAVAV VADIA	Khajuri	70.89	21.67	7053' 24"	2140' 12"
KUNKAVAV VADIA	Khajuri-Pipaliya	70.91	21.66	7054' 36"	2139' 36"
KUNKAVAV VADIA	Khakhariya	70.87	21.63	7052' 12"	2137' 48"
KUNKAVAV VADIA	Khijadiya Hanuman	70.75	21.61	7045'0"	2136' 36"
KUNKAVAV VADIA	Khijadiya Khan	70.84	21.6	7050' 24"	2136' 0"
KUNKAVAV VADIA	Kolda	71.07	21.62	714'12"	2137' 12"
KUNKAVAV VADIA	Kunkavav Moti	70.97	21.58	7058' 12"	2134' 48"
KUNKAVAV VADIA	Kunkavav Nani	71.01	21.6	710'36"	2136' 0"
KUNKAVAV VADIA	Lakhapadar	71.04	21.66	712'24"	2139' 36"
KUNKAVAV VADIA	Luni-Dhar	71.1	21.65	716'0"	2139' 0"
KUNKAVAV VADIA	Mayapadar	71.07	21.68	714'12"	2140' 48"
KUNKAVAV VADIA	Megha-pipaliya	70.9	21.7	7054'0"	2142' 0"
KUNKAVAV VADIA	Morvada	70.84	21.63	7050' 24"	2137' 48"
KUNKAVAV VADIA	Najapur	70.92	21.57	7055' 12"	2134' 12"
KUNKAVAV VADIA	PipaliyaDhundhiya	70.81	21.6	7048' 36"	2136' 0"
KUNKAVAV VADIA	Rampur	70.88	21.56	7052' 48"	2133' 36"
KUNKAVAV VADIA	Sanala	71.01	21.66	710'36"	2139' 36"
KUNKAVAV VADIA	Sanali	70.95	21.69	7057'0"	2141' 24"
KUNKAVAV VADIA	Sarangpur	71.09	21.72	715'24"	2143' 12"
KUNKAVAV VADIA	Surya Pratapgadh	70.91	21.63	7054' 36"	2137' 48"
KUNKAVAV VADIA	Talali	70.95	21.67	7057'0"	2140' 12"
KUNKAVAV VADIA	Targhari	70.92	21.68	7055' 12"	2140' 48"
KUNKAVAV VADIA	Tori	70.87	21.57	7052' 12"	2134' 12"
KUNKAVAV VADIA	Ujala-Mota	70.95	21.64	7057'0"	2138' 24"
KUNKAVAV VADIA	Ujala-Nana	70.99	21.62	7059' 24"	2137' 12"
KUNKAVAV VADIA	Vadia	70.81	21.64	7048' 36"	2138' 24"
KUNKAVAV VADIA	Vavdi	70.98	21.67	7058' 48"	2140' 12"

Jafarabad:-

Taluka - Jafarabad

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
Jafarabad	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

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

Annexure-3

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, Rajula2 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	HeatWave	May-2010/13	Medium	Entire District
8	ColdWave	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.
13	Cyclone	2021	High	Taukte Cyclone Entire District; Most affected area was Jafarabad and Rajula Talukas

Annexure-4

Details Of Public Gathering Places

Sr. No.	Taluka Name	Place Of Public Gathering	Remarks	Management
1	Khambha	Gir Wild life Sanctaury	During Holidays	Low&Orderlookafter by Forest Department
2	Lathi	BhurakhiyaHanumanMandir	During Holidays	ManagementByTrust
3	Dhari	KhodiyarMandir,Damsite	During Holidays	ManagementByTrust
4	Amreli	Nagnath Temple	During Holidays	ManagementByTrust

Annexure-5

Details of Coastal Villages

Sr.No	Taluka	VillageName	Population (2011)	TemprroryShelterDetail	Total Rooms
1	Jafrabad Mamlatdr Office-Phone No- 02794-245436	Jafrabad	27167	SagarPrimarySchool KanyaSala VapaliyaPrimarySchool TalukaPrimarySchool ParekhMahetaHighSchool KoliSamajVadi KharvaCasteVadi	4 5 7 9 12 2hall 2hall 3rooms
2		Babarkot	4624	PrimarySchool CommunityHall	14 1
3		Balana	1701	PrimarySchool Samaj Vadi	7 5
4		Bhankodar	1583	PrimarySchool	8
5		Chitrasar	3091	CommunityHall PrimarySchool	1 16
6		Kadiyali	2982	PrimarySchool	12
7		Mitiyala	2385	PrimarySchool	16
8		Rohish	5604	PrimarySchool Communityhall Samajvadi	14 1 8

9		Shiyalbet	5096	PrimarySchool Samajvadi	8 10
10		Vadhera	4442	PrimarySchool CommunityHall Samaj Vadi	15 14
11		Vandh	2046	PrimarySchool	11

Sr.No	Taluka	VillageName	Population (2011)	TemproryShelter Detail	Total Rooms
1	Rajula MamlatdrOffice- PhoneNo- 02794-222013	Chanch	5830	HighSchool Samaj Vadi PrimarySchool	10 2 21
2		Victar	2040	PrimarySchool Samaj Vadi	11 2
3		Nigala-1	1000	PrimarySchool Samaj Vadi	21 1
4		Pipavav	1858	PrimarySchool Samajvadi	8 1
5		Visaliya	2958	PrimarySchool	8
6		Khera	4191	PrimarySchool Samajvadi	9 2
7		Patva	2013	PrimarySchool Samaj Vadi	8 2
8		Samdhiyala-1	2427	PrimarySchool Samajvadi	11 2
9		Bherai	4185	primarySchool Samajvadi	18 1
10		Rampara-2	3559	HighSchool PrimarySchool Samajvadi	11 14 1
11		Kovaya	4061	PrimarySchool Samaj Vadi	12 2
12		Kathirvadar	1623	PrimarySchool Samajvadi	11 2

Annexure-6

Details of River/Dam Affected Villages

Sr.No	RIVER	DEM	TALUKA NAME	Water logging villages	Mamlatdar Office PhonNo
1	Shetrunji	Khodiyar Dem	Dhari	Ambardi Padargadh Bhath Dhari Paldi	02797-225015 PSI-02797225033
			Amreli	Sarbhada Medi Tarvda Babapur Vankiya Gavadka Fatepur Vitthalpur MandavadaNana GorakhavalaNana GorakhavalaMota Pithvajal	02797-223225 PSI-02792223198
2			Bagasara	Halaria Hulariya	02796-222194
			Liliya	kankot Aamba Krackach Bavadi Bavada Ingorala Shedhavadar Lonka Lonki	02793-236538
			SavarKundla	JunaSavar Khalpar Aakolda Mekada Fifad Ghoba Borala khorada pipardi padargad halriya hulriya	02845-224200 PSI-02845242599
2	Sataldi	Munjiyasar	Bagasara	Bagasara	02796-222194

		Dem		Jethiyavadar Jamka Sanadiya	
			Amreli	TimblaBabapur Mandava	02792-223225
3	Sheel	Sheldedumal	Dhari	NanaSamdhiyala Ditla	02797-225015
			SavarKundla	HathasaniNa naSamdhiyala Karjada Simran Khambhadiya	02845-224200
4	Dhatar	Dhatarvadi-1	Rajula	KovayaNav iMandardi Juni Mandardi Hod Nava/JunaZapodar UchaiyaDha ranonessRa mparaHindo rnaDhavesva rJhampodar VadZapodar	02794-222013
			Jafrabad	Lothpur	02794-245436
5	Dhatar	Dhatarvadi-2	Rajula	NaniKhakhbayKh akhbayHindorna Vad Chhatdiya Dharness UchaiyaR ampara	02794-222013
			Jafrabad	Lothpur	02794-245436
6	Survo Survo	SurvodemSak rolidem	Vadiya- Kukavav	Vadiya HanumaanKhijadiya	02796-273388

Annexure-7

Details of 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

List of the Industries of 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	TTKottan Ltd. Kadiyali- Rajula				
5	GSCL Ltd - Victor - Rajula & Jafrabad				
6	PLL Holdings. Rajula				
7	Sintex Spinning 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. Marketing Fad. Ltd. Savarkundla Road	B	Hexane	30	Flammable

Sr. No.	Name of the Factory	Distance from Amreli (km)
01	Ultratech Cement Limited, Village :Kovaya, Rajula	85
02	Bharat Shell Ltd. (GPPL)V:Uchhaiya,Rajula	75
03	SHV Energy North-West(I)Ltd. (Babra filling plant)Babra	35
04	Shripati Chemical, Port Albert Victor,Rajula	85
05	Guj.State Co-op.Marketting Fad. Ltd. Savarkundla Road	10

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 ₃)	Upper Respiratory track Irritation/ CNS affected causing spasm corrialperforation	Emergency Treatment: Wash eye with 0.5 to 1% alum. SOS ophthalmologist. Skin to be washed with 5% citric/ acetic/ salicylic acid. Inhale with warm H ₂ 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 Effects of Exposure/ Symptoms: 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.	Emergency Treatment: 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. Effects of Exposure/ Symptoms: Cause eye irritation, sneezing, copious salivation, general excitement, restlessness. High concentration causes respiratory distress and violent coughing, often with retching. Death may result from suffocation.	Emergency Treatment: Eye-exposure: - Flush the eyes immediately with large amount of water (not hot). Put 2-4 drops of 0.5% Pontokain or Benoxinate (Novesin) in the eyes. Get medical attention. Skin-exposure: - Flush the skin immediately with large amount 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.

Annexure-8

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

Along 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- 2.88m

MHWN - 2.20m

MLWS- 1.50m

MLWN- 0.90m

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 vessel 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 landingslopes, 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. Su

pplies

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-30m
- Fish-landing wharf: length-450m

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

Port 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.

Annexure-9

**Rain fall Data of Amreli
District :**

Sr No.	Taluka	2011 In m/m	2012 In m/m	2013 In m/m	2014 In m/m	2015 In m/m	2016 In m/m	2017 In m/m	2018 In m/m	2019 In m/m	2020 In m/m	2021 In m/m	2022 In m/m	2023 In m/m
1	AMRELI	753	378	861	677	724	687	628	410	983	1071	823	817	941
2	LILIYA	733	428	944	508	501	845	489	407	805	1148	862	666	588
3	LATHI	741	423	980	578	729	746	670	318	916	999	458	650	712
4	BABRA	710	467	1105	644	501	587	654	332	913	621	779	879	723
5	VADIYA	759	258	846	433	845	600	789	615	835	1185	798	970	1050
6	BAGASARA	798	318	639	425	1190	646	633	455	940	1390	809	695	862
7	DHARI	897	366	815	451	1103	606	345	293	745	762	574	546	586
8	KHAMBHA	484	276	822	516	709	603	524	467	1001	1338	670	749	850
9	S.KUNDLA	679	361	817	466	643	595	502	446	915	1095	728	819	490
10	RAJULA	533	327	1085	468	850	933	780	789	1195	1505	910	608	729
11	JAFARABAD	551	346	883	599	791	970	634	959	665	1289	632	359	485

Annexure-10

List of Government Hospitals

Sr. No.	Taluka	Nameof CHCs	Nameof PHCs	PhoneNo.
1	AMRELI	CivilHospital	Jaliya,Chital,Motaan kadiya, Vakiya,	02792-222587
2	LILIYA	LiliyaCHC	Krankach,Gundarn,	02793-236575
3	LATHI	Lathi CHC	Matirala,Ansodar, Chavand	02793-250566
4	BABARA	BabaraCHC	Kotadapitha, Mota devaliya,Khambhala,	02791-233466
5	VADIYA	Vadiya CHC, KukavavCHC	Anida,Devgam,	02796-222013 02796-273044
6	BAGASARA	BagasaraCHC	JunaHaliyad,Mavjinjava	02796-222013
7	DHARI	DhariCHC	Gopalgram,Dalkhaniya, Jira, Bhader,	02797-221114
8	KHAMBHA	KhambhaCHC	Khadadhar, Mota samthiyala,Dedan, Tataniya	02797-260543
9	S.KUNDLA	S.KundlaCHC	Jira,Vijapadi,Vanda,Junasavar, Ambaradi, MotaJinjuda	02845-242604
10	RAJULA	RajulaCHC	Dungar,Vavera,Bherai,	02794-222033
11	JAFARABAD	JafarabadCHC	Babrkot,Nageshri,Timbi	02794-246396

Annexure-11

List of Private Hospitals

Sr.No	Hospitals	Contact No
1	General 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

Annexure-12

List of NGOs/ CBOs

Sr No.	Name of Organization	Address	Contact Person	Mobile No
1	Brahmyuva Sangathan	Near Railway Station, Dhari	Riddhesh B. Joshi	9712802244
2	B.A.P.S. Swami nanarayana 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	9099997251/52
5	Shri Shantidham Seva Sansthan, Lathi	Ramnath Society, Lathi	M.R. Trivedi Trustee	
6	Active Smile 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 Bhaves hbhai B.	
13	Satvara Samaj, Bagasara	Near Govt. Hospital, Bagasara	Vitthalbhai Chauhan	94282 61419
14	Shree Ramyuva Sangathan	Muldas Bapuni Jagya, Near Tower, Amreli	Hirenbhai Rathod	94287 95944
15	Lohana Samaj, Bagasara	Near Mahajan Vanda, Amreli Road, Bagasara	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 Hasmuk hbhai S.	94263 16776

19	Shravan Seva Prasad Kendra, Amreli	Postal Society, Chittal Road, Amreli	Agravat Bhikhhalal Nandlal	94088 47434
20	Aman setu Education Welfare 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 Gruopof Amreli	Gajerapara, Amreli	Sandipbhai Dhanani	82381 80609
32	Parivartan Trust, Amreli	Gajerapara, Amreli	Sandipbhai Pandya	9978966607
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	9925933450
38	Daudi Vhora Jamat, Amreli	Navi Voravad, Vhora Masjid, Amreli	Salimbhai Munshi	98244 72911
39	Amansetu Edu. Welfare 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	9427025876
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

Annexue-13

List of Resources Available with Government

DEOC:-

Sr.No.	Name of Resources	Number of Resources
1	Life Bouya	1
2	Life Jacket	20
3	Ropes (200 ft.)	2
4	Ropes (100 ft.)	3
5	Generator	0
6	Tree Cutter	2

**UP-SCALING OF AAPDA MITRA SCHEME under EER Kit at DEOC
Items for Emergency Essential Resource Reserve (EERR) at District Level**

Sl. No.	Items	Quantity
1	Personal Floatation Device (Life Jacket made of polyurethane foam)	6
2	Torch or emergency light (Solar enabled)	12
3	Safety gloves (Canvas/leather)	12 pairs
4	30 mtrs 10/11 mm BOB Nylon rope	6
5	Lifebuoys	12
6	Oars & Rowlocks	3 pairs
7	Paddles	18
8	Anchors	4
9	Galvanized metal bucket or bailer	4
10	Outboard Motor Minimum 30 HP	2
11	DCP Fire Extinguisher	4
12	Emergency Spot light with minimum 12 hours run time	3
13	Tool kit (Colt cutter, wire cutter, Pliers, Screw driver set)	3
14	Axe/hatchet 3kg	3
15	Fibreglass Backboard Stretcher	6
16	Radio Walkie sets 5 watt	6
17	Blankets	12
18	Park pickets	12
19	First Aid Kit	6

20	Twin PrognedGraphel/ Cat Hooks	6
21	Throw Bag	6
22	GUM Boots	12 pairs
23	Safety Goggles	6
24	Safety Helmet (Water rafting)	6
25	GPS sets	4
26	Navigation lights	4
27	Maps, Charts and compass	As required
28	Chain Saw machine	4
29	Camping tent (water resistant) + Mosquito Net	4+4
30	Inflatable Rescue Boat	1

TEOC:-

No.	Name of Taluka Mamlatdar Office	Ring Boya	Article included in each ECRs			Generatos
			LifeJacket	200 ft. Ropes	100 ft. Ropes	
1	Mamlatdar Office – Amreli	40	30	03	05	0
2	Mamlatdar Office – Babra	2	2	1	2	01
3	Mamlatdar Office – Dhari	2	7	0	0	00
4	Mamlatdar Office – Lathi	14	15	0	0	00
5	Mamlatdar Office – Vadiya	10	10	00	00	00
6	Mamlatdar Office – Liliya	11	09	00	00	00
7	Mamlatdar Office – Bagasara	20	15	00	00	00
8	Mamlatdar Office – Khamabha	02	20	00	7	00
9	Mamlatdar Office – Rajula	29	28	03	03	00
10	Mamlatdar Office – SavarKundla	04	04	00	08	00
11	Mamlatdar Office – Jafrabad	07	02	00	00	00

Nagarpalika:-

No	Municipalities Name	Name/Number of Equipments			
		Water Bowser	Mini Fire Tender	Boat	Bullet
1	Nagar Palika -Amreli	2	1	--	1
2	Nagar Palika- Savarkundla	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		
9	Nagar Palika-Damnagar	-	1	-	-

Police Department:-

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 12Volt Ampere's	15
	Total	145

Annexure-14

List of AapdaMitra (Upscalling Aapda Mitra Project)

Sr. No.	Name	Sr. No.	Name
1	Niravbhai B. Bambhaniya	151	VAGHELA SANJAYBHAI HAKABHAI
2	Chanabhai G. Sankhat	152	CHAROLA KISHORBHAI BABUBHAI
3	Mukeshbhai B. Sankhat	153	SEJU MAYUR ASHOKBHAI
4	Bhavesbhai H. Sankhat	154	HELAIYA JAYESHBHAI NANJIBHAI
5	Rajubhai R. Sankhat	155	RANGPARA MAHESHBHAI NANJIBHAI
6	Rizwansa R. Kanojiya	156	MAKWANA ASHVINBHAI BABUBHAI
7	Ashokbhai N. Sankhat	157	JOSHI DIPAK KANTIBHAI
8	Rameshbhai U. Sankhat	158	MAJETHIYA UMESHBHAI RAMESHBHAI
9	Bharatbhai H.Rathod	159	RAMAVAT VISHNUDAS GHANSHYAMBHAI
10	Kishorbhai B. Kotadiya	160	BHAMANI SANJAYBHAI SURESHBHAI
11	Balubhai G. Bambhaniya	161	NAGALANI JAYDEV MUKESHBHAI
12	Laljubhai G. Parmar	162	SEJU MEHULKUMAR MAHESHBHAI
13	Afzalbhai H. Bambhaniya	163	MEVADA JAGDISHBHAI DAYABHAI
14	Dineshbhai Khimabhai Babriya	164	LAKHMANBHAI JINABHAI CHAUHAN
15	Prakashbhai P. Babriya	165	UMESHBHAI BHIKHABHAI DHUNDHARVA
16	Mehurbhai D Bamba	166	VIKRAMBHAI BABUBHAI MAKWANA
17	Omkarbhai R Barad	167	RAVAJIBHAI DUDABHAI MAKWANA
18	Pravinshinh K Jadeja	168	NAGJIBHAI PARSHOTAMBHAI CHAUHAN
19	Jaylubhai D Khuman	169	CHANDUBHAI CHAGANBHAI BAMBHANIYA
20	Ashokbhai D Khuman	170	LALABHAI UKABHAI SOCHA
21	Firozbhai H Belim	171	RAJUBHAI VELABHAI BAMBHANIYA
22	Mansukhbhai R Bagada	172	VIPULBHAI VELABHAI BAMBHANIYA
23	Nileshbhai K Bagada	173	BHALABHAI NANJIBHAI BABRIYA
24	Rameshbhai M Bagada	174	RANCHHODBHAI UKABHAI JOGADIYA
25	Vinodbhai M Bagada	175	MAVIBHAI DUDABHAI KHASIYA
26	Ganshyambhai P Galasaniya	176	ASHOKBHAI MOHANBHAI BHALIYA
27	Bharatbhai V Rathod	177	PRAKASHBHAI SHAMJIBHAI BARAIYA
28	Akilasha I Pathan	178	BHARATBHAI BHAGVANBHAI SANKHT
29	Gautambhai G Asodara	179	CHHAGANBHAI RAMBHAI BABHANIYA
30	Maheshbhai M Devmurari	180	NAGJIBHAI VASHRAMBHAI MAKWANA
31	Jaysukhbhai V Parmar	181	LALJIBHAI NATHUBHAI JITIYA
32	Umedbhai K Vala	182	MANUBHAI BHIKHABHAI KHORASIYA
33	Maganbhai V Unava	183	AMINBHAI ISMAILBHAI SUMRA

34	Chandreshbhai G Santhala	184	ISMAILBHAI DADABHAI SUMRA
35	Mayurbhai D Vala	185	RAJABMIYA AKBARMIYA SAYAD
36	Sadulbhai A Vala	186	VINUBHAI JIVANBHAI VELARI
37	Nileshbhai M Gohel	187	JAGJIVANBHAI VIRABHAI VELARI
38	Mehul L Solanki	188	NAJABHAI RATABHAI VALA
39	Devangbhai H. Tank	189	HEMRAJBHAI MAGANBHAI VAGHELA
40	Moin S. Chauhan	190	RAMESHBHAI NATHABHAI VALA
41	Mitbhai M. Mahida	191	Dineshbhai Valjibhai Rathod
42	Rahul H. Dafda	192	Ratilal Dhanjibhai Rakhsiya
43	Jahagirkha B. Aghalani	193	Bhadreshbhai Rajendrakumar Tilavat
44	Arjunbhai D. Devmurari	194	Avinashbhai Batukbhai Tilavat
45	Jaydip D. Vala	195	Meghabhai Manchabhai Toliya
46	Jaswantsinh B. Chauhan	196	Gordhanbhai Meghajibhai Rathod
47	Jignesh U Dave	197	Bhanubhai Bhikhabhai Toliya
48	Vikramsinh J. Solanki	198	Ashokbhai Jilubhai Der
49	Manishkumar M. Jobanputra	199	Madhubhai Bavabhai Dabhi
50	Pradipgiri H. Meghnathi	200	Veljibhai Devashibhai Toliya
51	UNAGAR HEVIN C	201	Mukeshbhai Mangabhai Chavada
52	RATHOD RAVI K.	202	SHAILESHBHAI RAMBHAI DERVALIYA
53	Desai Bhailal Jagajivanbhai	203	ANAKBHAI DEVDANBHAI GARIYA
54	Harichadrashinh Kishorbhai Sarvaiya	204	RAJESHAKUMAR VIRABHAI SOLANKI
55	Kapilbhai Pravinbhai Joshi	205	MAKAWANA ARVINDABHAI PACHABHAI
56	Sanjay Gordhanbhai Vaghela	206	DERVALIYA KARANBHAI VINUBHAI
57	Ramjibhai Jivarajbhai Ranera	207	KANJIBHAI TALSHIBHAI SOLANKI
58	Kaushikkumara Gunvantbhai Vyas	208	KANDAS MANCHARAM LASKARI
59	Shaktibhai Ravjibhai Parmar	209	VALLABHABHAI LALJIBHAI SOSA
60	Vijaybhai Gordhanbhai Dholakiya	210	SURESHABHI PACHABHAI PARNALIYA
61	Rameshbhai Vallabhbhai Makavana	211	VANARABHAI KURJIBHAI AJADIYA
62	Ashishbhai Karsanbhai Banbhaniya	212	MUKESHABHAI PACHABHAI SOLANKI
63	Hitesh Harjibhai Singal	213	VALJIBHAI DEVSHIBHAI CHAUHAN
64	Pankaj Hinmatbhai Khanbhu	214	SOLANKI NITIN SURESHBHAI
65	Nitin Maganbhai Gangadiya	215	Mahipatbhai M Dhakhda
66	Umesh Nagarabhai Ranava	216	Prakashbhai M Valsur
67	Sanjay Babubhai Rangpara	217	Rameshbhai A Valsur
68	Parvej Anavarbhai Gariba	218	Ankit K. Solanki
69	Nilesh Manjibhai Gohil	219	Rameshbhai G. Parmar
70	Jagdish Devajibhai Seju	220	Rasulkha D. Sheikh
71	Sanjay Babubhai Parmar	221	Sanjaybhai M. Jethava
72	Jigar Hinmatbhai Dharjiya	222	Salimbhai S. Sheikh
73	Bharatbhai Harjivanbhai Ghataliya	223	Jigneshbhai B. Purohit

74	Abhay Kalubhai Vaja	224	Babubhai A. Rathod
75	Jugalkumar Sureshbhai Dave	225	Bochiya Hiteshkumar Hanubhai
76	Tofik Rashulbhai Belim	226	Dipakbhai M. Rathod
77	Shailesh Dhirubhai Bagda	227	Kishorbhai B. Mevada
78	Harihar Dipakbhai Bhatt	228	KAUSHIKBHAI KANUBHAI KASAVALA
79	Raufakhan Ayubakhan Pathan	229	Sureshbhai B. Solanki
80	Dharmeshkumar Arvindbhai Dabhi	230	Hiren S. Chudasama
81	Mohin Mehamudabhai Sarvaiya	231	GOHIL KIRAN MAGANBHAI
82	Ketan Dineshbhai Bagda	232	Vipul D. Parmar
83	Gopal Bhanubhai Dabhi	233	JOKHIYA SIRAJ SALIMBHAI
84	Khushalbhai Gigabhai Maru	234	Bharat N. Parmar
85	Ashvinbhai Narshinhbhai Vala	235	Ajaybhai D. Chavada
86	Sadambhai Rajakbhai Gaha	236	Sumit R. Makwana
87	Sohilsha Valisha Pathan	237	Vishal M. Chaudhari
88	Lalabhai Hahabhai Parmar	238	KANDOLIYA KHUSHALKUMAR ASHOKBHAI
89	Ghanshyam Balubhai Thummar	239	Chetanbhai C. Nagvadiya
90	Bhupatbhai Rambhai Chavda	240	Rakesh G. Sankliya
91	Hashnsha Habibbhai Shekh	241	Abhishek A. Japadiya
92	Arvind Rambhai Rathod	242	Suresh Premanjibbhai Rathod
93	Babubhai Kasambhai Parmar	243	Amarshibhai Govabhai Dafda
94	Shailesh Harshadbhai Ravaiya	244	Ashvin Hinmatbhai Sisalada
95	Sahdev Temubhai Rathod	245	Vipul Kadavabhai Tarad
96	Nagbhai Devkubhai Kikar	246	Mahmad Dadasha Rafai
97	Ajaybhai Rambhai Bhuva	247	Bipinbhai Nareshbhai Dafda
98	Dharmeshbhai Bhanabhai Gadhadara	248	Anvara Piramamad Naad
99	Amarubhai Dadabhai Vala	249	Mukesh Ashokbhai Gosai
100	Maheshbhai Ravjibhai Ravarani	250	Bhikhubhai Valinanadbhai Jorana
101	Prakashbhai Devajibhai Chudasma	251	Jaysukh Govindbhai Rathod
102	Ravajibhai Chanabhai Dafda	252	Mayankshinh Chandrashinh Bhandoriya
103	Kuladipbhai Sukhnathbhai Kuvarada	253	Makabulshinh Hinmatbhai Rana
104	Alpeshbhai Ravjibhai Makvana	254	Haradevshinh Mahendrashinh Vaghela
105	Merabhai Arjanbhai Bheda	255	Pankajbhai Dhirubhai Solanki
106	Rameshbhai Jivanbhai Makvana	256	Amitbhai Hinmatbhai Hachad
107	Bharatbhai Chandubhai Rathod	257	Manshukhbhai Bijalbhai Mer
108	Afjalbhai Bhikhubhai Kureshi	258	Dharamdas Mastrambhai Lashkari
109	Rajeshbhai Bhikhubhai Chauhan	259	Abhishekbhai Rameshbhai Maheta
110	Sagarkumar Harshadbhai Metaliya	260	Sanjaybhai Chhaganbhai Gohil
111	Jogeshshinh Dilipshinh Juni	261	Hiteshbhai Narshibhai Vanaliya
112	Mukeshbhai Valjibhai Makavana	262	Bharatbhai P Gujriya
113	ZAPADA SANJAY ZINABHAI	263	Vijaybhai Jivrajbhai Chouhan

114	PARMAR HITESHBHAI DEVAJIBHAI	264	Manoj Jivanbhai Gohil
115	BAGDA NARESHBHAI PRAVINBHAI	266	Dineshbhai Valjibhai Gohil
116	DABASARA PRAKASH KALUBHAI	266	Kureshi Rahimbhai Dadubhai
117	JALERA PRAVIN BHUPATBHAI	267	Naresh Bhikhubhai Vadhel
118	PARMAR VINUBHAI DHIRUBHAI	268	Kanu Somatbhai Jadav
119	SAILESHBHAI VAGHAJIBHAI SAIVAIYA	269	Gohil Vijaysinh Dilipshinh
120	RAJESHBHAI MEHULBHAI VALA	270	SHAMJIBHAI DAYABHAI SHIYAL
121	MAHESHBHAI VIRJIBHAI JADAV	271	Jitu Bhojbhai Dhakhda
122	BHARATBHAI LIMBABHAI PATADIYA	272	Amirsha Jagadusha Moghal
123	BHAVINBHAI DILIPBHAI BHATT	273	Rajesh Pravinbhai Zakhara
124	PRAVINBHAI JETHABHAI VALA	274	Ajay Kantibhai Solanki
125	BHARATBHAI LAKHABHAI VAGHELA	275	Hardevbhai Vijaykumar Dave
126	JITENDRABHAI KALUBHAI JINJUVADIYA	276	CHANDRESHBHAI CHOTHABHAI SAKHAT
127	MUKESHBHAI HIRABHAI DAFDA	277	Rahulbhai Jivanbhai Rathod
128	JITENDRABHAI BHIKHABHAI JADAV	278	Munafabhai Mahmadbhai Pathan
129	SHAMJIBHAI RAVJIBHAI JADAV	279	Imaranbhai Rasulbhai Chauhan
130	JAYSUKHBHAI VALJIBHAI JADAV	280	Jignesh Rameshbhai Maniyar
131	JAYSHUKBHAI NAGJIBHAI JADAV	281	Dharmesh Chhaganbhai Rathod
132	KIRITBHAI RAMESHBHAI KANSAGRA	282	Pradipbhai Anantrai Bagada
133	VANRAJBHAI RAMESHBHAI GANGAL	283	Nitinkumar Vashrambhai Vala
134	KALUBHAI GHUGHABHAI CHAUHAN	284	Rajeshbhai Bhanajibhai Parmar
135	RAVATBHAI DEVSURBHAI KAMLIYA	285	Hiren Bharatbhai Dafda
136	VALKUBHAI KALUBHAI RATHOD	286	Shahir Habibbhai Jadav
137	MANJIBHAI NARANBHAI SONДАРВА	287	Jitendrabhai Karshanbhai Parmar
138	SANJAYBHAI KHODABHAI SARVAIYA	288	Kirankumar Hareshbhai Solanki
139	KISHORBHAI MANGABHAI MAKVANA	289	Sureshbhai Madhubhai Solanki
140	JITESHBHAI KARASHNBHAI KUNDHNIYA	290	Mahendrabhai Amrutlal Joshi
141	VIPULBHAI NANJIBHAI MARU	291	Mahmadbhai Ushmanbhai Parmar
142	RAJUBHAI BABUBHAI CHOUHAN	292	Akashkumar Antubhai Bagda
143	HITESHBHAI HARGOVINDBHAI	293	Sabir Rajakbhai Hingora
144	JAYNTIBHAI RAMBHAI MAKVANA	294	Nareshbhai Kantibhai Salakhana
145	MERUBHAI HADABHAI VANJAR	295	Kureshibhai Iqbalbhai Hunani
146	BALUBHAI DEVGANBHAI VANJAR	296	Bharatbhai Kantibhai Makvana
147	HARESHBHAI DHIRUBHAI BHAKAN	297	MAKVANA JATIN GUNVATBHAI
148	MAKVANA BHARATBHAI MADHUBHAI	298	DIVYARJ VIKRAMSINH PARMAR
149	DER DHAVAL VASURBHAI	299	ARAVINBHAI HIMATBHAI SOLANKI
150	BAGDA BHAVESHBHAI MANUBHAI	300	

Annexure-15

DETAIL TABLE OF INFORMATION ABOUT DAM

SR.NO.	NAME OF RIVER	DAM	DEPTH OF DAM		CAPACITY		NOs. OF GATE	CRAS TELEVEL		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

Annexure-16

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	Catchment Area : Chachai, Mithapur, Boradi Shivad Shemardi, Dhari, Govindpur, Kubada, dalkhania, Gigasan, Kotada, D/S Vilage: 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	Catchment Area: Bhader, Lungiya, Sudavad, Shapur, Rafaliya, Munjiyasar D/S Vilage: 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	Catchment Area: Rampur, Arajansuch, Tori, Khan Khijadia, Morvada, Dhundhiya D/S Vilage: Vadia, Charania, Charan Samadhiyala, Thana Galol.
4	Amreli	Vadi	Amreli/Amreli	Medium	71°-10'-50"	21°-38'-42"	9.40	8	77531	Yes	Catchment Area: Venivadar, Pipalag, Mota Ankadia, Jithudi, Jangar, Korada, Lunidhar D/S Vilage: Mangvopal, Varudi (Amarpur), Amreli, Fatepur, Vithalpur, Champathal,
5	Amreli	Thebi	Baxipur/Amreli	Medium	71°-12'-30"	21°-37'-00"	12.50	12	134126	Yes	Catchment Area : Chamardi, Gama Pipalia, Kuvargadh, Valardi, Pir Khijadia, Ingorala, Bhila-Bhiladi, Randhiya, Rikadia, Chtal, Jasvant Gadh, Toda, Shedhubar, Mota Machiyala, Nana Machiyala, Giriya, Sangaderi D/S Vilage: Amreli, Fatepur, Champathal

6	Savar Kundala	Shel Dedumal	Hathasani/Savar Kundal	Medium	71°-14'-00"	21°-19'-00"	15.00	5.0	49728	Yes	Catchment Area: Anida, Ingorala, Mota Samadhiyala, Rukanathpur-Khodi, D/S Vilage: Hathasani, Nesadi, Simaran, Karajala, Shel Khambhadia, Ditala
7	Rajula	Dhatarvadi-II	Khakhbai/Rajula	Medium	71°-26'-00"	21°-02'-00"	10.00	32	295600	Yes	Catchment Area : Mobhnes, Piplava, Khambha, adsang, Detad, Khoiyana, Dolati, Bhamar, Badhada, Vijapadi, Chaapari, Vanot, Dipaliya, Thoradi Vavera, Dhairesvar, Govindpur, Kotadi, Agaria, D/S Vilage: 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	Catchment Area: Dedan, Sarakadia, D/S Vilage: 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	Catchment Area : Mobhnes, Piplava, Khambha, adsang, Detad, Khoiyana, Dolati, Bhamar, Badhada, Chaapari, Dipaliya, Thoradi Vavera, , D/S Vilage: Dhareshvara, 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	Catchment Area : Mobhnes, Piplava, Khambha, adsang, Detad, Khoiyana, Dolati, Bhamar, Badhada, Chaapari, Dipaliya, Thoradi Vavera, , D/S Vilage: Badhada, Dolati, Detad,

Annexure-17

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	GeerSomnath	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	ChotaUdaipur	02669	233003	233002	9978405937	2432027	9978406249	233077	9978405977	9824048430	
33	Valsad	02632	253613	243417	9978406225	253184	9978406250	254222	9978405085	9978405253	243238

Annexure-18

Contact Detail of State Government Offices

Sr.No.	Name	Contact Detail	
		Phone	Fax
1	State Emergency Operation Center, Gandhinagar	07923251914, 07923251900, 07923221902	07923251916
2	Gujarat State Disaster Management Authority, Gandhinagar	07923259503	07923259275
3	Irrigation Department, Gandhinagar	07923220954, 07923248735, 07923248736	07923240553
4	R & B Department, Ahmedabad	07926305296, 07926303490	-
5	Health Commissioner, Gandhinagar	07923253343, 07923250818	07923253343, 07923250818
6	Home Department, Gandhinagar (State Control)	07923252957, 07923252958	07923252075
7	DGP, Police Bhavan, Gandhinagar (State Control)	07923246328, 07923246330, 07923246331	07923246329
8	Gujarat Maritime Board, Gandhinagar	07923238346, 07923238348	07923234704
9	GSRTC, Ahmedabad (Central Office)	07925454102	07925453280
10	IMD (MET), Ahmedabad	07922865012	07922865449

Annexure-19

Contact Details of Collector Office(STD Code No.

02792)

Sr. No	Designation	Name	ContactNumber	
			Office	Mobile
1	Collector	Shri Ajay Dahiya (IAS)	222307	9978406202
2	RAC	Shri Dilipsinh Gohil	228903	9878405203
3	DSO	Shri M. G. Solanki	222807	7874217707
4	Dy. Collector, Election	Shri B.T. Saksena	2232872	9978405280
5	Dy. Collector, StampDuty	Shri PoojabenJotaniya	224401	7567010029
6	District Planning Officer	Shri H.B. Patel (i/c)	223658	8000707616
7	Chitnis	Shri A.P. Vyas	221977	63538 45078
8	PRO	Shri G. G. Bavisha (i/c)	223748	8866263265
9	Mamlatdar, Disaster Management	Shri Matang Nimavat (i/c)	230735	9909982319
10	DPO-GSDMA	Shri Shailesh Parmar	230735	9913486219
11	DIO-NIC	Shri Ravi Gupta	220918	7795111985

Annexure-20

Contact Details of District Panchayat Office (STD Code No. 02792)

Sr. No	Designation	Name	ContactNumber	
			Office	Mobile
1	DDO	Shri P.B. Pandya (IAS)	222313	9978406227
2	Director, DRDA	Shri K.A. Jadeja	223563	7567031983
3	CDHO	Dr. R.M.Joshi	222115	9687642244
4	DPEO	ShriK.V. Miyani	222109	9909971652
5	Executive Engineer (R&B)	Shri P. P. Parmar	222112	9898098298
6	Executive Engineer Irrigation (State)	Shri C. A. Chavada	222164	9574065205
7	District Agriculture Officer	ShriJ.K. Kanani	223324	9913215747
8	Dy.Director, Animal Husbandary	Shri S.B. Kunadiya	223058	9712275101
9	District Social Welfare Officer	Shri A.K. Shekh	223217	9904245358
10	PO - ICDS	Shri shailesh kanzariya(i.c.)	231326	8141522999

Annexure-21

Contact Details of DSP Office (STD Code

No.02792)

Sr. No	Designation	Name	ContactNumber	
			Office	Mobile
1	DSP	Shri Himkar Sinh (IPS)	222333	9978405063
2	Dy.SP(HQ)	Shri A.G.Gohil	222797	9978407960
3	Dy.SP(SC/STCell)	ShriP.R.Rathod	-	97273 77711
4	PI-CPI	Shri A.C.Patel	229825	97124 99777
5	PI-LIB	Shri M.D.Salunke	227494	89800 25756
6	PI-Cyber Crime	Shri V.M.Koladara	-	99137 08777
7	PSI-Traffic	Shri V.V.Gohil	222335	89801 81848
8	PSI-BDDS	Shri P.H.Joshi	222131	9979317944
9	PSI-QRT	Shri P.H.Joshi (I/c)	222131	9979317944
10	PSI-GRD	Shri R.V.Solanki	-	8141384340
11	PSI-LCB	Shri A.M.Patel	227495	9898156739
12	PSI-Pipavav Marine	Shri P.B.Lakkad	-	97276 86150

Annexure-22

Contact Details of Other Offices (STDCCodeNo.02792)

Sr. No	Designation	Name	ContactNumber	
			Office	Mobile
1	DCF-Forest	Shri Sadik Mujavar	222606	7567861778
2	Suprentendent-CivilHospital	Shri Dharaben Vyas	222587	9427284600
3	FireOfficer	Shri H.C.Gadhavi	220916	7567677377
4	Exe.Engineer-R&BState	Shri H .J. Dholavala	223100	9099885607
5	Exe.Engineer-Irrigation State	Shri A.B.Rathod	222009	9512838981
6	Suprentending Engineer-PGVCL	Shri A.R.Parikh	223836	9825603179
7	Exe.Engineer- G.W.S.S. Board	Shri Vijay Bhamani	223611	9978406805
8	Regional Officer- GPCB	Shri A.J.Rathod	-	8140944711
9	Ass.Director-D.I .S.H (.i/c)	Shri J.M.Trivedi	-	9824190891
10	Port Officer,GMB	Shri Kuldipsing	245165	9687089687
11	CO-Coast Gaurd	Shri Rakesh	02794- 221603	9727277032
12	DC/ST ManagerDepot.	Shri P.P. Dhama	240169	6359919027
13	Ast. Regional Transport Officer	Shri I.S.Tank (i/c)	223313	9723759293
14	Exe.Engineer-JETCO	Shri H R Vamja	222032 220037	9925210155
15	Ass.Director-Fisheries	Shri Sikotariya	245432	8866646675
16	General Manager-DIC	Shri G.M.Bhatiya	222529	7203027889
17	Ass.LaboureOfficer	Shri MahavirsinhParmar	222899	9408548656
18	Dy.Director-Information	Shri D.J.Chhatbar	223404	8980784342
19	Disrict Homegaurd Commandent	Shri Rohit Mehta	222517	9426735030
20	District Education Officer	Shri M.D.Gohil	222939	9909970203
21	Asst.Charity Commisionar	Shri B.K.Vaja	220503	9979386162
22	District Sports Officer	Shri Poonam Fumakia	223630	9574226849
23	Manager-BSNL	Shri M.G.Bhadru	231600	9427110211
24	District Treusary Office	Shri Jayesh Khachar	222268	7016593791
25	Manager-Circuit House	Shri Mayurbhai	223362 222057	8758135871

Annexure-23

Contact Details of All SDM

Sr. No	Designation	Name	Contact Number	
			Office	Mobile
1	Dy.Collector & SDM Amreli	Shri M. J. Nakiya	222730	7567010024
2	Dy.Collector & SDM Rajula	Shri Mehulkumar Barasara	02794-222001	9428280084
3	Dy.Collector & SDM Lathi	Shri N . I. Brahmhatta	02793-251252	7567010029
4	Dy.Collector & SDM Savarkundla	Shri D.H.Bhalala	02845-236800	7567010058
5	Dy.Collector & SDM Dhari	Shri H D Jadeja	02797-225070	7567009902
6	Dy.Collector & SDM Bagasara	Shri K V Nanda	02797-225070	7567000191

Annexure-24

Contact Details of All Mamlatdar

Sr. No	Designation	Name	ContactNumber	
			Office	Mobile
1	Mamlatdar - Amreli City	Shri G. G. Bavisha	02792-223225	8866263265
2	Mamlatdar - Amreli Rural	Shri M. G. Nimavat	02792-223225	9909982319
3	Mamlatdar Babra	Shri J D Jadeja	02791-233422	7567000803
4	Mamlatdar Lathi	Shri M.C. Rajyaguru	02793-250542	7567000832
5	Mamlatdar Liliya	Shri J Z Desai	02793-236538	756700106
6	Mamlatdar Vadia	Shri M P Solanki	02796-273388	9722286324
7	Mamlatdar Bagasara	Smt R G Zala	02796-222194	7567000751
8	Mamlatdar Savarkundla	Shri S.H. Baria	02845-224200	7567000784
9	Mamlatdar Rajula	Shri A K Shrimali	02794222013	7567000930
10	Mamlatdar Dhari	Shri A C Vyas	02797-225015	7567000728
11	Mamlatdar Khambha	Shri A P Antala	02797-260528	7567000917
12	Mamlatdar Jafrabad	Shri J.N.Mehta	02794-245436	7990613741

Annexure-25

Contact Details of All TDO

Sr. No	Designation	Name	ContactNumber	
			Office	Mobile
1	TDO - Amreli	Shri Dilip Pandya	02792-223204	9016833931
2	TDO - Babra	Shri M.S.Siroya	02791- 233423	9099114462
3	TDO - Liliya	Shri Tushar Radadiya	02793-226535	9173746771
4	TDO - Dhari	Shri H.C.Bhatt	02797- 221017	7567012088
5	TDO - Bagasara	Shri R.N. Kalsariya	02791-223204	9512015442
6	TDO - Khambha	Shri A H Danidhariya (i.c.)	02797-260532	9879932876
7	TDO - Rajula	Shri H.J.Parmar	02794-222039	7567012028
8	TDO - Jafrabad	Shri V.M.Sonagara	02794-245421	7096070204
9	TDO - Lathi	Smt HimadriBaa Sarvaiya	02793-250550	9428361506
10	TDO - Kunkavav	Shri A B Joshi	02796-238229	9898940529
11	TDO - Savarkundla	Shri K.P.Parmar	02845-225811	7041481511

Annexure-26

Contact Details of All Chief Officer

Sr. No	Designation	Name	ContactNumber	
			Office	Mobile
1	Chief Officer - Amreli	Shri H. K. Patel	220916	9601951935
2	Chief Officer - Babra	Shri Nikunj Vora (i.c)	02791-223440	8141717198
3	Chief Officer-Bagsara	Shri J J Chauhan	02796-222053	9998723740
4	Chief Officer-Chalala	Smt. Bhavanaben Goswami	02797-251013	9574642924
5	Chief Office-Jafrabad	Shri J J Chauhan (i.c)	02794-245420	9998723740
6	Chief Officer - Lathi	Shri Nikubj Vora	02793-250549	8141717198
7	Chief Officer-Damnagar	Shri K J Patel (i.c.)	02793-222006	9313236374
8	Chief Officer-Rajula	Shri H.P. Borad (i.c)	02794-251013	9427621111
9	Chief Officer-Savarkundla	Shri H.P. Borad	02845-242638	9427621111

Annexure-27

Contact Details of All Fire Station

Sr. No	Designation	Name	ContactNumber	
			Office	Mobile
1	Amreli	DFO	02792-223592	7567677377
2	Babra	CO	02791-223440	9824160162
3	Bagsara	Fireman	02796-222053	8160601260
4	Chalala	Fireman	02797-251013	9726900560
5	Jafrabad	Fireman	02794-245420	9898851606
6	Lathi	Fireman	02793-250549	9898404817
7	Damnagar	Fireman	02793-222006	9687957857
8	Rajula	Fireman	02794-251013	9714642098
9	Savarkundla	Fireman	02845-242638	9427244404

Annexure-28

Contact Details of All Police Station

Sr.No.	Name of Taluka	Police Stsation Name	Police Station Officer's Name	Degignation	Contact No.	Name of Division	Name of Division's Officer	Designation	Contact no.
૧	Amreli	Amreli City	Shri D K Vaghela	PI	9687748484	Amreli Division	Shri Chirag Desai	Dy.SP	9978407973
૨		Amreli Rural	Shri R G Chauhan	I/C PI	9725200318				
૩	Lathi	Lathi	Shri H J Barvadiya	WPSI	8980252250				
૪		Dmanagar	Shri B P Parmar	PSI	8200215078				
૫	Babra	Babra	Shri C S Kugasiya	PI	8320464282				
૬	Vadiya	Vadiya	Shri A N Gangana	PSI	8128764237				
૭	Bagasara	Bagasara	Shri K B Jadeja	PI	9099913034				
૮	Liliya	Liliya	Shri S R Gohil	PSI	7600169805				
૯		Savarkundala Town	Shri A M Parmar	PI	9979033003				
૧૦	Savarkundala	Savarkundala Rural	Shri P L Chaudhari	PI	7016422569				
૧૧		Vanda	Shri K M Mori	PSI	9723484842				
૧૨	Rajula	Rajula	Smt I J Gida	WPI	7285072861				
૧૩		Dungar	Shri K G Maya	PSI	9825503503				
૧૪		Pipavav Marine	Shri P B Lakkad	PSI	9727686150				
૧૫		Jafrabad Town	Shri J R Bhachkan	PI	9714388710				
૧૬	Jafarabad	Jafrabad Marine	Shri D S Isharani	PI	9512119911				
૧૭		Nageshri	Shri P V Palas	PSI	9099511333				
૧૮	Khambha	Khambha	Shri K D Hadiya	PSI	7567900378				
૧૯	Dhari	Dhari	Shri A M Desai	PI	9662939922				
૨૦		Chalala	Shri R R Galchar	PSI	8320119856				

Annexure-29

SETELITE PHONE NUMBER

Sr No.	District Name	SETELITE PHONE NUMBER
1	Collector Amreli	8991115046

Annexure-30

Important Tollfree Number

Sr. No.	Name	ContactDetails
1	SEOC - Disaster	1070
2	DEOC - Disaster	1077
3	Police	100
4	Fire	101
5	Ambulance	102
6	GVK Ambulance	108

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 walls, 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 firefighting
- Do not keep pots near the glass window
- Do not keep heavy and fragile things in the shelves
- Do not 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 toward the exit
- If you are outdoors 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

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 river bank even after the flood water 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 systems should be checked and any damages should be repaired immediately so as to curtail spread of diseases.
- Empty the water clogged in the basements slowly with help of water pumps 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 use 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 Safety:

The phenomenon Tsunami is a series of traveling ocean waves of extremely long length generated primarily by earthquakes occurring below or near the ocean floor:

Following safety measures need to be learnt before, during and after the occurrence of tsunami: Before

- Be familiar with the tsunami warning signals. People living along the coast should consider an earthquake or a sizable ground rumbling as a warning signal. A noticeable rapid rise or fall in coastal waters is also a sign that a tsunami is approaching.
- Make sure all family members know how to respond to a tsunami. Make evacuation plans. Pick an inland location that is elevated.
- After an earthquake or other natural disaster, roads in and out of the vicinity may be blocked, so pick more than one evacuation route.
- Teach family members how and when to turn off gas, electricity, and water
- Children should be taught in advance about the evacuation plans
- Prepare an 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:

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 fireworks
- 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 fire breaks 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 stops.
- In case of burn 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, or 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 sunburst 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

Fire Safety & Fire Extinguisher Use

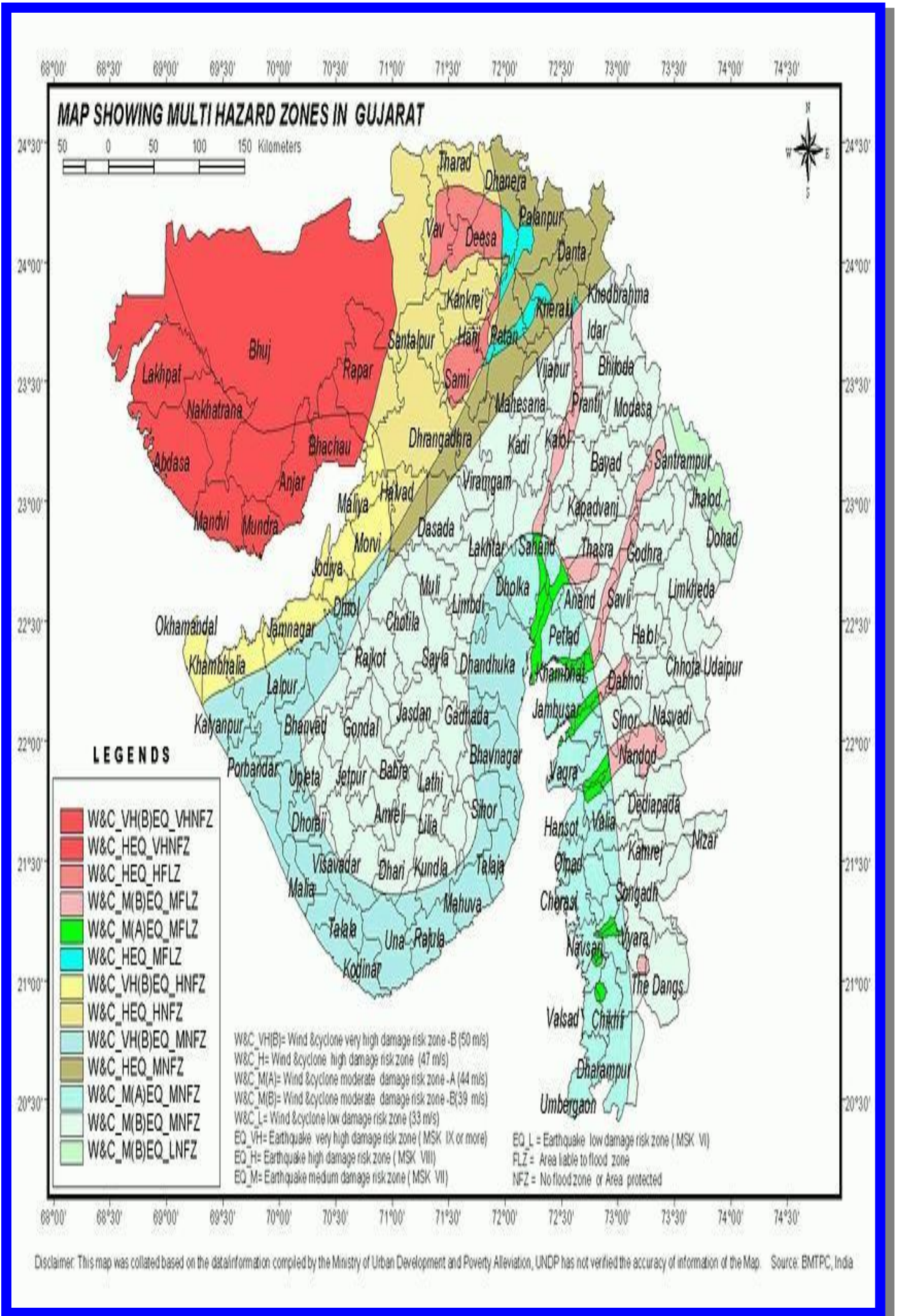


CATEGORIES OF FIRE

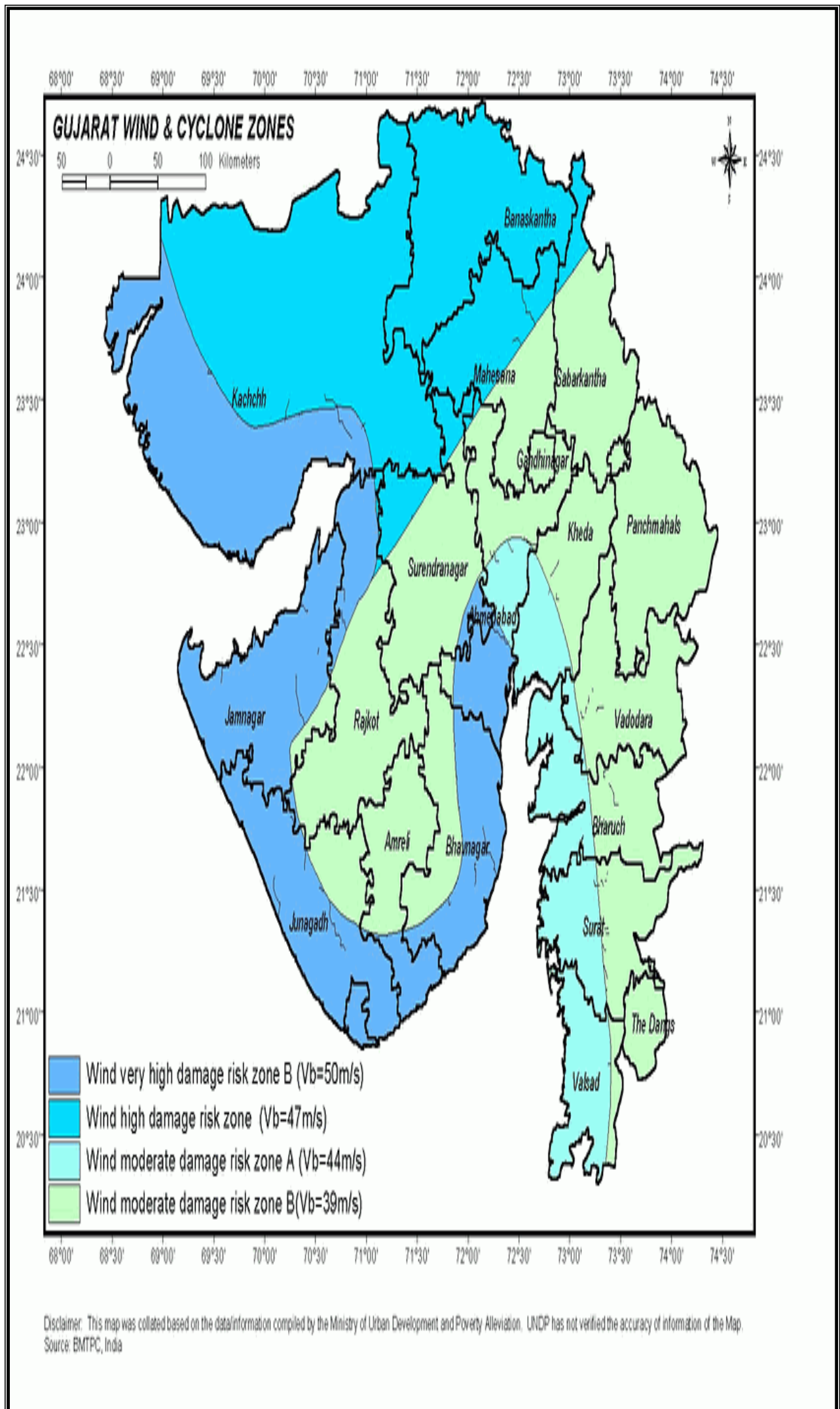
ABCD	CLASS	COMBUSTIBLE MATERIAL
A	Ordinary combustiblesolids	Paper, Wood, Cloth, etc.
B	Combustible liquids orliquifiablesolids	Oils,Paints,Chemicals,Wax,etc.
C	Combustiblegases	L.P.G.,Acetylene,Hydrogen,Methane, Natural Gas, etc.
D	Combustible metals	Magnesium,Sodium,Uranium,Thorium,etc
E	Electricalequipment&installations	Switchgears,Transformer,etc.

Maps

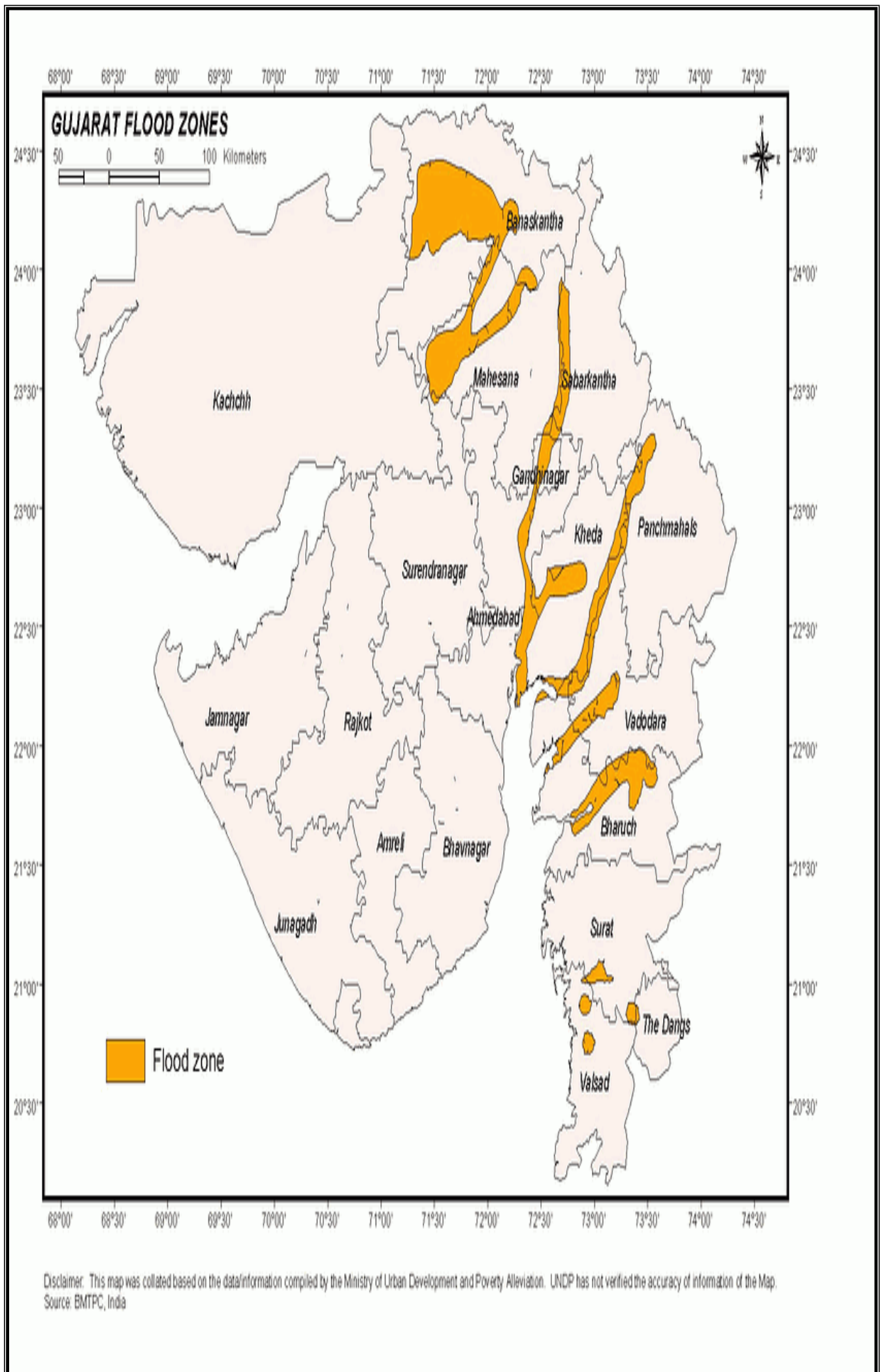
Multi Hazard Map



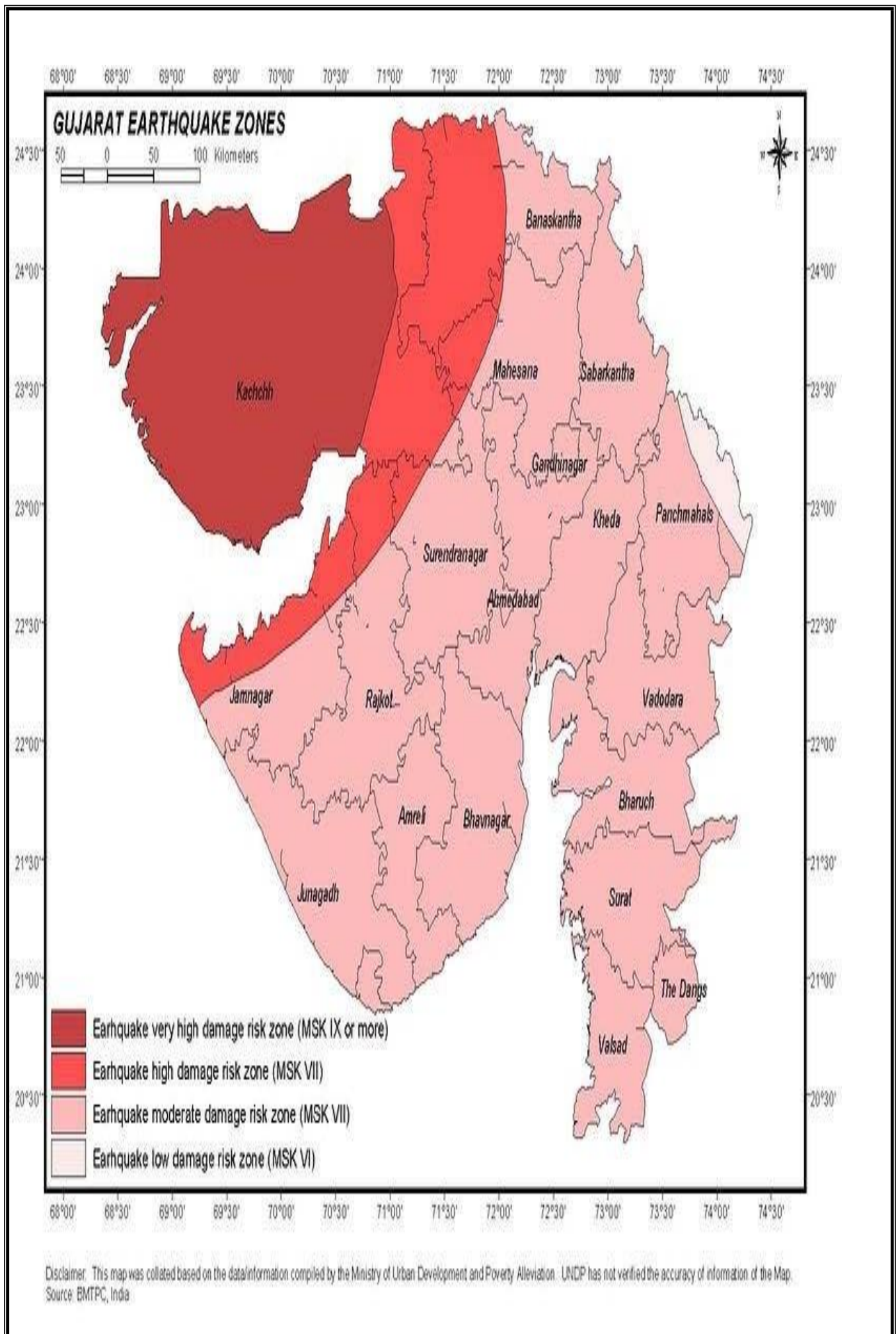
Cyclone Hazard Prone Map



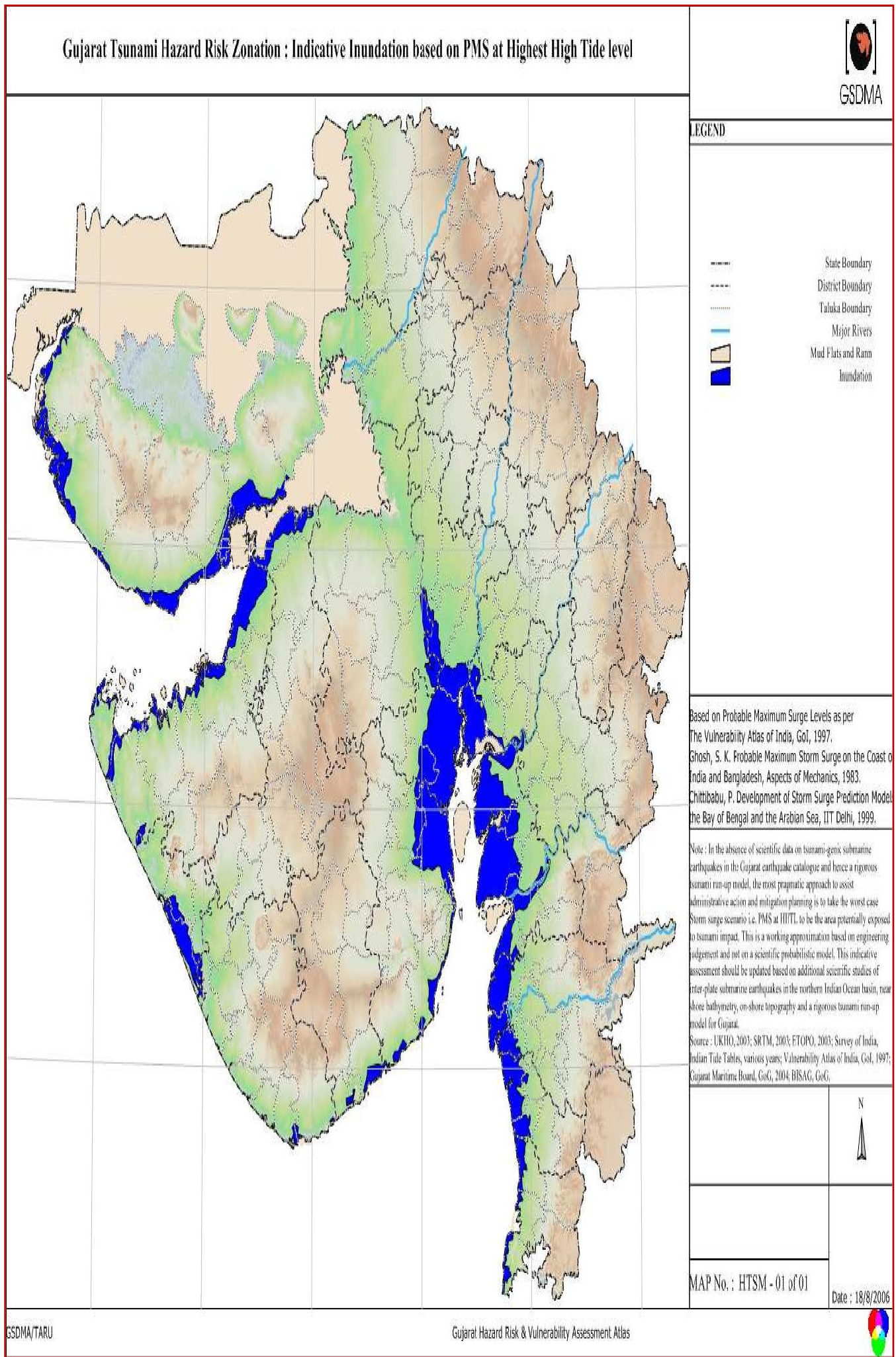
Flood Hazard Prone Map



Earthquake Hazard Map



Tsunami Hazard Map



ROAD ACCIDENT PRONE AREA

