



District Emergency Operation Center
Collector office, Sabarkantha
Himatngar



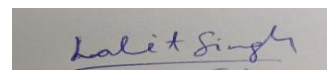
Introduction

Disaster risk reduction must be an everyday concern for everybody. Due to natural and manmade disasters people are being tested time. As on today, it is observed that people of Gujarat are strong and bold to counteract disasters confidently.

In recent years, the Government of Gujarat has been giving increased focus towards the disaster management and related aspects, as a part of disaster risk management of all the villages, Taluka and city in the Sabarkantha, district administration has prepared Disaster Management Plan at respective levels, and it is updated every year by authorities.

The disaster management plan is a summary document giving details about the hazards, its history, vulnerability analysis, risk assessment, flood management strategy and mitigation plan. It also outlines the flood response plan, warning system, communication system, search, rescue and relief operations and contingency plans. During the preparation of District Disaster Management Plan, emergency contact details of health department, police department, fire departments etc have been updated.

I am elated by this Sabarkantha district disaster management plan as it has been developed in a consultative manner with constant inputs and feedback from all the stakeholders. This plan has moved beyond the reactive relief-based approach and has a concise plan of actions for different stakeholders at district level for disaster risk reduction, emergency response and recovery. This district disaster management plan is a necessary document for reducing risk due to hazard and vulnerability. I hope this great document will be helpful for protecting life and properties as well as sustainable development in the future.



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ABBREVIATIONS

AAI	Airport Authority of India
AERB	Atomic Energy Regulatory Board
ACWCs	Area Cyclone Warning Centres
AIDS	Acquired Immune Deficiency Syndrome
APMC	Agricultural Produce Market Committee
AE	Assistant Engineer
ATI	Administrative Training Institute
ATS	Anti Terrorist Squad
ATVT	Apno Taluko Vibrant Taluko
BARC	Bhabha Atomic Research Centre
BIS	Bureau of Indian Standard
BISAG	Bhaskaracharya Institute for Space Applications and Geo-Informatics
BOOT	Build Own Operate and Transfer
BPL	Below Poverty Line
CBRN	Chemical, Biological, Radiological and Nuclear
CCG	Central Crisis Management Group
CDMA	Code Division Multiple Access
CDO	Central Design Organization
CEO	Chief Executive Officer
CFO	Chief Fire Officer
CMG	Crisis Management Group
CoH	Commissioner of Health
COR	Commissioner of Relief
CP	Commissioner of Police
CWC	Central Water Commission
CWCs	Cyclone Warning Centers
CWDS	Cyclone Warning Dissemination System
CBO	Community Based Organization
CHC	Community Health Center
CRF	Calamity Relief Fund
CSO	Civil Society Organization
DCG	District Crisis Group
DDMA	District Disaster Management Authority
DDMP	District Disaster Management Plan
DDO	District Development Officer
DEOC	District Emergency Operation Centre
DGVCL	Dakshin Gujarat Viji Company Limited
DISH	Directorate of Industrial Safety and Health
DM	Disaster Management
DAE	Department of Atomic Energy
DDO	District Development Officer

DEOC	District Emergency Operation Centres
DG	Director General
DGHS	Directorate General of the Health Services
DGP	Director General of Police
DIG	Deputy Inspector General
DSO	District Supply Officer
DPO	Project Officer
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DSP	District Superintendent of Police
Dy. Eng.	Deputy Engineer
Dy- SP	Deputy Superintendent of Police
DoR	Director of Relief
DP&S	Directorate of Purchase and Stores
DPR	Detailed Project Report
DRM	Disaster Risk Management
DRMP	Disaster Risk Management Programme
EFC	Expenditure Finance Committee
EMS	Emergency Medical Services
EOC	Emergency Operation Centre
ERCs	Emergency Response Centres
ERTs	Emergency Response Teams
ERU	Emergency Response Unit
EMRI	Emergency Management & Research Institute
ESR	Elevated Surface Reservoir
EWS	Early Warning System
Ex. Eng.	Executive Engineer
F&ES	Fire and Emergency Services
FCI	Food Corporation of India
FPS	Fair Price Shop
FWP	Food for Work Program
GDCR	General Development Control Regulation
GIDM	Gujarat Institute of Disaster Management
GLR	Ground Level Reservoir
GMB	Gujarat Maritime Board
GoI	Government of India
GPs	Gram Pranchayats
GPCB	Gujarat Pollution Control Board
GSDMA	Gujarat State Disaster Management Authority
GAD	General Administration Department
GEB	Gujarat Electricity Board
GERI	Gujarat Engineering Research Institute
GIDC	Gujarat Industrial Development Corporation
GIDM	Gujarat Institute of Disaster Management
GIS	Geographic Information System
GMB	Gujarat Maritime Board
GoG	Government of Gujarat
GoI	Government of India
GPCB	Gujarat Pollution Control Board
GSDMA	Gujarat State Disaster Management Authority

GSI	Geological Survey of India
GSM	Global System for Mobile Communications
GSWAN	Gujarat Statewide Area Network
GUVNL	Gujarat UrjaVikas Nigam Limited
GWSSB	Gujarat Water Supply & Sewage board
HFA	Hyogo Framework for Action
HHs	Households
HPC	High Powered Committee
HQ	Head Quarter
HAZCHEM	Hazardous Chemicals
HF/VHF	High Frequency/Very High Frequency
HoD	Head of Department
HRVA	Hazard, Risk and Vulnerability Assessment
HWB	Heavy Water Board
HRVC	Hazard, Risk, Vulnerability and Capacity
IMD	Indian Meteorology Department
INCOIS	Indian National Centre for Ocean Information Services
INSAT	Indian National Satellite System
IRIS	In corporate Research Institute for Seismology
ISR	Institute of Seismological Research
ISRO	Indian Space Research Organisation
ICT	Information and Communication Technology
ICTS	Information Communications Technology System
IAY	Indira Aawas Yojana
IDRN	India Disaster Resource Network
IEC	Information Education Communication
ICS	Incident Commander
ICS	Incident Command System
IDNDR	International Decade for Natural Disaster Reduction
IEC	Information Education Communication
ISDR	International Strategy for Disaster Reduction
IWMP	Integrated Watershed Management Program
KAPS	Kakrapar Atomic Power Station
LCG	Local Crisis Management Group
MAH	Major Accident Hazard
MFRs	Medical First Responders
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	Milli Meter
MP	Member of Parliament
MHA	Ministry of Home Affairs
MoA	Ministry of Agriculture
MoC&F	Ministry of Chemicals and Fertilizers
MoC&I	Ministry of Commerce and Industry
MoD	Ministry of Defence
MoEF	Ministry of Environment & Forests
MoF	Ministry of Finance
MoLE	Ministry of Labour and Employment

MoP&NG	Ministry of Petroleum and Natural Gas
MoSRT&H	Ministry of Shipping, Road Transport and Highways
MSDS	Material Safety Data Sheet
NEC	National Executive Committee
NCMC	National Crisis Management Committee
NDRF	National Disaster Response Force
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
NEIC	National Earthquake Information Centre
NFSM	National Food Security Mission
NGO	Non Government Organization
NGRI	National Geophysical Research Institute
NIDM	National Institute of Disaster Management
NRDWP	National Rural Drinking Water Program
NRHM	National Rural Health Mission
NSS	National Swayam Sevak
NIOT	National Institute of Ocean Technology
NPCIL	Nuclear Power Corporation of India Ltd.
NSRA	Nevada Seismic Research Affiliates
NWRWS	Narmada Water Resources Water Supply
NYK	National Yuva Kendra
PESO	Petroleum and Explosive Safety Organization
PPE	Personal Protective Equipments
PFZ	Potential Fishing Zones
PGA	Peak Ground Acceleration
PMO	Prime Minister 's Office
PMS	Probable Maximum Surge
PPP	Public Private Partnership
PS	Principal Secretary
PDS	Public Distribution System
PHC	Primary Health Center
PI	Police Inspector
PMGY	Pradhan Mantri Gramodyan Yojna
PRIs	Panchayati Raj Institutions
QCI	Quality Council of India
QRMT	Quick Reaction Medical Team
R & R	Recovery & Reconstruction
R&B	Roads & Buildings
RTO	Regional Transport Office
R & R	Rehabilitation & Reconstruction
RDD	Radiological Dispersal Device
RED	Radiation Exposure Device
RESECO	Remote Sensing and Communication Centre
RSO	Radiological Safety Officer

SC	Scheduled Caste
SDM	State Disaster Management
SDMA	State Disaster Management Authority
SDRF	State Disaster Response Fund
SDRN	State Disaster Response Network
SE	Superintending Engineer
SEOC	State Emergency Operation Centre
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
Supt. Eng.	Superintendent Engineer
SWO	Social Welfare Officer
SSNNL	Sardar Sarovar Narmada Nigam Limited
SST	Sea Surface Temperature
SWP	Single Wire Protocol
SAR	SearchandRescue
SCG	State Crisis Management Group
SCMC	State Crisis Management Committee
SOP	Standard Operating Procedure
SED	Site Emergency Director
SOG	Standard Operations Guide
SEOC	State Emergency Operation Centre
TDMA	Taluka Disaster Management Authority
DDMC	Taluka Disaster Management Committee
DDMP	Taluka Disaster Management Plan
TDO	Taluka Development Officer
TIO	Taluka Information Officer
TNA	Training Needs Assessment
TSC	Total Sanitation Campaign
TSO	Taluka Supply Officer
TEOCs	Taluka Emergency Operation Centers
UD&UHD	Urban Development & Urban Housing Development
UNDP	United Nations Development Programme
UTs	UnionTerritoriesx
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
WALMI	Waterand Land Management Institute
WSEAC	World Scientificand Engineering Academy and Society
WAN	Wide Area Network



CHAPTER-1 -INTRODUCTION

Need for the Plan

As per Section 15 (3) of The Gujarat State Disaster Management Act, 2003, “The Authority shall prepare, or cause to be prepared and maintain a master plan for the State”. Section 23 (1) of The Disaster Management Act, 2005 also reads “There shall be a plan for disaster management for every State to be called State Disaster Management Plan”. Apart from these statutory requirements, the hazard profile and disaster history of the state demands for a comprehensive state disaster management plan to be in place for coordinated and streamlined management of disaster in the state.

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 which outlines four priorities for action to achieve 7 targets, which in turn would lead to one outcome that is- substantial reduction of disaster risk and losses in lives, livelihoods, health, economy of persons, businesses, communities and countries. India is a signatory to the Sendai Framework for a 15-year, voluntary, non-binding agreement which recognizes that the State has the primary role to reduce 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. In order to make the 2030 Agenda a reality, broad ownership of the SDGs must translate into a strong commitment by all stakeholders to implement the global goals.

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

The CoP 21 or the Paris Climate Conference held in December, 2015 led to a new international climate agreement, applicable to all countries, aiming at “holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change”. The Paris Agreement recognized the need to address the 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 national states.
3. Encourage greater involvement and leadership of women in disaster risk management
4. Invest in risk mapping globally related to hazards such as earthquakes based on widely accepted standards and parameters.
5. Leverage technology to enhance the efficiency of disaster risk management efforts.
6. Develop a network of universities to work on disaster issues.
7. Utilise the opportunities provided by social media and mobile technologies.
8. Build on local capacity and initiative. Response agencies need to interact with the communities and make them familiar with the essential drill of disaster response.
9. Ensuring that disaster learning is well documented.
10. Bring about greater cohesion in international response to disasters.

Vision

Making disaster resilient Gujarat by enhancing the capacity of all stakeholders to respond to disasters in a planned way to minimize loss of lives, livelihoods and economic loss in different forms including critical infrastructure, basic services including health and educational facilities along with social, cultural & environmental loss.

Objectives of the Plan

- i) To assess various hazards, vulnerability, capacity and risk associated with the state.
- ii) To lay down various measures and guidelines for prevention and mitigation.
- iii) To lay down preparedness measures for all stakeholders.
- iv) To build the capacity of all stakeholders in the state to cope with the disasters and promote community-based disaster management.
- v) To provide clarity on roles and responsibilities for all stakeholders concerned with various phases of disaster management.
- vi) To ensure co-ordination and promote productive partnership with all other agencies related to disaster management.
- vii) To mainstream disaster management concerns into the developmental planning process.
- viii) Ensuring DRM is socially inclusive, gender sensitive and empowering.

- ix) Strengthen efforts to mainstream DRR into water management and reduce the likely impacts of water-related hazards.
- x) To develop efficient, streamlined and rapid disaster response and relief mechanism in the state.
- xi) Prevent disasters and achieve substantial reduction of disaster risk and losses in lives, livelihoods, health, and assets (economic, physical, social, cultural and environmental).
- xii) Invest in disaster risk reduction for resilience through structural, non-structural and financial measures, as well as comprehensive capacity development.
- xiii) To commence recovery programme as an opportunity to build back better in case of a future disaster by incorporating community in the programme.
- xiv) Promote the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures to prevent and reduce hazard exposure and vulnerabilities to disaster.
- xv) Strengthen disaster risk modeling, assessment, mapping, monitoring and multi-hazard early warning systems.

Effective use of science, technology and traditional knowledge in all aspects of DRM.

Plan Activation

The disaster response structure will be activated on the receipt of disaster warning/on the occurrence of the disaster. The occurrence of disaster may be reported by the concern monitoring authority to the Commissioner of Relief/GSDMA by the fastest means. The Commissioner of Relief (COR) will activate all departments for emergency response including the State EOC, District EOCs and Regional ERCs. Also, they will issue instructions to include the following details:

- Exact quantum of resources (in terms of manpower, equipments and essential items from key departments/stakeholders) that is required.
- The type of assistance to be provided
- The time limit within which assistance is needed
- Details of other Task/Response Forces through which coordination should take place

The State EOC, ERCs and other control rooms at the State level as well as district control rooms should be activated with full strength. The State Government may publish a notification in the official gazette declaring such areas to be disaster-affected areas under GSDM Act (Section 32 (2) (a)). Once the situation is totally controlled and normalcy is restored, the COR declares End of Emergency Response and issues instructions to withdraw the staff deployed in emergency duties.

Plan Implementation

Both the DM Act 2005 and GSDM Act 2003 enjoins state governments to make provisions for the implementation of the disaster management plans. Section 15 of GSDM Act 2003 states that every Department of the Government of Gujarat shall make provisions, in its annual budget, for funds for the purpose of carrying out the activities and programmes set out in its disaster management plan. The Act also states that every Department of the Government must prepare a departmental Disaster Management Plan in accordance with the SDMP.

Aims and Objectives

Sabarkantha District is prone to multiple hazards such as Floods, Heavy Rain, Lightening, Earthquake, Fires and have experienced & witnessed too on several occasions in the past. Panchmahals district have experienced the effects of flood in past few years, effects of devastating earthquake of year 2001 & faced the impact of drought and water scarcity in summer. Moreover, the district has several chemical industries / industrial areas in the district hence there is a need to have such disaster management plan which may be useful to comply with multi hazard approach to dealing with different disasters.

Recognizing the fact that most tasks and actions before and following a disaster are common at the district level, the Panchmahal district administration has used a multi-disaster approach (all disasters covered by one plan) while developing disaster management plan for the district. The present plan is not intended to provide comprehensive explanations and background information about a disaster or serve as a training manual on how to respond to a disaster or conduct a disaster related task. This is simply a Multi Hazard Management Plan consisting details regarding different hazards that affect the district along with the response structure to deal with such hazards and having linkages of subsidiary DM plans of all levels and of sectors with this Plan.

Following are the main objectives of this Plan:

- To protect and minimize the loss of human lives from the effects of different disasters
- To promote a culture of prevention and preparedness by ensuring that disaster management receives the highest priority at all levels
- To ensure that community is the most important stakeholder in the disaster management process
- To minimize the sufferings of the people arising due to different disasters
- To mainstream disaster management concerns into the developmental planning process
- To minimize the damage and losses that occur to the Property and Infrastructure due to different disasters
- To reduce the vulnerability aspect of both the people and infrastructure due to different disasters

- To ensure efficient response and relief with a caring approach towards the needs of the vulnerable actions of o immediat
- To create awareness and preparedness by providing advice and training to the agencies involved in disaster management and to the community
- To assess the risks and vulnerabilities associated with various disasters
- To provide clarity on roles and responsibilities for all the stakeholders concerned with disaster management so that disasters can be managed more effectively and efficiently
- To strengthen the capacities of the community and to establish and maintain effective Disasters Response Systems / Mechanisms
- To strengthen the existing Response mechanism
- To incorporate all the aspects concerned of DM for pre, during and post disaster phenomena
- To integrate and link up all level specific and department specific Disaster Management Plans

Mandatory Provisions of Disaster Management Plan

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

The DM Act authorizes the District 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. The roles, responsibilities and obligations of the Collector and other parties are set out in detail in the Act and are considered as part of this plan.

Concept of Disaster Management

There are few terms and definitions of Disaster and Disaster Management as per DM Act - 2003, the basics of Disaster and Disaster Management can be understood as follows:

- The term Hazard means: A hazard is a natural or manmade phenomenon which may causes physical damage, loss or threaten human life and wellbeing if it occurs in an area of human settlement, agricultural or industrial activity
- Category of Hazard:
 1. Natural hazards are the hazards that are caused because of natural phenomena (hazards with meteorological, geological or even biological origin). Examples of natural hazards are cyclones, tsunamis, earthquake and volcanic eruption which are exclusively of natural origin. Landslides, floods, drought, fires are socio-natural hazards since their causes are both natural and manmade. For example, flooding may be caused because of heavy rains, landslides or blocking of drains with human waste.
 2. Manmade hazards are the hazards that are caused due to human negligence. Manmade hazards are associated with industries or energy generation facilities and include explosions, leakage of toxic waste, pollution, dam failure, wars or civil strife etc.
 3. Geological hazards
 - Earthquakes
 - Tsunamis
 - Volcanic eruptions
 - Landslides
 4. Climatic hazards
 - Storms (including tropical cyclones)
 - Floods
 - Drought
 - Tornados
 5. Environmental hazards
 - Environmental pollution
 - Deforestation

- Desertification
- Pestinfestation

6. Industrial accidents

- Nuclear
- Biological
- Chemical

7. Epidemics of all types

- The term Risk means: Risk is defined as the expected losses (lives lost, persons injured, damage to property, economic activities of livelihoods disrupted) to a community when a hazard event occurs. The probability of the loss will occur as the result of an adverse event, given the hazard and vulnerability.
- The term Vulnerability means: Vulnerability is defined as the degree of loss of assets of prevailing conditions, which adversely affect people's ability, prevent, to prepare for and respond to hazards event. These long-term factors, weaknesses or constraints affect a household or community's ability to absorb or immediate disaster or to recover from the damage.

Definitions as per the Disaster Management Act-2003

-Disaster means an actual or imminent event, whether natural or other occurring in any part of the district which causes, or threatens to cause, all or any of the following:

- (i) Widespread loss or damage to property, both immovable and movable; or
- (ii) Widespread loss of human life or injury or illness to human beings; or
- (iii) Damage or degradation of environment.

And any of the effects specified in subclauses (i) to (iii) is such as to be beyond the capacity of the effected community to cope up with using its own resources and which disrupts the normal functioning of the community.

Disaster Management is a continuous and integrated process of:

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



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

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

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

Approach to Disaster Management

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

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

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

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

Policies and Responsibilities

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

Authorities and Responsibilities

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

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

Warning, Relief and Recovery

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

The focal point for early warning, relief and recovery is the District Collector, who directs and coordinates these efforts within the district. The Collector is also responsible for coordinating

warning, relief and recovery with similar activities in neighboring districts and with the GSDMA and Revenue Department.

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

Mitigation, Preparedness and Prevention

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

- Long term planning for mitigation, preparedness and prevention-investments to this effect in the district,
- Enforcement of regulations, particularly building and safety codes and landuse plans.
- Review and evaluation of development plans and activities to identify the way store duce 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 affect mitigation, preparedness and prevention using the mechanism noted above. Based on the interim assessment of risk and vulnerabilities, the district will focus on the following areas for mitigation, preparedness and prevention, which are specific to district:

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

Plan Review and Updation

Disaster Management Plan is prepared and reviewed by the District Collector / DEOC in collaboration with the line departments and other organizations in the district.

The plan reviewed annually (in the Month of May) and inspecial case periodically too and updated:

- When significant changesi n the nature of any hazards
- Lessons learnt following any major disaster or
- When the reisany significant change to organization or responsibilities of primary members of the task forces defined in the plan.

Financial Arrangements

With respect to the Updation of the DM plan the expenditure shall be booked either from the grant provisions of GSDMA under the DM Plan Updation head and time to time guidelines of GSDMA or as per the directions of District Collector the expenditure will be booked under the head of 2245 for DDMP Updation.

There are other provisions which are utilized in different kinds of relief measures as per the directions released from Central Government, State Government and so the Collector & DM viz.the funds like Calamity Relief Fund (CRF) which is utilized for the affected people / nature / cattle death in case of the natural calamities, NCCF, CM Relief Fund, PM Relief Fund etc.

Scope of the Plan

The District Disaster Management Plan for Panchmahals District has been prepared for its execution by various departments and agencies of the district and other Non-governmental Agencies expected to participate in disaster management process. This plan provides for Vulnerability Assessment and Risk Analysis, Preventive Measures, Mainstreaming disaster management concerns into Developmental Plans, Preparedness Measures, Response Mechanism, and Partnership with Stakeholders, Financial Arrangement, Roles and Responsibilities of the

Various agencies interlink in disaster management and the scope of the iractivities. An elaborate inventory of resources has also been formalized.

Trigger mechanism

The plan would be put into action as per the levels of disasters categorized i.e. L0, L1, L2&L3.

Levels of Disaster (The L Concept)

The L concept has been developed to define the different levels of disaster to facilitate the assistance to Stateand the Centre. It has four levels which are as follows.

- L0 level: Denotes normal times, which will be utilized for close monitoring, documentation and preparatory activities. Training in Search and Rescue teams, rehearsals, evaluation and inventory updation for response activities will be carried out during this period.
- L1 level: Denotes when the disasters which can be managed at the district level where the State and the Centre need to be on guard in case assistance is required for disaster relief operations.
- L2 level: Disaster situations that require assistance and active participation of State resources for management of the disaster.
- L3 level : Disaster situation arises in case of large-scale disasters that have a noticeable impact on a number of districts of states and when the State and District authorities have been over whelmed with the disaster and require assistance from the Centre for rescue and relief operations.

HAZARD, RISK AND VULNERABILITY ASSESSMENT

CHAPTER- 2

HAZARD, RISK AND VULNERABILITY ASSESSMENT

Hazard risk assessment and vulnerability mapping & vulnerable elements to specific hazards

The Hazard technically is not a disaster unless the ‘Trigger ‘ set it off. It could be weak legislation that failed to regulate the functioning of the facility. The Risk and Vulnerability factors analyzed from these Hazards vary from Minor to Major impacts affecting the smaller or larger areas of the district.

“**Risk** is a technical concept, which is used by engineering and management specialists to arrive at an estimation of losses in the event of disaster and the expected probability of its occurrence.”

$$\text{Risk} = \frac{\text{Hazards} \times \text{Vulnerability}}{\text{Coping Capacity}}$$

“**Vulnerability** gives the extent to which a community is affected by a disaster”.

The idea of danger or threat points out the possibility of physical events capable of causing damage, like earthquakes, floods, industrial accidents etc. The vulnerability brings to light the structural susceptibility of society or social groups suffering harm, based on physical event constituting a “Threat”. Vulnerability concerns the relationship between the social, economic and physical elements, on which the wellbeing of the society or the group in question depends. The analysis of vulnerability is specific and based on the type of danger or threat which is apprehended.

The table below summarizes the results of an analysis of impact of Hazard, risk and Vulnerability of disaster in Panchmahal is as below. This analysis indicates that disaster planning at district level should first focus on the functional response to the Flood, Industrial Accidents and Earthquakes which triggers to the other hazards like Dam Failure, Water logging, Fire, Failure of critical infra structure and building collapse.

Table1: Risk and Vulnerability Analysis

Hazards	Probability Rating	Impact Rating	Vulnerability Ranking	Vulnerable Areas/Talukas
Industrial Accidents	5	4	12 (moderate)	Industrial areas of Himatnagar, Prantij, Talod, Idar Taluka.
A) Fire	4	3	12 (moderate)	Mostly inurban pockets and industrial areas (including rural areas), and domestic fires in rural areas.
B) Leakage of Gases				
C) Oil Spill	4	3	12 (moderate)	
	3	2	10 (moderate)	Industrial areas of Himatnagar, Prantij, Talod, Idar Taluka.
Drought	4	3	12 (moderate)	Whole District
Flood	5	5	20 (High)	Mostly low-lying Areas
Epidemics	5	4	25 (High)	Whole District
HeatWave	4	3	12 (Moderate)	Whole District
Rail/Road/Air Accidents	4	2	10 (moderate)	Whole District
Earthquake	3	2	16 (High)	Zone-3
Terrorism	2	5	15 (moderate)	District
1) Cyber				
2) Robbery				
Boat Sinking	2	1	2 (Low)	Majorly the areas surrounded by rivers.

Building Collapse	1	2	2(Low)	Majorly the Urban areas
Dam Failure	2	1	2(Low)	The district has 2 (Dharoi, Harnav) major dams and Hathmati, Gorthiya, Jawanpura, Guhai, Khedva medium / minor dams Dam can be the vulnerable.
Failure of Critical Infrastructure	2	1	2(Low)	The Petroleum cross-country pipeline srunning across the district may be affected

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

4.	Environmental risk – Due to man-made Natural Calamity disaster while transporting of chemical by road, rail & pipeline	Leakage, spillage, escaping, penetrate of toxic, flammable, explosive, radioactive, poisoning chemical liquid, vapors, dust, fume in atmosphere or on or in the land due to rupture of pipeline, on or in the land road transport containers / vessel, railway wagon, equipment failure because of natural calamities or man made or combination of Them disaster	Same as above	Same as above
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Capacity Analysis

Traditional Coping Capacity:

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

Hazard	Early Warning	Preparedness	Early Response
Flood	Monitering water resoureces through community	Identification of high elevation places and Rescue teams	Evacution, Search and rescue and First aid support
Cyclone	Information through Fisher folks	Evacute to safe place	Search and rescue and First aid support
Earthquake	---	Identification of Safe Places	Search and rescue and First aid support
Draught	Own assessment mechanism	Food storage, Food Storage at individual level	Panjrapol
Industrial/Chemical Hazard	Local Adinistration	OCR, DISH and EOC	Local Response Teams
Tsunami	---	Evacute to safe place	Search and rescue and First aid support

Major Accident Hazard (MAH) Units in Sabarkantha District

Sr. No.	Name of the Unit	Location	Activity/ Product
1	HEXONE INTERCHEM PVT. LTD.	OPP. KATWAD PATIYA, N.H. SABARKANTHA, GUJARAT	ETHYLENE OXIDE
2	NAVBHARAT LPG BOTTLING CO.	SABAR DAIRY, TALOD ROAD HIMMATNAGAR SABARKANTHA	LPG
3	AIRONA TILES LIMITED	BLOCK NO 121, CERAMIC ZONE, AT-DALPUR, TA-PRANTIJ, DIST-SABARKANTHA	LPG

Major Accident Scenarios for MAH Units at Himatnagar, Prantij Talukas

Name of the Unit	Chemical	Storage Qty. (MT)		Damage Distance (m)							Toxic Dispersion		Population likely to be affected	Areas likely to be affected
		Large	Total	Pool Fire		BLEVE		UVCE			D-3	F-1.5		
				FZR	IZR	FZR	IZR	FZR	IZR	D-LFL				
HEXONE INTERCHEM PVT. LTD. OPP. KATWAD PATIYA, N.H. SABARKANTHA GUJARAT	E.O.	7	7	13.7	19.5	103.9	215.5	2.4	11.9	7.3	823 m	1.1 Km	200	Prantij
NAVABHARAT LPG BOTTLING CO. SABAR DAIRY, HIMMATNAGAR SABARKANTHA	LPG	30	30	----	----	204.0	403.2	61.8	197.8	400.8	----	----	100	Himatnagar
AIRONA TILES LIMITED BLOCK NO 121, CERAMIC ZONE, AT-DALPUR, TA-PRANTIJ, DIST-SABARKANTHA	LPG	20	20	----	----	204.0	403.2	61.8	197.8	400.8	----	----	100	Prantij

Transport Accident Scenarios

Sr. No.	Transport Accident Scenario	Area Likely to be Affected
1.	Failure of chlorine toner	1 to 1.4 Km down wind
2.	Failure of acid / alkali tanker	Immediate surroundings and burns to persons coming in direct contact with the substance
3.	Ammonia leak from cylinder	Varying, depending on the capacity of the cylinder but not more than 1 km
4.	Ammonia leak from a tanker	Up to 3 km down wind
5.	Escape of explosive gases from cylinder followed by explosion	Explosion may cause over pressure up to 50 m for a short duration. However, pieces of damaged cylinder may travel up to 100 m from the accident site
6.	LPG leak from tanker followed by fire / explosion	Thermal radiation and overpressure effects will be up to 200 m for a short duration. BLEVE may result first degree burns up to 150 m and also cause secondary fires depending on the location of occurrence.
7.	Spill / leak of flammable petroleum products followed by fire	Thermal radiation effects of unconfined pool fire will be felt up to 25 m from the pool edge for the duration of fire.
8.	Spill leak of CS ₂ followed by fire in a road tanker	Thermal radiation effects of unconfined pool fire will be felt up to 30 m from the pool edge for the duration of fire. Burning of CS ₂ results in formation of toxic sulphur dioxide, effects of which may be felt up to a distance of 2km from the accident site
9.	Spill / leak of solvents and other flammable chemicals such as toluene, methanol, benzene and xylene followed by fire	Thermal radiation effects of unconfined pool fire will be felt up to 15 m from the pool edge for the duration of fire.

PREVENTION, MITIGATION AND PREPAREDNESS AND CAPACITY BUILDING

CHAPTER- 3

PREVENTION, MITIGATION, PREPAREDNESS AND CAPACITY BUILDING

In the context of Sabarkantha district and Gujarat State in general the Disaster Management perspective has been followed in three phases, i.e. pre, during and post disaster management activities.

The pre-disaster phase includes prevention, mitigation, and preparedness activities. These activities involve Extensive Data collection, maintaining Directories of resources, developing Action plans, Capacity building, Training and Community awareness activities among others.

District administration, other Government departments, local authorities and other relevant agencies have already been formulated / working on the plans for prevention and mitigation of disasters and will build the capacity and ensure preparedness in the event of a disaster taking place. The private sector, NGOs and the community actively co-operate with the relevant agencies and participate in the training and other activities, which are conducted to augment their disaster management capabilities.

In this context, District Administration and different Government Line departments act as the nodal agency for mitigation, preparedness and capacity creation for the respective specific field areas as per the guidelines of State government and GSDMA.

In the district, DEOC / District Administration has developed links with other stakeholders such as Lending agencies, Government departments, Local authorities, NGOs, Private sector and Community groups in order to share the knowledge and augment capacity on a holistic basis. The capabilities developed in this phase play a critical role in all subsequent phases.

In **Pre-Disaster Phase** with Respect to district, the key activities may be the joint efforts from the Chairman i.e. District Collector and other district line department heads / District Disaster Management Committee members towards the disaster management.

Planned development: There is a significant relationship in the way disasters and development affect each other. A long-term disaster management approach has been adopted and accordingly planning activities for development have been carried out for robust mitigation practices. District Administration and different Government Departments would ensure that the planning activities of the district administration and local authorities would consider disaster risks and provide suitable preventive and mitigation measures.

Development of policies, SOP's and guidelines: Effective disaster management requires the formulation of clear guidelines and subsequent compliance by all Government authorities, private sector entities and the public at large. Different departmental SOPs has been developed for district and department specific and private sector specific SOP can be developed intheseregard.

Establishment of a proper chain of command: It is imperative that a clear chain of command is established for effective management of activities that immediately follow a disaster. DEOC / District has been established a clear chain of command which is headed by District Collectorand DEOC is the focal control room for all disaster management activities and coordination mechanisms across all entities responsible for implementation in the district.

Risk assessment: Before commencing preventive and preparedness activities, it is important to identify and assess different types of risks for the district. Relevant departments will co-ordinate with the District Administration for athorough assessment of:

- Hazards: Classification of the region into zones, based on hazard potential; and
- Vulnerability: Assessment of degree of vulnerability of any given structure/ people / region to the impact of the hazard.

The assessment has been used for developing detailed conting encyplans and mitigation measures. Develop disaster management plans: Detailed disaster management plans that are tailored to local needs would enable the relevant authorities and the community to respond systematically and effectively to disasters. District administration / DEOC, different line departments, and expert agencies etc., in consultation with DEOC has developed the disaster management plans. These are constantly reviewed and updated.

Develop repositories of information: It is critical that the relevant authorities should be in a position to quickly establish contact with people and resources in the aftermath of a disaster. DEOC and the relevant Government departments have created comprehensive repository of information such as names, contact details, and always made easily accessible to the relevant authorities.

Establish communication networks: A robust district-wide communication network is critical not only for managing disasters but also for effective functioning of the district administration. Comprehensive communication network has been established up to village level by DEOC and different line department.

Developing early warning mechanisms: Early warning mechanisms help the relevant authorities in taking timely preventive measures and thereby, reduce the damage caused by disasters. Set up early warning mechanisms by DEOC, different control rooms and departments to give advance warning for hazards like cyclones, floods etc.

Building capabilities & expertise: It is necessary to build strong capabilities and expertise for handling various aspects of disasters. District administration with the support of GSDMA has been involved in enhancing the capabilities of different officials and community members, NGO's etc. by imparting disaster management trainings to different agencies and departments by providing rescue equipments for strengthening individual and department with respect to disaster management.

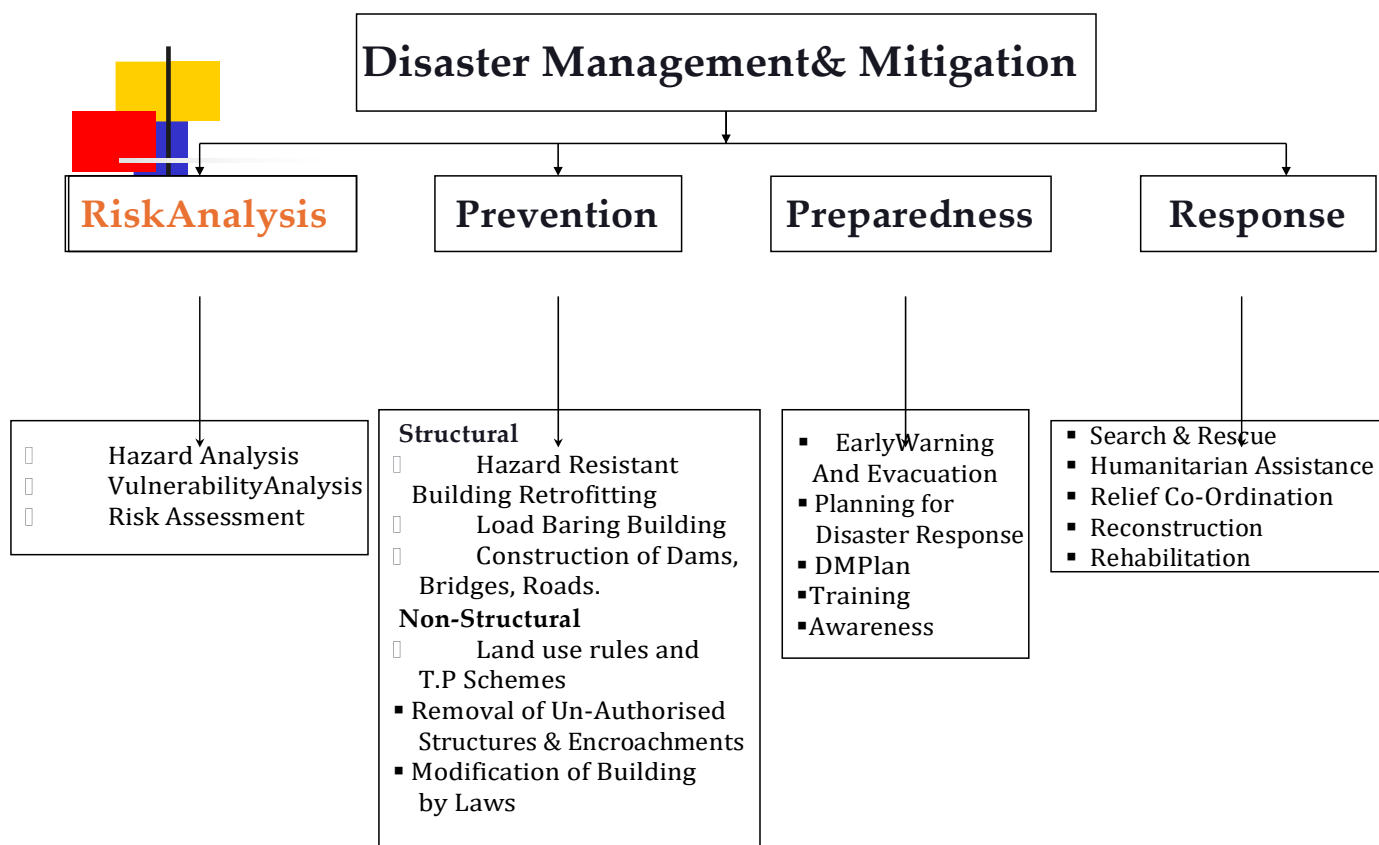
During the period of any kind of disaster: As per the set response mechanism with this District Disaster Management Plan all line department will perform accordingly to get the routine life back on the regular track, District Collector is the Responsible Officer and as per his/her directions all other line departments, agencies respond to the disaster and ensure that the damage due to the disaster can be minimized as much as possible. The Rescue and Relief work in the affected area will be the focal point of response and accordingly the response teams/ groups will be performed to let the disturbed life on track.

In Post disaster scenario of any types of disaster, the focus will be on the rehabilitation and reconstruction work, as per the directions of State Government and so t

Chairperson & District Collector, the afore said task will be performed with the support of different taskforce, department and agencies and by the cumulative efforts of all line department and response groups the focus will be on the routine life establishment.

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

As the district is surrounded by various rivers and industrial zones, the major possibilities of floods and industrial hazards are more with the district so the required mitigation strategies may be developed in this regard to minimize the effect of such kind of disaster. The following flow chart shows Disaster Management and Mitigation aspects in three different DM phases.



- -Mitigation means a measure aimed at reducing the impact or effects of a disaster.
- -Prevention means measures the object of which is to avoid the occurrence of a disaster
- -Reconstruction means repair and construction of a property undertaken after a disaster
- -Rehabilitation means any activity, the object of which is to restore normalcy in conditions caused by a disaster.
- -Emergency Preparedness means the state of readiness which enables stakeholders to mobilize, organize and provide relief to deal with and impending or actual disaster or the effects of a disaster.

1. **Level specific Disaster Management plans** such as District DM Plan, Departmental DM Plan, Offsite emergency Plan, Taluka DM Plan, Village DM Plan, City DM Plan, etc. have been prepared and updated periodically, time to time instructions for development and updation of DM Plan for different set up like industries, Educational establishments, Health infrastructure, different agencies has been given by the District EOC.
2. Preparation and timely updation of district level contact detail diary, Resource Inventory and communication plan by District EOC.
3. **The Database of DM Plans** has been updated on a regular basis on SDRN and IDRN.
4. **Capacity building** of all stakeholders including government officials, agency representatives, PRI's and community members with respect to Disaster Management, It is on going process.
5. **Subject specific training** such as First Aid, Search & Rescue, EOC Management, Early Warning & Communication and Masons training has been organized for various stakeholders by inviting guest lecturers, Professional trainers of different health agencies, fire department, individual agencies to conduct the trainings for different types of stakeholders of all levels.
6. **Awareness generation programmes** with respect to Disaster Management are frequently organized to sensitize all kinds of stakeholders, officials, community members of all levels and other organizational representatives on Disaster Management through various types of modes such as:

- Orientation/sensitization meetings
- Competitions
- School level programmes (elocution, Poster competition, etc.)
- Rallies
- Using special drives of IEC hand outs distribution for different Agencies / bodies /practitioners
- Poster exhibition and IEC distribution on different occasions /fairs /in National / local festivals, in government programme.
- Video Screening for different target groups.
- By organizing different programmes like street plays, Bhavai etc.
- Spread the message of preparedness and what to do and what not at the time of emergencies through media channels, print media (local and national both), cell phone operators by scrolling of messages and warnings.

7. Training and Rehearsals at all levels (District, Taluka, Village, City)

For effective implementation of this DDMP, regular training and mock drills involving all key members need to be carried out. This will further enhance better understanding of individual's role and responsibilities in emergency response besides improving the overall coordinated efforts.

The main objectives of training plan are:

- Familiarizing key personnel involved in the plan with their equipment, the overall plans and their roles.
- Ensuring efficacy of emergency response mechanisms / resources.
- Reviewing the total plan, so that updating, modifying and training activities can be improved.

8. Mock Drills

The ability of the Emergency Management Team is to perform a set of critical tasks under simulated conditions for different hazards that are validated by conducting a full-scale mock drill once a year at district level. This includes but not limits management initiatives, response activities, direction, control, mobilization of resources, communications, mitigation and post incident activities of all concerned. This is a field

mockdrill on a large scale involving all the task forces.

After completion of every mock drill, a debriefing meeting shall be arranged in which proceedings of the mock drills are discussed highlighting weakareas /short falls for effecting improvement in the plan.

Taluka level mockdrills have been organized twice a year for checking preparedness measures of all kinds of DM initiatives in particular DM Plan updation status. Same way as per the office order of zonal-subzonal officers' appointment, village level mock drills have to be performed thrice for one taluka covering different villages of the taluka.

Electronic Support for resources utilization and information

1. State Disaster Resource Network: (SDRN)

SDRN is a Web base database system/portal and can be utilized for the DM related resource details/ information of Taluka, City and Village of whole district. SDRN consists of contacts related as well as resources related to both types of details of the Gujarat State. This portal can be utilized from Taluka, District and from state level. It runs GSWAN and Private connectivity. For utilization of the same one can use the following link:

<http://sdrn.gsdma.org>

2. India Disaster Resource Network (IDRN)

IDRN is nation wide data base portal and utilized through district and from state and national level. IDRN consist online data base of equipments, skilled men power and critical supplies of whole nation. This database can be utilized at the time of crisis; For utilization of the same one can use the following link:

<http://www.idrn.gov.in>

MITIGATION MEASURES:

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

Probable Mitigation Measures	Identified Locations and Villages	Implementing Departments	Convergence with Scheme/ Program	Time Frame
Desilting and deepening of water channels (kaans)	Respective Sensitive Kaans	Irrigation,	Departmental program	Before June
Repair and maintenance of Flood Channels, canals, natural drainage, stormwater lines	-	Irrigation department	Departmental or special plan	Before June,
Construction of Safe Shelters (new construction through Indira Awas, Sardar Awas and Ambedkar Awas)	Respective villages	Rural Development	Housing Scheme	Regularly
Desilting of water bodies like rivers and ponds	Village ponds and river streams	Irrigation TDO Rural Development	Departmental program	Before June

- Non-Structural Mitigation Measures for Flood:

Non-Structural measures	Locations/coverage area	Implementing Departments	Convergence with agency/program	Time Frame
Safety audit of existing and proposed housing stock in risk prone areas	Flood risk prone villages	TDO, Rural development	Sardar Awaas and other rural housing schemes	Regularly
Promotion of Traditional, local and innovative practices like bamboo/ plastic bottle raft etc	Flood risk prone	TDMC, SHGs and youth groups, NGOs	Training and capacity building plan for disaster management	Continuous
Capacity building of volunteers and technicians	Flood risk prone	TDMC	Training and capacity building plan for disaster management	Continuous

- Structural Mitigation Measures for Earthquake:

Structural measures	Identified Locations and Villages	Implementing Departments	Convergence with Scheme/Program	Time Frame
Retrofitting (if required) of public utility buildings like offices, schools/banks markets etc.	Whole District	R&B (State and Panchayat), Panchayat, Rural department		Regularly
Retro fitting of unsafe rural houses		DDMC, DDO	Rural housing schemes and departmental programs	Regularly
Identifying and safely Dismantling unsafe structures		R&B department		Regularly

- Non-Structural Mitigation Measures for Earthquake:

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

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

Structural measures	Activities	Implementing Departments	Convergence with agency/program	Time Frame
Monitoring impact of industries on NRM (land, water and air)	Data collection of impact on natural resources (groundwater monitoring wells, air quality test, etc)	DDMC, TDMC, LCG, GPCB		Regular interval
Safety assessment	Carry out structural safety inspection/ audit	DISH, DCG, LCG (Dy. Industrial Safety and health)		Regular interval

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

Nonstructural Measures	Activities	Implementing Departments	Convergence Agencies	TimeFrame
Planning	Prepare an onsite and offsite emergency plan	Occupier, DISH		Regular interval
	Conduct mockdrills as per the regulations	DCG, DISH and LCG		Regular interval
	Update the plan as per the requirement	Occupier, DISH		Regular interval
	Monitor similar activities in all the factories /industries	DISH and LCG		Regular interval
Capacity Building	Develop IEC material for Publication & Distribution	DDMC, TDMC		Yearly
	Awareness generation to public and medical professionals residing near MAH factories for immediate steps	DDMC, TDMC, LCG		Regular interval
	Organize training programmes, seminars and workshops (e.g. line departments officers, Mamlatdar etc)	DDMC, TDMC, LCG		Regular interval
	List of experts/ resource person/subject specialist (District emergency Off site plan)	DDMC, TDMC, LCG		Regular interval
	Encourage disaster insurance	Labour & employment department		Regular interval
Medical	Listing of hazardous chemicals and gases.	Occupier, DCG, LCG, DISH, BHO		Regular interval
	Keep checking on availability and validity of relevant antidotes for chemical hazards prevalent in District	Occupier, DCG, LCG, DISH,		Regular interval

	Workshops and training for medical professionals to handle potential chemical and industrial hazard	DCG, Occupier, LCG, DISH		Regularly
Compliance	Environmental Protection Act, Factory Act, Mutual Aid SOPs	DISH, GPCB		Regular interval

At District level, the District Crisis Management Group (DCG) is an apex body to deal with major chemical accidents and to provide expert guidance for handling them.

RESPONSE PLAN & INSTITUTIONAL MECHANISM

CHAPTER - 4 - RESPONSE PLANNING

Trigger mechanism for putting the plan in to action

Level of Disasters

L concept has been developed to define different levels of disasters to facilitate the responses and assistances to states and districts.

Level	Description	Activities
L0	Normal time	Prevention, preparation and capacity building activities like training, preparation and updation of plans, mock drills, procurements of equipment, etc
L1	Can be managed at district level	State and Centre remain ready to assist if need arises
L2	Beyond the capacity of district	Require active participation and mobilization of resources from State Government
L3	Resources of the District and State Government have been overwhelmed	Require Central Government for reinstating the State and District machinery as well as for rescue, relief, and other response and recovery measures

District Emergency Operations Centers

EOC is an offsite facility which functions from the State / District/ Taluka headquarters. It includes the space, facilities and protection necessary for communication, collaboration, coordination and emergency information management. It is a combination of various line departments of Government and other agencies whose services are generally required during incident response.

Special powers are conferred on the Responsible Officer during disasters. The principle organization leading each task force is responsible for giving alert to the appropriate authority when use of the special powers is required to accomplish warning, relief or recovery objectives given to the task force.

Disaster Response and District Incident Response System

The response to disasters in the district will be organized according to the Incident Response System as adapted to the conditions in Gujarat State (IRS/GS). The argument for the IRS is that its fundamental elements –predefined different task forces, identified resources, and predefined duties and responsibilities to different task forces will lead to an effective response to any kind of disaster.

In the district, the District Disaster Management Plan is focused on sector specification plans unlike the department specific planning approach. The disaster response is led by the

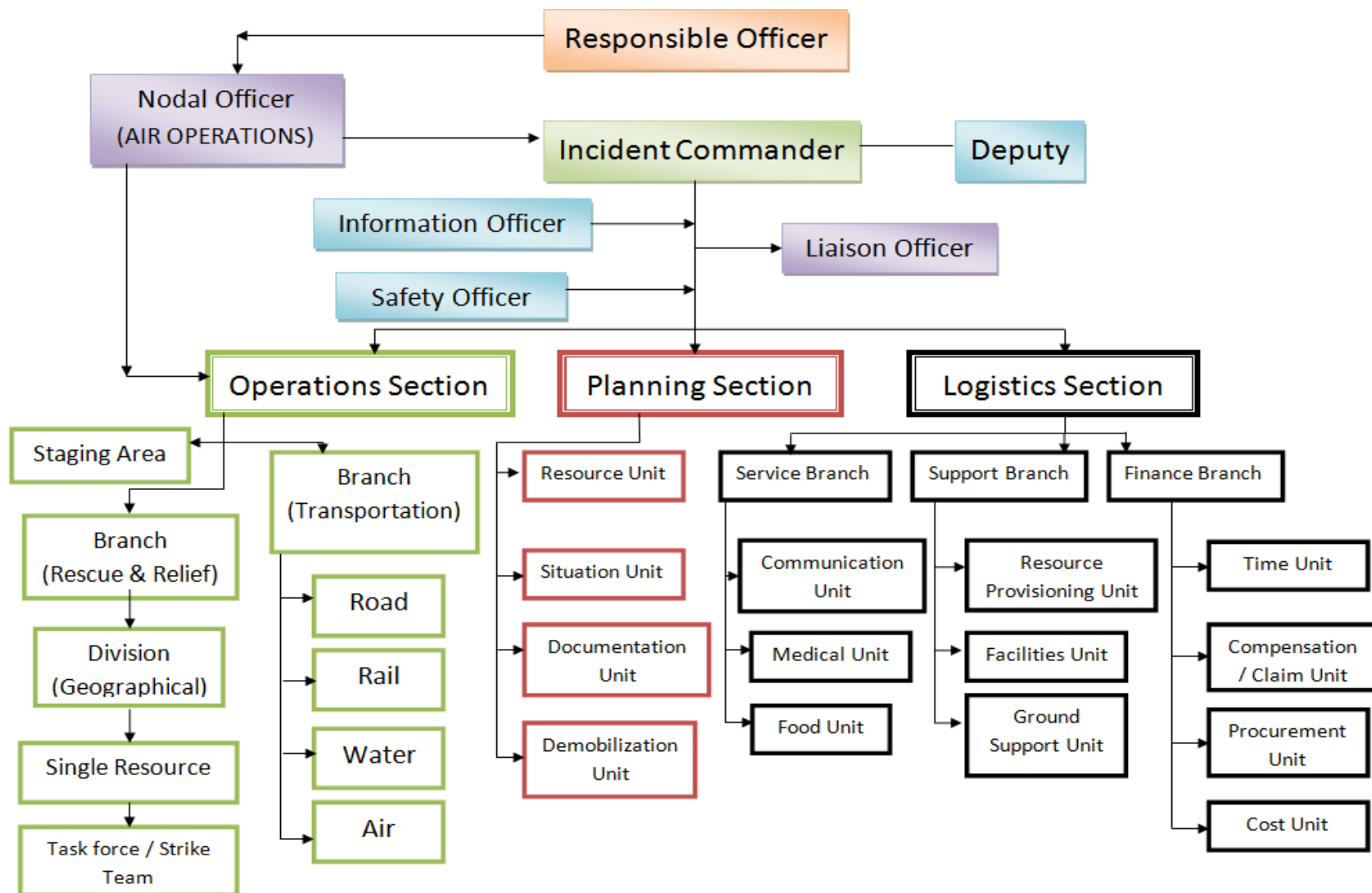
District Emergency Operation Center (DEOC) under the command and control of the District Collector.

Framework for Taluka level Disaster Management Committee, City level Disaster Management Committee and Villagelevel Disaster Management Committee has been made, updated and followed for different level specific Disaster Response Mechanism.

Functions of DEOC

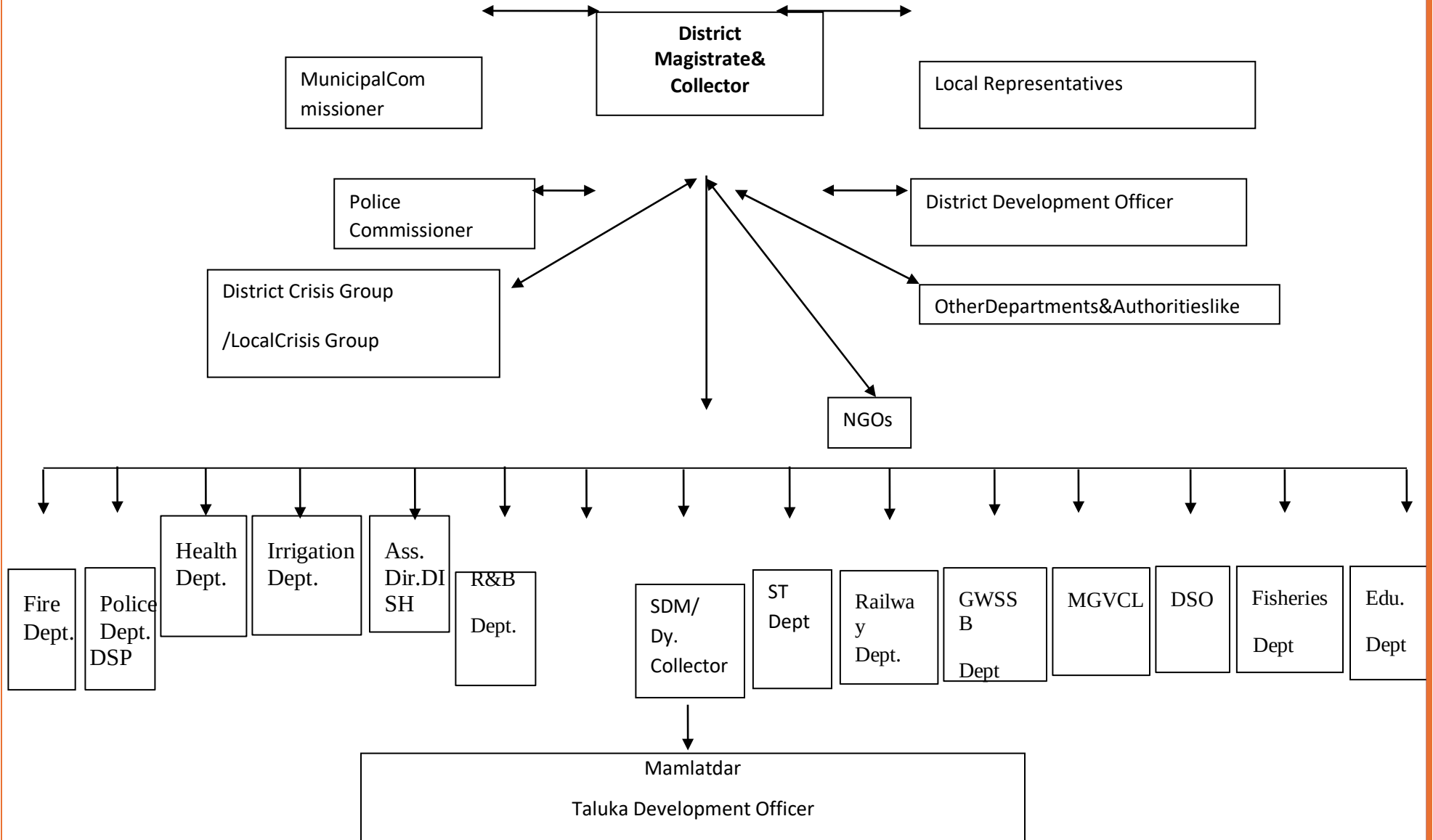
1. Receive, monitor, and assess disaster information.
2. Monitor, assess, and track response units and resource requests.
3. Manage resource deployment for optimal usage.
4. Make policy decisions and proclaim local emergencies as needed.
5. Provide direction and management for EOC operations through set priorities and establish strategies.
6. Coordinate operations of all responding units, including law enforcement, fire, medical, transport, shelter, food, water etc.
7. Augment comprehensive emergency communication from EOC to any field operation when needed or appropriate.
8. Maintain EOC security and access control.
9. Keep Senior, subordinate and relevant officials informed.
10. Keep local jurisdictions (Village/town/City, district and State) informed.
11. Operate a message center to log and post all key disaster information and keep media informed about the current situation of the disaster.
12. Develop and disseminate public information warnings and instructions through media.

District level Response Structure Model

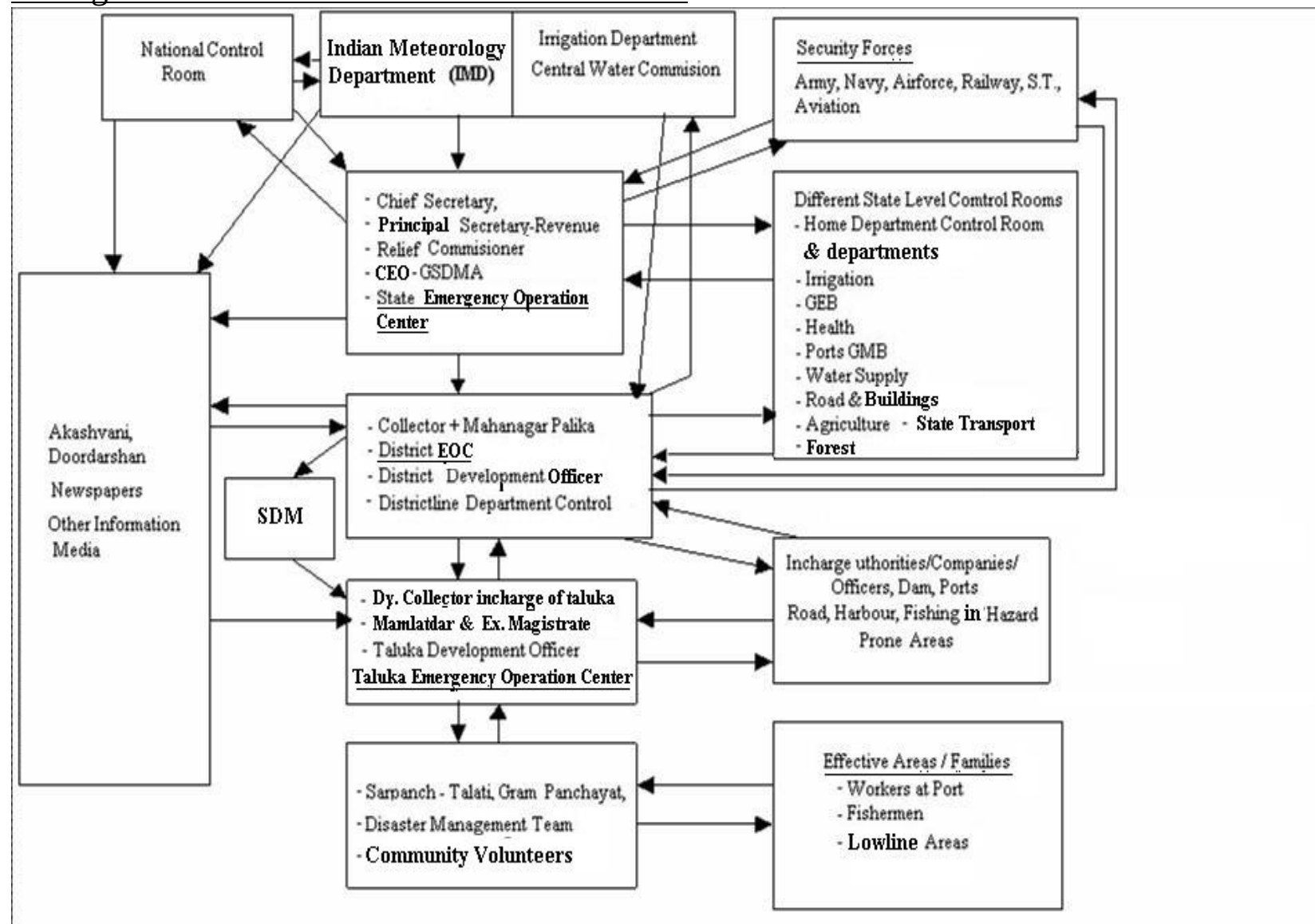


District level Response Structure (IRS)

Flow chart of District Administrative Setup



Linkages of District with State and National level



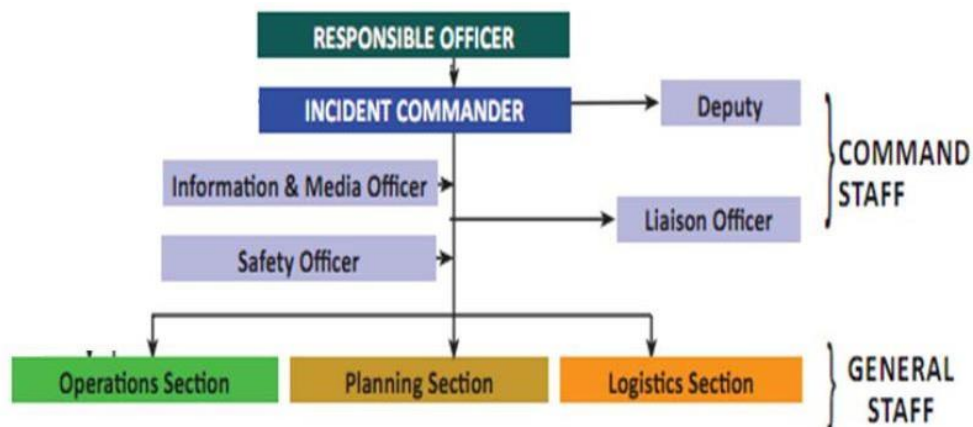
INCIDENT RESPONSE SYSTEM

1. IRS Organizational Structure: IRT Framework

As per NDMA 's IRS guidelines, IRT at District, Sub-Division, Tehsil and Block level should be constituted under the written directives of District Magistrate (DM). These teams will include experienced officers / employees at all levels and respond to all natural and man-made disasters. The lowest administrative unit (Sub-Division, Tehsil or Block) will be the first responder as the case maybe. IRT at all levels will have the same structure, i.e. IC supported Operations, Planning and Logistics Sections. The IRTs are to be pre-designated at all levels.

A. IRT Framework-District Level

In general, the selection of Section Chiefs is made according to the suitability and capability of the officer. The selection of the Operations Section Chief, however, depends on the nature of the disaster. In case of floods 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. In case of fire, it will be the District Fire Officer who will be an appropriate officer to handle the situation. In case of health-related disaster, it would be the Chief District Health Officer and so on.



B. Major Responsibilities and Duties

INCIDENT COMMAND

The Incident Command 's responsibility is the over all management of the incident. It is comprised of the following positions:

Incident Commander

The Incident Commander has a wide variety of responsibilities.

- Assess the situation and/or obtain a briefing from the prior Incident Commander.
- Determine incident objectives and strategy.
- Establish the immediate priorities.
- Establish an Incident Command Post.
- Establish an appropriate organization.
- Ensure planning meetings are scheduled as required.
- Approve and authorize the implementation of an Incident Action Plan.
- Ensure that adequate safety measures are in place.
- Coordinate activity for all Command and General Staff.
- Coordinate with key people and officials.
- Approve requests for additional resources or for their lease of resources.
- Keep agency administration informed of incident status.
- Approve the use of students, volunteers and auxiliary personnel.

- Authorize release of information to the news media.
- Order the demobilization of the incident when appropriate.

Information and Media Officer

The Information and Media Officer is responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other

Appropriate agencies and organizations. Reasons for the Incident Commander to designate an Information and Media Officer:

- An obvious high visibility or sensitive incident.
- Reduces the risk of multiple sources releasing information.
- Need to alert, warn or instruct the public.
- Media demands for information may obstruct IC effectiveness.
- Media capabilities to acquire their own information are increasing.

Liaison Officer

The Liaison Officer is the point of contact to assist the first responders, cooperating agencies and line departments. It may be designated depending on the number of agencies involved and the spread of affected areas. Reasons to establish the Liaison Officer position at an incident:

- When several agencies send, or plan to send, Agency Representatives to an incident in support of their resources.
- When the IC can no longer provide the time for individual coordination with each Agency Representative.
- When it appears that two or more jurisdictions may become involved in the incident and the incident will require on-site liaison.

Safety Officer

The Safety Officer's function is to develop and recommend measures for ensuring safety of responders and to assess or anticipate hazardous and unsafe situations and review it regularly. The Safety Officer will correct unsafe situations by working through the chain of command, however, the Safety Officer may exercise emergency authority to directly stop unsafe acts if personnel are in imminent life-threatening danger.

GENERAL STAFF

Each one has a vital role for efficient response; however, depending upon the nature and requirements of the incident, they may be or not be activated. Each of these functional areas can also be expanded as needed into additional organizational units with further delegation of authority.

Operations Section

The Operations Section deals with all types of field level tactical operations directly applicable to the management of an incident. This section is headed by an Operation Section Chief (OSC). In addition, a deputy may be appointed to assist the OSC for delegating his functions depending on the magnitude of the workload. The Operations Section is further sub-divided into Branches, Divisions and Groups which assist the OSC/IC in the execution of the field operations.

Planning Section

The Planning Section deals with all matters relating to the planning of the incident response. Headed by the Planning Section Chief, this section helps the Incident Commander in determining the objectives and strategies for the response. It works out the requirements for resources, maintains up-to-date information about the ongoing response and prepares IAP. For the closing phase of the operations, the Planning Section also prepares the Incident Demobilization Plan.

Logistics Section

The Logistics Section deals with matters relating to procurement of resources and establishment of facilities for the incident response. This section is headed by the Logistics Section Chief and is an important component of the IRS organization for providing backend services and other important logistic support like communications, food, medical supplies, shelter and other facilities to the affected communities and responders as well. There is a Finance Branch attached to this Section in order to ensure that the procurements, if any, may be made quickly and in accordance with the financial rules.

2. Triggering Mechanism for Deployment of IRS

Some of the natural hazards have a well-established early warning system. On receipt of information regarding the impending disaster, the Emergency Operations Center (EOC) will inform the Responsible Officer (RO), who in turn will activate the required IRT and mobilize resources. At times the information about an incident may be received only on its occurrence without any warning – in such cases the local IRT will respond and inform the higher authority and if required seek reinforcement and guidance.

3. Activation of IRS in the District

Before taking up response activities, the DM (RO/IC as per IRS) will hold a briefing meeting and take stock of the situation, availability and mobilization of resources for listing out the various tasks and providing proper briefing to the responders. The IAP will be drawn and put into action based on the assessment of situations. The DM/RO will nominate Operations Section Chief (OSC) based on incident type and rest will follow as per IRS/IRT and other procedural guidelines.

On activation of IRS, all line departments/organizations/individuals shall follow the directions of the Incident Commander as condition demands. He can divert all mechanisms and resources in the district to fight against a scenario leading to disaster/calamity in the district. All Section Chiefs (Operations, Planning and Logistics) are vested with commanding authority and logistic assistance to deliver the concerned responsibility.

4. Incident Action Plan

It is important that activities indicated in the IAP relate to the functional responsibility defined in IRT and according to other descriptions as per DDMP. For instance, proper links shall be established between IRT and Emergency Support Functions (ESF) for IAP effectiveness. Three basic elements of IAP are: Task /Function /Activity, Department/Officer Responsible, and Time. Besides that, common forms used for performing IRS and IA as given in IRS National Guidelines may be utilized.

5. Standard Operating Procedures

Standard Operating Procedures (SOPs) are a common method of implementing instructions. SOPs provide response protocols for carrying out specific responsibilities. They describe the –who, what, when and how during a disaster, helping responders to perform complex tasks with high level of coordination. SOPs should be prepared and annexed to the DDMP for all relevant hazards of the district, such as earthquake, flood, cyclone, landslide, tsunami, man-made disasters, etc. It should be based on pre-defined IRTs and ESFs and communicated to every stakeholder in advance.

FUNCTIONAL RESPONSIBILITIES

RESPONSIBLE OFFICER = PRIMARILY RESPONSIBLE FOR
EFFECTIVE RESPONSE

COMMAND = OVERALL INCHARGE OF THE INCIDENT
RESPONSE TEAM AND ITS EFFECTIVE
FUNCTIONING

OPERATIONS = DIRECT AND SUPERVISE ALL TACTICAL
ACTIONS

PLANNING = COLLECT/ANALYZE DATA, WORKOUT NEED
OF REQUIRED RESOURCES AND PREPARE
ACTION PLAN

LOGISTICS & FINANCE = PROVIDE LOGISTICS SUPPORT,
PROCUREMENT AND COST ACCOUNTING

LIST OF IRS POSITIONS AND SUITABLE OFFICERS IN THE DISTRICT

IRS Position	Suitable officers
INCIDENT COMMANDER	ADM / ADC or any other equivalent officer or as deemed by RO
Deputy IC	SDM or any other equivalent officer or as deemed by IC
Information & Media Officer	Control Room Officer / Emergency Officer or any other suitable position at District level as deemed by IC
Liaison Officer	Dy. Collector (Protocol) / District Public Relations Officer or any other suitable position at District level as deemed by IC
Safety officer	Fire Officer / Dy. SP (Police) / Medical Officer / Factory Inspector or any other suitable position at District level as deemed by IC
OPERATIONS SECTION CHIEF	Dy. Superintendent of Police / ADM / Dy. Collector or any other suitable position at District level as deemed by IC / RO
PLANNING SECTION CHIEF	ADM (Sadar) / Add. SP / Dy. SP / Sr. Deputy Collector / Joint Collector / District Planning Officer / Fire Officer / Medical Officer / NDRF representative (If available) or any other suitable position at District level as deemed by IC / RO
LOGISTICS SECTION CHIEF	Senior Dy. Collector or any other suitable position at District level deemed by IC / RO

The district administration has identified 16 expected task forces for eyresponse operation functions that are described below. Additional taskforces can be added under the operations section as needed by the circumstances of a disaster. Each Task force is headed by one organization and supported by other organizations.

Task Force Details in I

Emergency Operation Task force	Functions
1. Coordination and Planning	Coordinate early warning, Response & Recovery Operations
2. Administration and Protocol	Support Disaster Operations by efficiently completing the paperwork 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 of immediate use.
8. Food and Relief Supplies	Assure the provision of basic food and other relief needs in the affected communities.
9. Power	Provide the resources to reestablish normal power supplies and systems in affected communities.
10. Public Health and Sanitation (including First	Provide personnel and resources to address pressing Public health problems and re-establish normal health

Aid and all medical care)	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 analyses 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 ensure 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 task forces indicated above is that the roles and responsibilities will be executed and coordinated through the IRS/GS system.

Task Force, Leader and Supporting department details in response (INCIDENT RESPONSE SYSTEM)

The COMPOSITION of the TASK FORCES is given in the table below:

No.	Task Force	Task force Leader	Supporting members/ Organizations/Departments	Section/ Unit
1.	Planning and Coordination	Collector	DDO, DSP, RAC and Mamlatdar-DM	Planning
2.	Administration & Protocol	Resident Additional Collector	SDM– Mamlatdar – TDO	Liaison
3	Damage Assessment/Survey	SDM	DIC, Dy. DDO, Ex.Engr., R&B, DAO, Fisheries	Logistics
4	Warning	Supt. Engr. – For Floods & Cyclones Jt./Dy.Dir.-ISH-For Chemical Disaster CP/ DSP –For Terrorist Attack	RAC, Factory Inspector, Mamlatdar – DM, Various Departmental Control Room, Member Secretary -OCR control room, District Information Officer (DIO), Police Dept., Irrigation Dept.	Operation
5	Communications	Resident Additional Collector	Factory Inspector, Mamlatdar – DM, Various Departmental Control Room, OCR controlroom, dy. Mamlatdars, Mobile Operators, TV, Radio, 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	SP	Dy. SP, SRP, HomeGuards Commandant, NGOs, Para-military and Armed Forces	Safety
9	Search & Rescue	Add. Collector	Dy.SP, TDO, Police, Executive Engr., RTO, StateTransport, Health Dept., SRP, SDRF, NDRF, Army, Air Force.	Operation
10	PublicWorks	Engr.R&B(State/Panchyat) SER&B(Panchayat) SE Irrigation	Ex.Engr-R&B(S/C/P), Ex.Engr Irrigation (Circle/Panchayat), DFO, NGOs, Water Supply Board, Municipalities, Home Guards, Police	Operation
11	Shelter	Dist.Pri.Edu.Officer Dist.Edu.Officer	Administrative officer, Education Department, School Principal, Teachers, Health, PHC, State Transport, Water Supply, RTO, Mamlatdar,TDO, NGO ,CBO.	Operation
12	Water Supply	Ex.Engr.GWSSB	Dy.Ex.Engr., Mamlatdar, TDO, Health Dept, Dy.Engr.	Operation
13	Food & Relief Supplies	Dist. Supply Officer	RTO,GSRTC,Municipality, DRDA, Police, Homeguard, FPS, PDS, Mamlatdar,NGO,CBO	Logistics
14	Power	Supt.Engr.UGVCL	Ex.Engr., Dy.Engr.Technical, GEB, Transport	Operation
15	Public Health & sanitation	CDHO	CDMO, Medical Supt. Civil Hospital, Medical Officer CHCS, Municipality, RedCross, FireBrigade, CivilDefense, R&B, NGOs, Doctors, TDO, Mamlatdar	Operation
16	Animal Health & Welfare	Dy.Director Animal Husbandry	Veterinary Inspector, NGOs	Operations

Alert Mechanism

Warning, Relief and Recovery

Warning, Relief and Recovery actions are intended to eliminate the loss of life and property and hardship due to disasters. DM Plans and SOPs of different levels, sectors and departments have their own early warning mechanism and imply the same at the time of disaster, further planning for relief and recovery assistance to the affected people have been done during the course of disaster to avoid or reduce losses and hardship.

In the district the Collector/ DEOC is the focal point for early warning, relief and recovery aspect, who directs and coordinates these efforts within the district. Collector / DEOC coordinate in early warning, relief and recovery and share / report the steps taken in these regards with similar activities in neighboring districts and with the GSDMA and Revenue Department.

Early Warning Action Plan

The availability of an early warning system is a must before an early warning message could be disseminated to the people till the last mile. Thus, for every type of disaster there is an agency designated with the responsibility of keeping track of developments in respect of specific hazards and informing the designated authorities/agencies at the district level about the impending disaster. Nodal agencies for early warning of different natural hazards are:

Type of Action	Flood	Cyclone	Chemical and industrial accidents
Existing EWS	Irrigation department/ dam authority/ IMD ☐ Collector ☐ Mamlatdar/TDO ☐ Villages	IMD ☐ Collector ☐ Mamlatdar/TDO ☐ Villages	Industrial Association/industries ☐ DCG ☐ LCG ☐ Mamlatdar
Responsible Agency for warning dissemination	Mamlatdar office/ TDO	Mamlatdar office/ TDO	Mamlatdar office/ TDO

Villages covered	All risk prone villages
Villages/habitation not covered or Difficult to access	Communities in remote locations (fisher folk, maldharis etc)
Measures required to improve timeliness and outreach (For example, Voice enabled SMS)	Contact of communities in remote locations (fisher folk, Maldharis etc)

During and Post Disaster Advisory Action Plan:

Type of Hazard	Flood	Cyclone	Earthquake	Drought	Chemical and industrial accidents	Tsunami
Responsible Agency	Revenue & Panchayat offices					
Villages covered	All risk prone villages					
Villages/habitation covered or difficult to access	Communities in remote locations (fisher folk, Mal dharis etc)					
Measures required outreach	Contact of communities in remote locations (fisher folk, Maldharis etc)					

Details of Control Room telephone numbers functioning 24*7 365 days and during the monsoon with some key dignitaries' telephone numbers are as under.

SEOC-DEOC-TEOC and Other Control Rooms

Sr. No.	Subsr. No.	EOCs/Control rooms	Contact Numbers
1		State EOC	079 23251914, 079 23251916, 079 23251906, 079 23251900 079 23251912(F), 079 23251916(F)
2		Relief Commissioner	079 23251509, 079 26301728 I

3		CEO-GSDMA	2325902, 23259275 (F)
4.		Director of Relief	23251611, 23251612
5		Addl. CEO, GSDMA	23259451, 23259302(F)
6		Sabarkanthas District EOC	02772-249039, 02772-1077
	6.1	1. Warning and Communications (DEOC)	02772-249039 1077
	6.2	2. Law & Order (SP)	100 02772-247333
	6.3	3. Search & Rescue For Whole District with support of DSP and Liaison officer	02772 – 241303 (Police Control) 02772 – 242536 (DEOC) 1077 (DEOC)
	6.4	4. Public Works (Ex. Eng, R&B)	9714797331 02772 – 241651 rnb-sab@gujarat.gov.in
	6.5	5. Shelter DEO, DPEO	9909970217 (DEO) 9909971696 (DPEO)

	6.6	6. WaterSupply (Ex.Eng. GWSSB)	9978406943
	6.7	7.Food &Relief supplies (District Supply Officer)	02772-240698 dso-sab@gujarat.gov.in
	6.8	8.Health	02672-246422

	6.9	9.Power (Supt.Engr.UGVCL)	02772- 240262, 242332 987320798
	6.10	10.Logistics (DDO)	02772-242350
	6.11	11.Animal Health & Welfare (Asst.Director, A&H)	9426566098
	6.12	12.Damage assessment/Survey (Dy.DDO)	02772-242350
	6.13	13.Media/publicInformation (Sr.Sub Editor- Info)	9574099942
	6.14	14.Planningandcoordination (Collector)	02772-241001
	6.15	15.Finance/Administration/ Protocol (ResidentAdditionalCollector)	02772-246012

7	Taluka EOCs (For Monsoon period)		
	7.1	Himatnagar	02772-249039
	7.2	Idar	02778-250003
	7.3	Vadali	02778-222017
	7.4	Khedbrhma	02775-222404
	7.5	Vijaynagar	02775-254340
	7.6	Poshina	02775-283533
	7.7	Prantij	02770-230425
	7.8	Talod	02770-220641
8		Fire brigade Himatnagar	02772-246720
		Fire brigade Idar	02778-250767
		Fire brigade Prantij	02770-233410/510
		Fire brigade Talod	02770-220652
		Fire brigade Khedbrhama	02775-222021
		Fire brigade Vadali	02778-222016

Emergency Communication Systems

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

Radio Communication

All the Control Rooms are equipped with hand held radios and all the task force leaders and their teams are having the hand held radio sets at their respective control rooms. The different user groups are operating at different frequency channels allotted to them for ease in communication in respective groups. 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

Telephone facility is available with 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 and made functional, following alternate systems shall be used based on the seriousness of the situation.

Satellite Communication System

Satellite communication should be activated once all the communication systems fail. This facility is with DEOC. The Telecommunication Task Force shall ensure that this facility is resumed on all such occasions.

Messengers

- Use of messengers as a last resource to carry handwritten messages to people 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

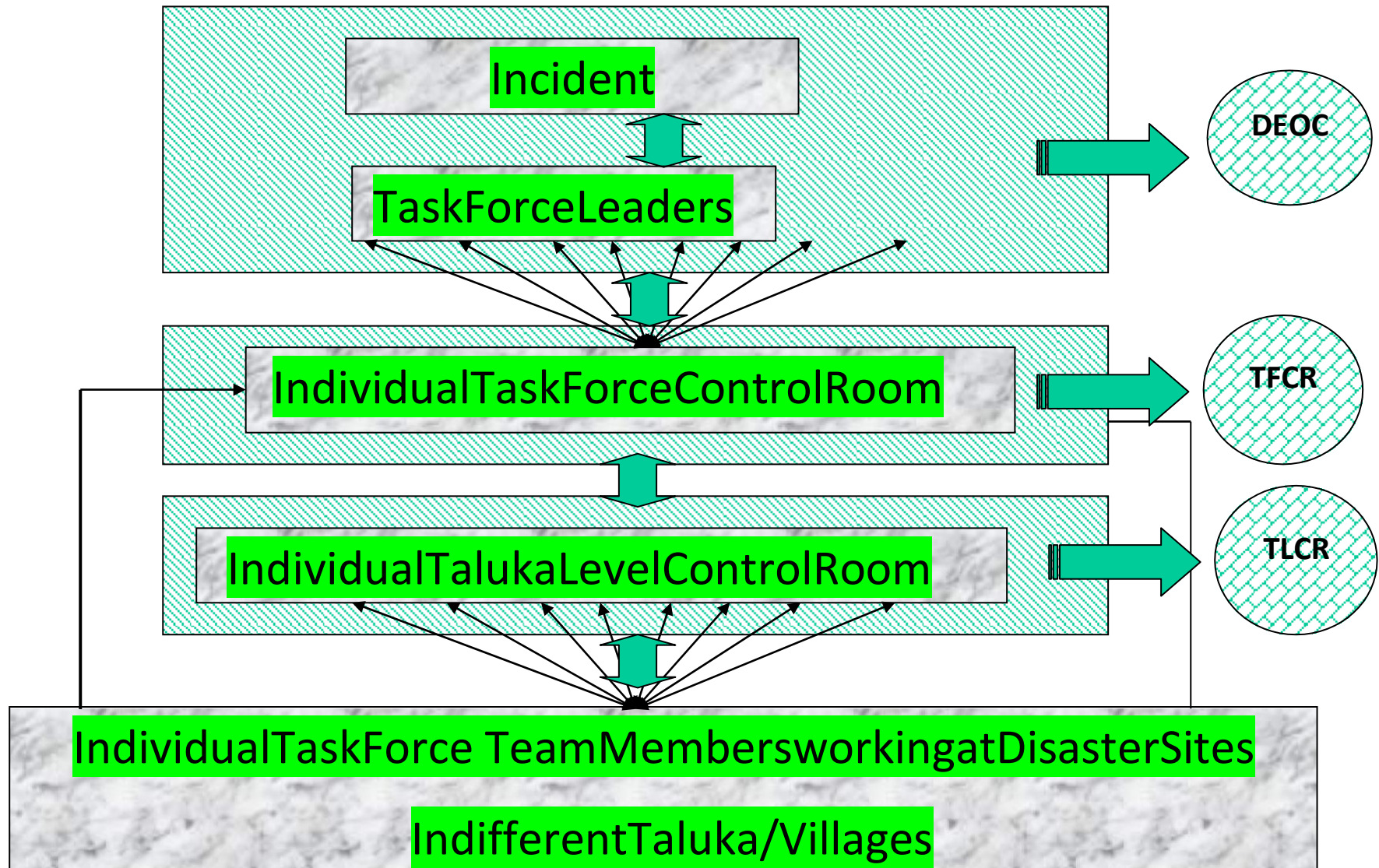
- The sense of urgency that everyone experiences during disaster may lead to a chaotic situation if communication systems are not properly used.
- Communication shall be brief and simple.
- Telephones, Cellphones, Hot Lines shall be used when ever required.

The table below describes the task force 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, as to what specific task forces 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 the district.

Communication Flow Chart during Disaster Management



TASK FORCE RESPONSE PLANNING

Emergency Support Functions

- **Co ordination 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 to occur.	Timeframe
Before a Disaster		
Establish a disaster management structure to the village level. (COLLECTOR, DDMC)	Links to State level and Establishment of ICS structure.	On-going
Develop disaster plans at all levels down to the village level. (DDMC)		On-going
Hold regular meetings on disaster management including government, NGOs and private sectors. (DDMC)		Yearly.
Continual training, including public awareness. (DDMC and Media Task Force).	Involvement of GSDMA	On-going.
Check warning, communications and other systems (DDMC), including the use of drills.		On-going.
Warning		
Hold Crisis Management Committee (Collector)	Communications between Districts And with State Control Room.	On receipt of warning.
Mobilize task force 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. (CMC)	Telecommunications systems, plans.	As decided.
Establish an alternate communications system (Telecommunications Task Force)		As decided.

Action and (Who Should TakeIt)	Requirements or Conditions to be met for the action can occur.	Time frame
Disaster		
Start Search, Rescue and Evacuation activities. DDO	SAR TaskForce operational.	Immediately
Begin Collecting Information on extent of damage and areas affected. DDO	Assessment teams have Communications and transport.	It started in 4 hours.
Start planning development and provide instructions on where Task Forces Should go and what they should do. (Collector)	Information on damage and areas affected.	It started in 4 hours.
Mobilize out side resources	Information on damage and needs.	It started in 5hours.
Provide Public Information		As early possible (or should Be started in 6 hours).
12 Hours		
Begin regular reporting on actions taken and status by Task Forces. (Task Forces)	Operating communications system.	It started at 12 hours.
Reassess damage information, resources, needs and problems areas/ activities. (CMC)		It started at 12 hours.
Begin rotation of staff (CMC)		Start at 12 hours.
Establish regular liaison with the State Control Room. (DEOC)	Working communications systems.	Start at 12 hours.
Shift focus of efforts to relief. (CMC)		Open
Restore key infrastructure (CMC through Public Works and other Task Forces)		Before 48 hours.
48 hours		
Continue review and reassessment of operations (CMC)	Information on operations.	
Conduct broad damage assessment (CMC and Damage Assessment TaskForce)		
Establish Temporary Rehabilitation Plan (CMC)		
Begin demobilization based on situation. (CMC)		

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
72hours		
Start Rehabilitation activities. (CMC)	Plan	
Conduct a detailed survey of damage and needs. (CMC and Damage Assessment Task Force)		
Begin regular reporting on operations.	Information on operations.	As early as possible.
Restore all public and private sector services. (CMC)		As early as possible.
Lessons Learned meeting. (CMC and others)		After 2 weeks.
Final Report/ Case Study (CMC)		After activities completed.

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

Task Force Leader: Resident Additional Collector

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Before 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 (For District)

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Before a Disaster		
Evaluating expected disasters needs verses normal resources. (Task Force)		Completed in 8 days.
Estimate personnel and resources needed for disasters. (Task Force)	Based on standard for number of security personnel per population depending on the severity of disaster.	Completed in one week.
Planning and coordination with Revenue Dept. (TaskForce)		
Conduct drills, including public awareness generation. (TaskForce)	Includes participation of Media Task Force	Every45 days.
Warning		
Verify communications system. (Wireless Inspector)		1-2hours of warning.
Alert police and other Task Force members. (Superintendent of Police)		1-2hours of warning.
Implement duty distribution SOP for personnel and other resources. (Superintendent of Police)		1-2hours of warning.
Develop preliminary estimate of requirements to support another Task Forces. (Superintendent of Police)		1-2hours of warning.
Disaster		
Get orders for deploying personnel from the Control Room. (Superintendent of Police)	Operating communications system.	Immediately
Determine status of staff and facilities. (Superintendent of Police)	Operating communications system.	1-2hoursofdisaster.
Deploy additional staff. (Superintendent of Police)	Transport available.	2-3hoursofdisaster.
Monitor resources. (Superintendent of Police)		1hour of disaster

Action and (Who Should Take It)	Requirements or Conditions to be Met for the action can occur.	Time frame
Establish VVIP unit. (Superintendent of Police)		Immediately.
Request additional resources, if needed. (Superintendent of Police)	Operating communications system.	4 hours of disaster.
12 hours		
Institute regular reporting. (TaskForce)	Operatingcommunications systems.	Atstart ofperiod.
Begin staff rotation. (TaskForce)		At start of period.
Address crowd control problems. (Task Force)		As needed.
Implementanti-looting/anti-theft SOP. (TaskForce)		As needed.
Establish rumor control. (Task Force)	Involving Collector, Media Task Force, NGOs, and local eminent persons.	As needed.
Provide information to the public, e.g. road status. (Task Force)	Involves Control Room, Media Task Force, and Deputy Magistrate.	As needed.
48hours		
Implement a Force Management Plan (increase, reduction, Redeployment of forces). (Superintendent of Police)		From the star period.
Plan for return to normal (Superintendent of Police, Task Force, Control Room)		72 hours after the disaster.
Conduc t Lessons Learned Session (Task Force with input from other parties.)		1week after the disaster.
FinalReport		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: Addl. Collector & Liaison officers – SDM

Supportive Task Force Leader: Dy. SP, 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		
Risk assessment and vulnerability mapping. (Task Force)		Before warning.
Develop inventory of personnel and material resources. (Task Force)		Before warning.
Training. (Task Force)	Input and support from GSDMA	Before warning.
Establish a public education program. (Task Force)	Media Task Force	
Establish an adequate communications system. (Task Force)	Additional equipment required.	
Drills (Task Force).		Before warning.
Establish transport arrangements for likely SAR operations. (Task Force)	With Logistics Task Force.	Before warning.
Develop Rescue SOP. (Task Force)		Before warning.
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.

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.	3-4hours of disaster.
Provide reports on operations. (TaskForce)		Starting at 3 – 4hours.
Begin handling of deceased per SOP. (TaskForce)	Various Revenue Officers and Police involved.	Starting at 3- 4hours.
12Hours		
Begin staff rotation system. (TaskForce).		It started at12hours.
Begin specialized rescue (may begin earlier). (Task Force)	May require outside resources, Coordination with Logistics Task Force.	It started at12hours.
Begin debris removal in cooperation with Public Works Task Force.	Focus on critical infrastructure. Liaison with o immediate.	Startat 12hours.
Secure additional resources (e.g. fuel, personnel) for continued operations. (Task Force).		Startat 12hours.
48 hours		
Demolish/ Stabilize damaged buildings incooperation with Public Works Task Force.	Logistics Task Force, workers, equipment.	Starting at 48 hours.
Demobilization, reconditioning, repair and replace equipment and other resources. (TaskForce)		Based on the nature of disaster.
Remain on stand-by for additional operations, particularly related to Safety of recovery work. (Task Force).		As needed.

Actionand (Who Should Take It)	Requirements or Conditions to be Met for the action can occur.	Time frame
72hours		
Lessons Learned meeting. (Task Force and others)		After 2 weeks.
Final Report. (Task Force)		After major activities completed.

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

Task Force Leader: Executive Engineer, Roads and Buildings

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Before a Disaster		
Inventory of personnel, equipment and status of infrastructure. (Task force)	Link to DRM project databased development.	One week before warning.
Identify critical infrastructure. (Task Force)	Need to define what critical infrastructures.	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 an itation and other facilities for shelters. (Task Force)		
Warning		
Establish a 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.

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
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 (Fore.g., rest facilities, shelters).	Coordination with Logistics, Water, Power Task Forces and Control Room.	Within 12 hours of disaster.
Collaborate with other Task Forces.		Continuous.
12 Hours		
Begin staff rotation system and manpower planning. (Task Force).		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.	It 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 a 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.

Action and (WhoShouldTakeIt)	Requirements or Conditions to be met for the action can occur.	Time frame
Reconditioning, repair and replace equipment and other resources. (Task Force)		Based on the nature of disaster.
Plan and start demobilization. (Task Force)		Starting at 3days.
72hours		
Develop longtermres to ration planand start activities. (TaskForce)		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 and Sanitary Board

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Before a Disaster		
Establish water availability, capacities, reliability and portability. (Task Force)	Standard of 20 litres of drinking Water per person per day.	3 months before warning.
Plan for alternate water delivery and storage (Task Force)	May need tankers, tanks, generators 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 sectors 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.	Time frame
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.
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.
12 Hours		
Establish temporary water systems. (Task force)		Up to 72 hours from disaster.
Move to ward permanent water supply system. (Task force)		After 72 hours.

Complete long term recovery plan and needs. (Task Force)		After 72 hours.
Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Begin reporting and documentation. (TaskForce)		From 48hours.
Begin demobilization. (TaskForce)	Coordinated with ControlRoom.	From 48hours.
Lessons Learned meeting. (TaskForceandothers)		After 2weeks.
Final Report. (TaskForce)		After major activities completed.

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

Task Force Leader: District Supply Officer

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
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 plans. (Task Force)	In cooperation with Logistics Task Force.	Completed in 8 days.
Develop list of NGOs. (Task Force)		Done.
Plan to staff 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.
Warning		
Pass on warning. (Task Force)		Within 12 hours of Receipt of warning.
Alert NGO to stop repair 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 contract or stop repair 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.

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Disaster		
Receive and respond to instructions from Control Room. (TaskForce)		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. (TaskForce)	Coordination with Logistics Task Force.	Perdistribution plan.
Establish relief supplies reception scenters. (Task Force)	Coordinate with Control Room And Logistics Task Force.	As required.

12Hours		
Start distribution no perations. (TaskForce)	In coordinate with Logistics and Shelter Task Forces.	At the beginning of period.
Formalize reporting, communications and monitoring. (TaskForce)		Completed by 48 hours.
Start staff rotation system. (Task Force)		At the 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 the beginning of period.
Begin public announcement of distribute on plan and standards. (Media Task Force)		Under way in 48 hours.
48Hours		
Shift to normal operations. (TaskForce)		Within 1 week.
Reconcile receipts and distribution records. (TaskForce)		Within 30days.

Continue providing relief to special areas/populations. (Task Force)		For 15 days from the disaster
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Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
72Hours		
Restore Public Distribution System. (Task Force)		From 1week after the disaster.
Lessons Learned meeting.		Within 14 days of disaster.

- **Power:** Provide resource store- establish normal power supplies and systems in affected communities
Task Force Leader: Superintending Engineer, Uttar Gujarat Vij Company Limited (UGVCL)

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 status of power system and resources. (UGVCL)		
Establish minimum stock levels and procure necessary additional stocks. (UGVCL)		
Conduct monthly meetings. (UGVCL)		On-going
Develop contact lists. (UGVCL)		
Conduct informal hazard and risk assessment. (UGVCL)		
Develop disaster plans. (UGVCL)		
Disaster		
Assess impact according to SOP. (UGVCL)	Coordinate with Control Room And Damage Assessment Task Force.	
Prioritize response actions. (UGVCL)	Need to establish priorities.	
Collect more information. (UGVCL)		
Mobilize additional resources. (UGVCL)	Coordination with Control Room And other Task Forces.	
12Hours		
Revise plans based on feedback and assessments. (UGVCL)		Continuous
Monitor status of actions. (UGVCL)		Continuous
Begin staff rotation plan. (UGVCL)		At the beginning of period.
Disseminate public information. (MediaTask Force)		At the beginning of period.

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Secure support for staff (food, lodging) from NGOs. (UGVCL)		
Assure security as needed. (Law and Order TaskForce)	Coordinate with Control Room.	
Establish constant communications on needs, requirements and Resources with Control Room, UGVCL.		
48Hours		
Looking for improvements in efforts. (UGVCL)		
Reinforce central coordination. (UGVCL)		
Conduct regular coordination meetings with other actors. (UGVCL)		
Begin form all documentation of efforts. (UGVCL)		
72Hours		
Review shift plan for safety. (UGVCL)		
Plan for return to normal, including additional security if needed. (UGVCL)	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: (1) RDD/ CDMO- Civil Hospital

(2) Chief District Health Officer / Med. Supt.-Civil Hospital

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Before a Disaster		
Development in ventory of personnel, resources and facilities. (Task Force)		1week.
Training. (TaskForce)	Coordination with GSDMA.	6months.
Establish a Control Room.		
Prepare for specific diseases by season (e.g., monsoon)		
Establish Epidemiological Reporting System (ERS). (Task Force)		
Identify disease vulnerab leareas. (CDHO)		
Improve public awareness. (MediaTask Force)		
Warning		
Send out warnings to health facilities. (Task Force)		As received.
Mobilize health teams to possible disaster areas. (TaskForce)	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 the 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.

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Implement SOP form an agement of deceased. (Task Force)	Involves co operation with Law And Order and SAR Task Force.	Within 1 hour of disaster.
Coordinate efforts with the Control Room and other Task Forces.		Within 2-3 hours of disaster.
12Hours		
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. (TaskForce)	Coordination with Public Works, Power, Water, and Law and Order TaskForces.	Within 24 hours.
Expand surveillance of health status. (TaskForce)		Within 24 hours.
Establish a shift system for staff. (Task Force)		At the beginning of period.
Visit and review health status in shelters. (Task Force)		Within 24 hours.
Develop a health care system recovery plan. (Task Force)	In coordination with Control Room.	2-3hours.

48Hours		
Establish formal health care system reporting. (TaskForce)		At the beginning of period.
Start solid waste and vector control management SOP. (TaskForce)		At the beginning of period.
Start wastewater management SOP. (TaskForce)		At the beginning of period.
Focus health status surveillance on children 0to5years.		Implementsin one week.
Establish public awareness and IEC efforts. (Task Force and Media Task Force)		At the beginning of period.

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
72Hours		
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 disasters.

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.	Time frame
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.
Distributes supplies to vulnerable areas. (Task Force)		During warning period.
Contact Control Room. (Task Force)		As required.
Disaster		
Remove and destroy carcasses. (TaskForce)	Need fuel and logistics.	As soon as possible.
Treat injured animals. (TaskForce)		As soon as possible.
Issue certification of death. (TaskForce)	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. (TaskForce)		In 15 days.

- **Shelter:** o immediate supply 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.	Time frame
Before a Disaster		
Develop shelter operating procedures. (Task Force)		
Develop inventory of shelters (location, capacity). (Task Force)	UNDP project in inventory.	
Provide information to other Task Forces on the 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 o immediate.	Within 6 hours of warning.
Mobilize additional resources for shelters and camps. (Task Force)	Cooperation with Logistics, Food And Relief Supplies, Water and Power Task Forces.	Within 6 hours of warning.
Provide public announcements on locations and status of shelters. (Media Task Force)		Within 6 hours of warning.
Disaster		
Beginning logging-in of occupants. (Shelter managers).		Immediately.
Report on status of shelters. (Task Force)	To Control Room.	As needed.
Plan for prioritization of shelter use. (Task Force)	Coordination with evacuation Operations and Control Room.	Immediately.

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
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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 animals and with HealthTask 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.	Time frame
Before a Disaster		
Conduct resource inventory (air/land/water transport and storage; inside And out side 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 the expected disaster. (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 the 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 an occur.	Time frame
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.
12Hours		
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 the 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.	Time frame
Before a Disaster		
Establish assessment procedures and forms. (Task Force)	Collaboration with GSDMA.	
Compile base line 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.

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Begin initial assessment procedures. (Task Force)		When conditions allow.
Communicate assessment plans to Control Room. (Task Force)		o immediate plan is developed.
12 Hours		
Publicly o immediate ncy ment plans and reports. (Media Task Force)		As available.
Initiate continual updating of assessment information. (TaskForce)	Coordinate with Coordination and Planning Task Force.	
Initiate continual updating 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 the beginning of period.
48 Hours		
Prepare detailed damage, losses, needs assessment and long term Recovery plans. (Task Force)	Coordinate with another Task Forces.	3-5day safer disaster.
Coordination of requirements, plans and activities.	Working through Control Roomand Coordination and Planning Task Force.	Continuous.
72 Hours		
Lessons Learned meeting.	Include Shelter, Food and Relief Suppliesin meeting.	Within 14 days of disaster.

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

Task Force Leader: Sub Divisional Engineer (MIS)-BSNL

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Before a Disaster		
Develop telecommunications inventory and SOPs. (Task Force)	Telecommunication straining.	
Coordinate with other Task Forces. (Task Force)		
Identify sites of vulnerable system components. (Task Force)		
o immediate ancy in communications systems. (TaskForce)	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. (TaskForce)		Within 24 hours of warning.
Facilitate telecom demands of other Task Force members. (Task Force)		
Disaster		
Check the status of communication systems. (TaskForce)		In 2-3hours.
Identify damage to systems. (Task Force)		First information is available in 2-3hours.

Action and (Who Should Take It)	Requirements or Conditions to Be met for the action can occur.	Time frame
Contact Control Room and other Task Forces on telecom needs. (Task Force)		In 2-3hours.
Start repairs. (Task Force)		In 2hours.
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 the beginning of period.
48 Hours and Beyond		
Continue to assist other Task Forces. (Task Force)		
Continue repair work. (Task Force)		
Begin demobilization. (Task Force)		
Lessons Learned meeting.	Include Shelter, Food and Relief Supplies	Within 14 days of disaster.
Final Report. (TaskForce)	Involve other Task Forces.	Within one month of End of operations.

□ **Media & information Management:**

Task force Leader: Dy.Director Information

Action and (Who Should Take It)	Requirements or Conditions to be met for the action can occur.	Time frame
Before a Disaster		
Coordination with various Printand TV Media	Disseminate the DRMP rogramme Activities	
Awareness Generation Programmes for Media	May have workshops and seminars	
Massawareness for community	Largescale publicity for community awareness	
During Disaster		
Media Briefing Meeting	Timely Briefing of the situation	After every 4 hours
Supporting Incident commander and other leaders	Discuss current media briefing status in meetings	Everyday
Ensure proper and correct coverage	Steps taken to minimize the rumors	As and when find required

CHAPTER-5

Standard Operating Procedure and Roles and Responsibilities of Different Key Departments and Taskforces

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

A) DISTRICT MAGISTRATE & COLLECTOR

- Being chairperson and Incident commander of the district for Disaster Management, he will be in overall command & emergency action to control a kind of emergency effectively for the district.
- The Chair personhas to perform the roleas follows:
- Preparation and updating of District Disaster Management Plan for the District.
- To ensure that everyone can perform the role involved in emergency services effectively.
- To activate and maintain the District Control Room round the clock. To provide essential facilities with the district control room.
- To access emergencies and must declare the emergency, call and direct the emergency services to respond to the emergency by providing reinforcement and support by pooling the resources form the district and if required from the State.
- The arrangement for rescue, evacuation, shelter, food, water, clothing, and transportation to affected area, announcement to the public.
- To keep inform to the higher authority time to time to declare the withdrawal or termination of emergencies.
- Rehabilitation, Restoration, Cleaning etc. on post emergency actions.
- To submit the reports on emergencies. To conduct the meetings.
- To conduct the mock drill

B) DISTRICT DEVELOPMENT OFFICER

- Being a responsible person of Taluka / District, the following actions are to be given prime importance for emergency purpose.
- To ensure the different authorities, agencies, organization people, as specified their role, should participate immediately during emergency in district pocket area.
- To advise and guide different panchayat department and local representatives for mitigate and preventives aspects of disaster management and coordinative approach at the time of emergency.
- To participate in the meeting, mockdrill & training.
- To prepare our own detailed action plan to ensure effective control on emergency.
- To liaison & co-ordination with chairperson, Central Control Room, emergency services, organization, agencies, agencies, person etc.
- To support all other duties as specified by the District Collector.

C) POLICE DEPARTMENT

- An other authority who gets the first information on incident/accident is police department. The following actions are to be carried out by the police department.
- To access the situation and report immediately.
- To maintain the law and order during the emergency to control the traffic and control the affected area.
- To protect the life of people, inside, outside as well as road movers.
- To protect the property, environment and public announcement.
- Evacuation, rehabilitation, shelter & transportation work during the emergency as per prevailing situation.
- To help and assist in making the area clean, removing any structure and other similar work as required during actual emergencies.
- To participate in the meetings & Mock Drill/ Rehearsal and Training.
- To liaison with Central Control Room and other emergency services / organization/ agencies.
- To prepare their own detailed action plan and to ensure the provisions to handle the emergency

D) FIRE SERVICES

- Most probably, the first information regarding any incident / event is received by the fire services. Thus, fire service being first informant must play the major role during the emergency.
- Inspection, survey and assess the situation where incident occur & give the report.
- To decide the proper & effective actions and immediate response actions to control the emergency, under intimation to Central Control Room or Chair Person.
- Proper training to fight against different hazards
- Rescue, Evacuation, remove of debris, and other emergency work as directed or instructed.
- To maintain the proper and adequate firefighting, equipments, neutralizing media, self-breathing apparatus, emergency equipments, personnel protective equipments with keeping in working order.
- The knowledge & information on different type of alternative resources, various types of extinguishing media, neutralizing media, chemical properties and their hazards with safe handling procedure.
- To participate in the meetings Mock Drill / Rehearsal & training.
- To liaison with Central Control Room and other emergency services.
- To prepare their own details action plan & to ensure the provisions to hand let the emergency.
- Other duties to be performed during an actual emergency.

E) HEALTH DEPARTMENT

- The health and medical services must play a vital role following the emergency. One-fold is proper & timely treatment to the victims injured or affected persons. Another fold is to safeguard the public health.
- To ensure the arrangement & preparedness for special medical treatment antidotes and trained doctor Para-medical staff as specified in toxicology at the time of industrial emergency in local pocket area.
- On declaration of emergency or on receiving the message or information, prompt medical

facilities should be set up e.g. first aid post, casualty receiving center/ camp, as per gravity of situation at site. Similarly, arrangement for emergency operation or special treatment on chemical burn, injury, gas dispersion etc. with adequate arrangement, which will serve the purpose of Base Hospital.

- Identification of dead bodies and postmortem arrangement.
- To maintain an up-to-date list with telephone nos. of services of doctors, hospitals,
- Ambulance, primary health center, Para-medical staff, vehicle to meet the emergency.
- Arrangement to inform the up-to-date status from time to time to DEOC, Chairperson, and Relatives of injured or admitted patients, emergency services etc.
- Arrangement to safeguard the public health in case of development of epidemic situation & announcement on safety measure to be taken by public at the time of emergency.
- To advise & guide the different stakeholders in respect of medical & health part time to time.
- Provision for proper and adequate medicines, life saving drugs, equipments, antidotes etc. related to different hazards.
- To participate in meetings, mock drills /examine and training.
- To prepare our own detailed action plan to ensure the effective handling of different kinds of emergencies.
- To liaison with DEOC, Chairperson, emergency services organization, agency and other related people.
- Other duties as required during actual emergencies.

F) RTO

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

G) Civil Supplies Department

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

H) Asst. Director-Information

- The proper and correct news should be reached to the public to avoid rumours and panic. The role of District information officer is to create awareness and preparedness amongst the public for different hazards because of wide & fast spreading news.
- To participate in the meeting, mockdrill /exercises and training.
- To assist the public in case of rescue operations and authentic news.
- To liaison&Co-ordination with Chairperson, Central Control Room and emergency services.
- Ensure to safeguard the public at large during actual emergency by providing correct reliable authentic guidelineand news.

I) ELECTRICITY BOARD (MGVCL)

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

J) Regional Officer (GPCB)

- To participate in the meetings, mockdrill/exercises and training.
- To prepare own detailed action plan to ensure the effective control of industrial emergencies & subsequentaction.

- Liaison with central control Room, chairperson, Emergency Services, Organization agencies & other related persons.
- Advice & Guidance to the District Crisis Group in Respect of environment protection in the industrial pocket.
- To provide technical input regarding the environment and evaluate the contamination or adverse effects during industrial emergencies.
- To provide details and information on development of emergencies regarding in safe level to the life and suggest area to be evacuated and other safety measures.
- Other duties or work as directed by District crisis group or chairperson.

K) Representative Form MAH Units

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

L) Role of other members of District Crisis Group

- The other members like controller of explosives, trade union representative, agriculture department, and other government agencies, etc. must perform the various duties. However, the following are the suggested duties as required during the emergency:
- To participate in the meeting, mock drill/exercise and training.
- To assist the public in the proper way, in case of rescue and evacuation during actual emergencies.
- To advice and guidance to the district crisis group & Chairperson.
- To arrange and help the supporting actions and duties in respect of industrial emergencies
- To provide more and adequate resources & various requirements to tackle the industrial emergency immediately.
- Liaison & co-ordination with Central Control Room and emergency services.

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

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

N) Railway Authority

- On getting information at the time of the disaster from Central Control Room, the Divisional Manager, western Railway, Godhra will take the following actions:
- To issue the standing instruction to all railway gates to take actions on receiving the message from the Station Master.
- To decide the authority level of railway staff to take actions.
- To carry out evacuation by railway, if required.
- To take care of the floating population at railway stations and on-board travelers.
- To issue the standing instruction to station master's on up and down railway stations to stop the train as soon as emergency message is received from DEOC and CCR.

O) Irrigation Department

- o immedia role in pre, during and post form of emergencies particularly in floods.
- Proper management of dams, irrigation canals, ponds and timely maintenance of the same.
- Inform DEOC and respective stakeholders in case of water release from the dams.
- Start their control room at the time of monsoon.
- Follow the instructions mentioned with the Flood memorandum.
- To participate in the meetings, mockdrill/exercises and training.
- To prepare our own detailed action plan to ensure the effective handling of different kinds of emergencies.

P) R&B Department

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

DISASTER SPECIFICATION PLAN

CHAPTER- 6 DISASTER SPECIFIC ACTION PLAN

Floods Action Plan

Sabarkantha district is situated in the North East direction of Gujarat state. The district got its name Sabarkantha from the name of the Sabarmati river flowing in the west in this district. The district headquarters is Himatnagar. There were 13 talukas in the district but now there are 8 talukas due to the existence of the new Aravalli district. Khedbrahma taluka has been divided in the district and new Poshina taluka has been implemented mainly black and sandy Land, Since there is no, the main crops here are cotton and pulses. Sabarmati, Harnav, Hathmati rivers pass through this district, so there are chances of floods and storms in monsoon. Irregular rainfall leads to frequent shortages and drought conditions. The district has suffered the effects of continuous droughts from the 1970s to 1980s. Khedbrahma, Vijayanagar Taluka drought is likely. Due to the rivers like Sabarmati, Harnav, Hathmati, Guhai in the district there is a full potential of flooding. 32 such villages have been identified in the district. This plan has been prepared by DDMC which will be implemented by various departments under the leadership of the Collector. As many as 126 places in the district have been identified as accident-prone zones, since submergence in Harnao river at Polo in Vijayanagar taluka of the district so far.

In view of the fact that around 10 people have died last 10 years, the district collector was alerted the irrigation department and Prant Officer to prepare a separate action plan to prevent such incidents from happening permanently in such places so that no incidents will occur in the rainy season of 2025.

Early Warning & Communication:

GENERAL TERMINOLOGY USED IN WEATHER BULLETINS

(A) Intensity of Rainfall Terminology Used

1. 0.1. mm to 2.4 mm (24 hrs)----- Very light rain
2. 2.5 mm to 7.5 mm ----- Light rain.
3. 7.6 mm to 34.9 mm----- Light to Moderate rain
4. 35.0 mm to 64.9 mm ----- Moderate rain
5. 65.0 mm to 124.9mm-----Heavy rain
6. Exceeding 125 mm ----- Very Heavy rain.

(A)----- Special distribution of weather phenomenon Percentage Area Covered Terminology Used

1. 1 % to 25 % Isolated Places
2. 26% to 50% Few Places
3. 51% to 75% Many Places
4. 76% to 100% At Most Places

(B) Emergency Situation

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

(D) Evacuation

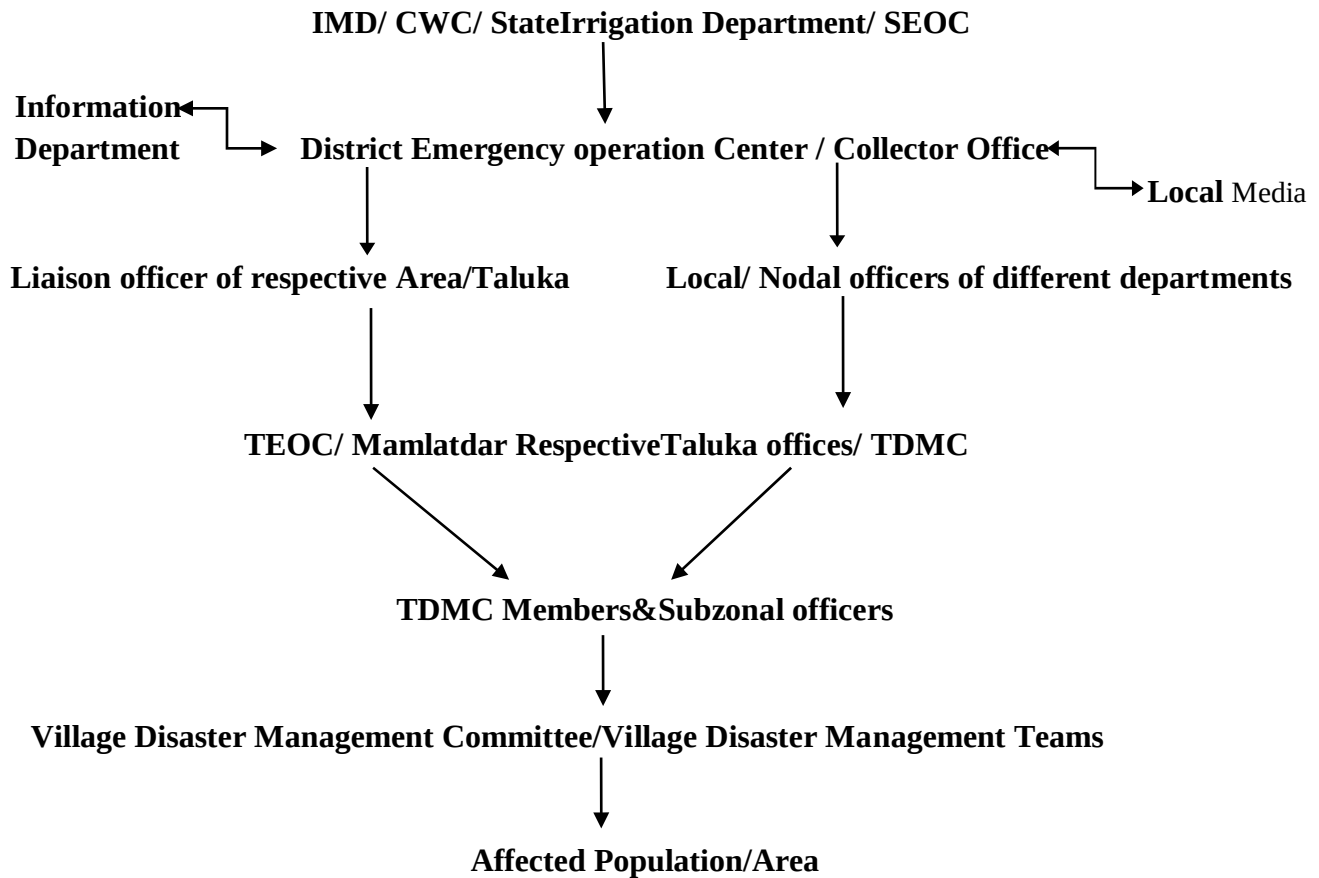
- (1) White Signal- Alert condition
- (2) Blue Signal- Ready for Evacuation
- (3) Red Signal- Immediate Evacuation

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 / controlrooms / community members using telecommunication, wireless message, by fax or in written by DEOC.

In the city area the route has been finalized for early warning, accordingly to an early warning task force leading by fire brigade personnel, spreads the message of alert in respective low line areas, in villages local methodologies of early warning has been used (by beating up of drums etc.) to communicate the message of alert to the affected population of the village.

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

Early Warning & Communication Chart:



Response:

The response mechanism would be the same as described with the general response mechanism chapter, here the focus will be on the Irrigation department, administrative officials and the affected areas/ population.

When early warnings have been circulated by the same department heads, Local officials and administrative heads will put their own DM plan into action and the response activities will be carried out accordingly.

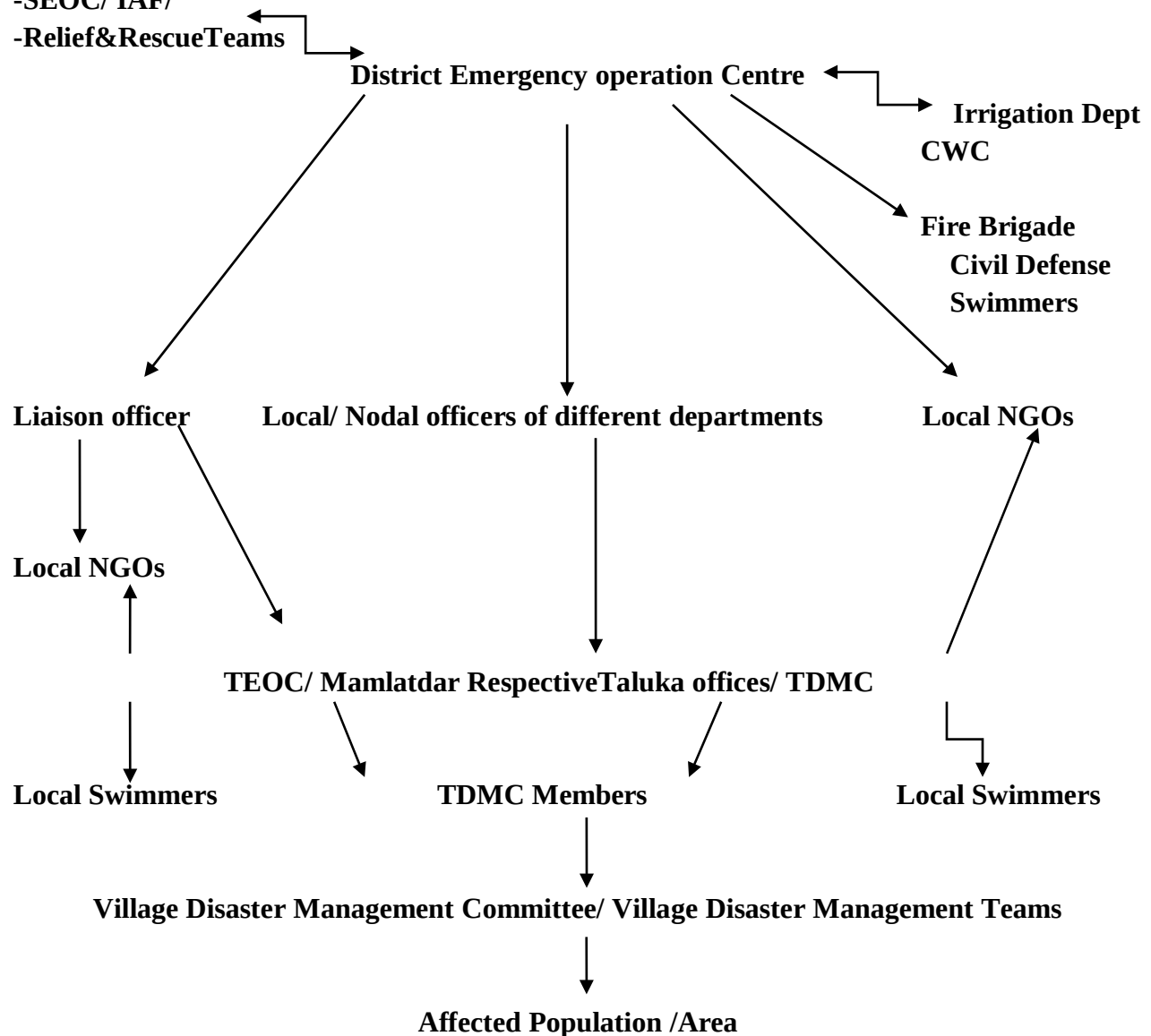
- ❖ As disaster declares the response managed and monitored through DEOC,
- ❖ All the concerned DDMC members along with the Liaison officers and response group members are intimated to respond to the situation as described in the chart below.
- ❖ As per the impact of disaster it will be managed through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

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

Response Chart:

-SEOC/ IAF/

-Relief&RescueTeams



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

Temporary Shelter:

- ❖ For temporary shifting of affected people, temporary shelters are used during the effect of floods.
- ❖ primary schools, Secondary/ Higher secondary schools, Community Hall, Colleges etc. as temporary shelter for flood affected persons and incorporated the same with their DM Plan which is used at the time of floods.
- ❖ 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.

(2) Industrial/ Chemical Disaster Action Plan

The risk of industrial accident is common in this district. National Highway no. 8 passes through this district. Happens so referred to chemicals. This highway is considered dangerous for transportation from Delhi to Mumbai. Accidents during transportation of hazardous chemicals by road. In the past, acid tanker overturned at Shamlaji killed about 15 people. This highway stretches from Majra in the district to Shamlaji-Ratanpur. As many as 126 places in the district have been identified as accident-prone zones.

To deal with Industrial / Chemical disasters, separate Off-Site Emergency Plan -DM plans developed by Director Safety & Health Sabarkantha total coverage of Task force, Rescue Teams, Contact details, shelters, response mechanism etc.

Industries have their own Onsite Emergency Management Plans to deal with on-site emergencies and the other major units like Sabarmati Gas etc. have developed their Disaster Management Plans.

Maintenance of permanently established machinery and shutdown mechanism can be monitored periodically with high concern, could be a major concern of risk in case of large-scale industries/ petro chemical industries.

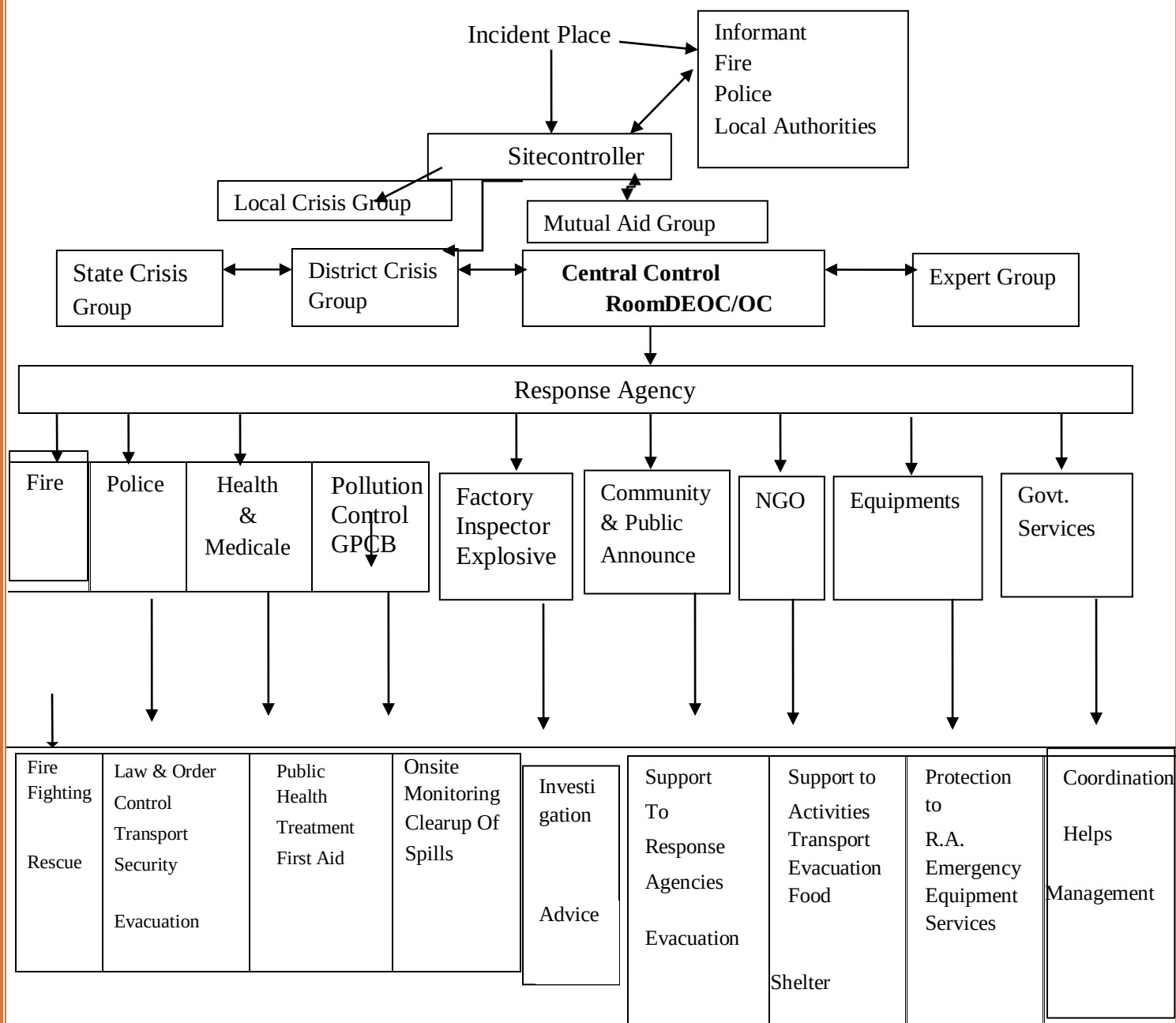
Under the chairmanship of DM & Collector the response will be managed and monitored from DEOC and Offsite control room, department wise response mechanism and response structure lied with Offsite emergency plan and will be referred the same at the time of chemical disasters which includes industrial fire, oil spill etc.

The response mechanism would be the same as describes with the general response mechanism chapter, here the focus will be on Industries, Offsite control room, District Crisis Group officials, technical members, Member secretary-OCR, GPCB and Office of Dy.Director, DISH with different Industries DM Plan and experts of different chemical hazards.

When there is a chemical kind of emergency off site emergency plan with the DM plan of the concern industries comes into action and the response activities will be carried out accordingly.

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

Action Chart in case of Chemical / Industrial Fire / Oil Spill types of Emergencies is asunder:



(3) Earthquake Action Plan

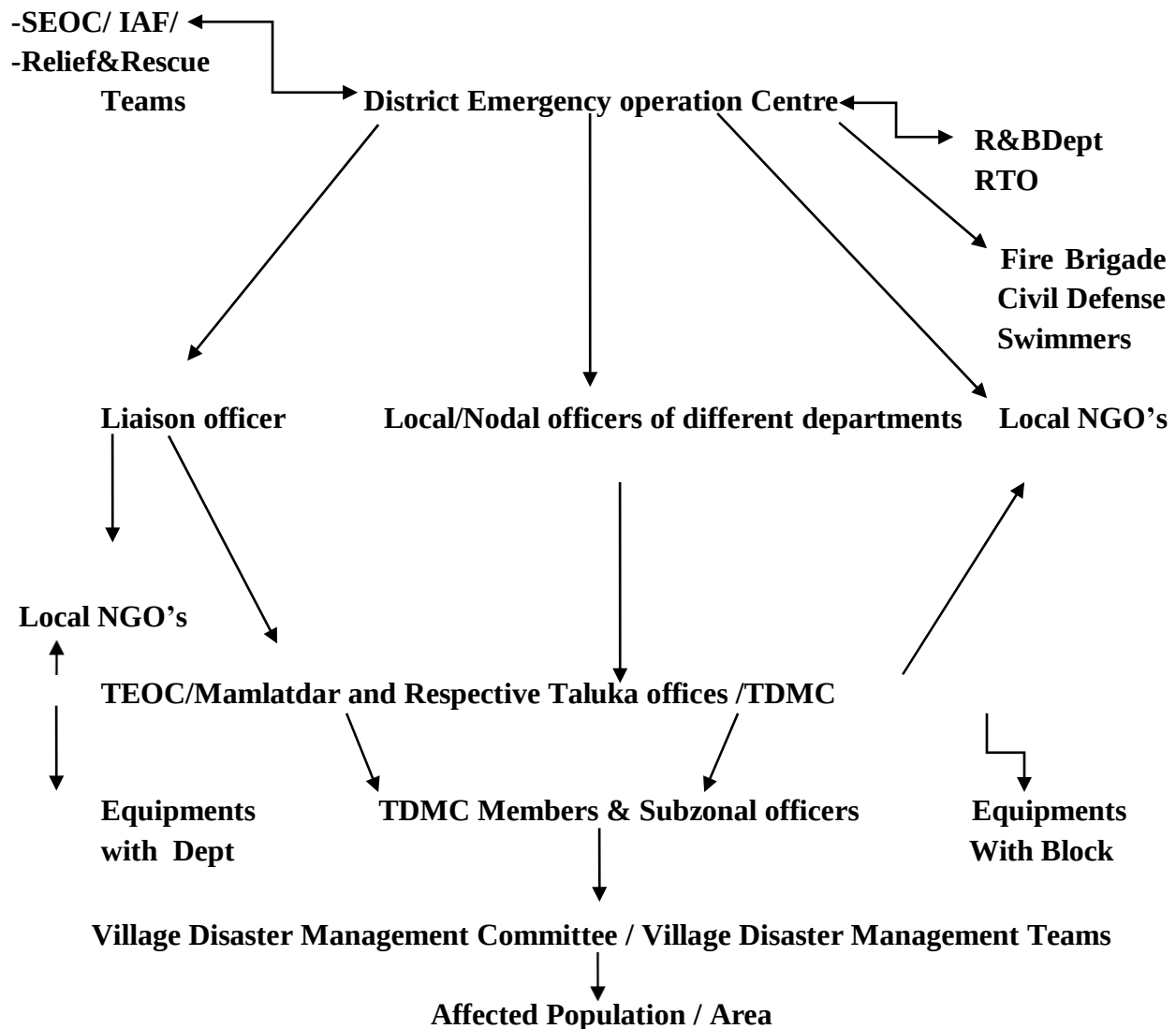
Sabarkantha fall under zone-III according to the zoning map, that's why it can be possible that an earthquake between magnitudes of 4-5 can strike the district. But as there is fault line going through the district, earthquakes of magnitude up to 7 can also strike and very high possibility of failure of various infrastructures and very high chances of risk of loss of live properties too in certain highly populated areas of the district.

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

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

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

ResponseChart:



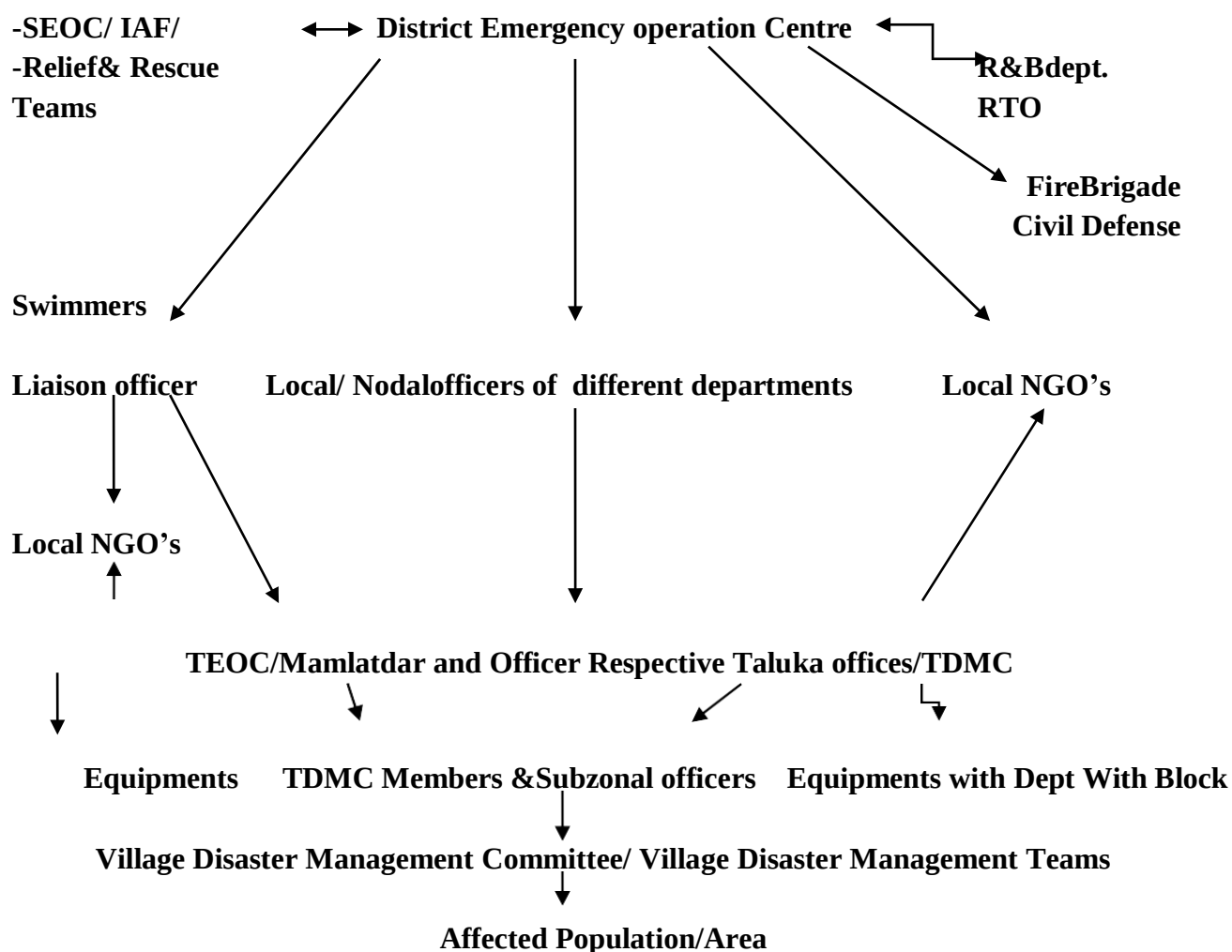
TemporaryShelter:

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

(4) Cyclone Action Plan

Sabarkantha District has no ocean and the taluka as of the district with major wards of the city are the possible site which can be affected during the heavy wind flow. Majorly the flood action plan will be referred to at the time of cyclone.

ResponseChart:



Temporary Shelter:

- ❖ For temporary shifting of affected persons, temporary shelter is used during the effect of Cyclone.
- ❖ Primary/ Secondary/ Highersecondary schools, Colleges, Community Hall etc. of taluka and villages are used as temporary shelter and the local officer for the same is DEO and DPEO.

Biological Disaster Action Plan

Majorly the people of urban area residing in district is affected by various types of Vector born disease and Water born disease in particular during the monsoon season. Frequent epidemics, especially during monsoon are common aspect for Sabarkantha district.

Sabarkantha district is endemic to various water-borne diseases such as Cholera, Leptospirosis and Malaria. Several relatively minor ailments such as Diarrhoea are more common during the monsoon. Most importantly, there is always a danger of epidemics breaking out after floods arising due to different factors – inundation of wells under contaminated sewage water, through such flooded water. There is contamination of groundwater as well as well-water in such circumstances. Well water can be contaminated directly when sewage water enters the well during inundation.

A variety of groundwater pollution problems have emerged in the past two decades in district. Fluoride, nitrate and pollution from industrial effluents have caused contamination of aquifers in different parts of the district. Fluoride is present in several minerals such as Apatite and Hornblende are found in rocks of Igneous origin which leads high amounts of fluoride content in ground water, increasing use of Nitrate-based fertilizers that are not fully consumed by plants result in leaching of excess Nitrates into aquifers. Further, human and animal faeces also contribute to rise of Nitrate content in ground water.

Response:

Health department- District Panchayat, who will look after and respond to such kind of disaster arising in Panchayat areas, such as taluka level and village level. Health department – District Panchayat has their own set of epidemics team and task force to respond in such kind of disaster, for sampling of the water, grains, food sample etc done by Laboratory of Food & Drug.

Oil Spills and Mine Disasters Action Plan:

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

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

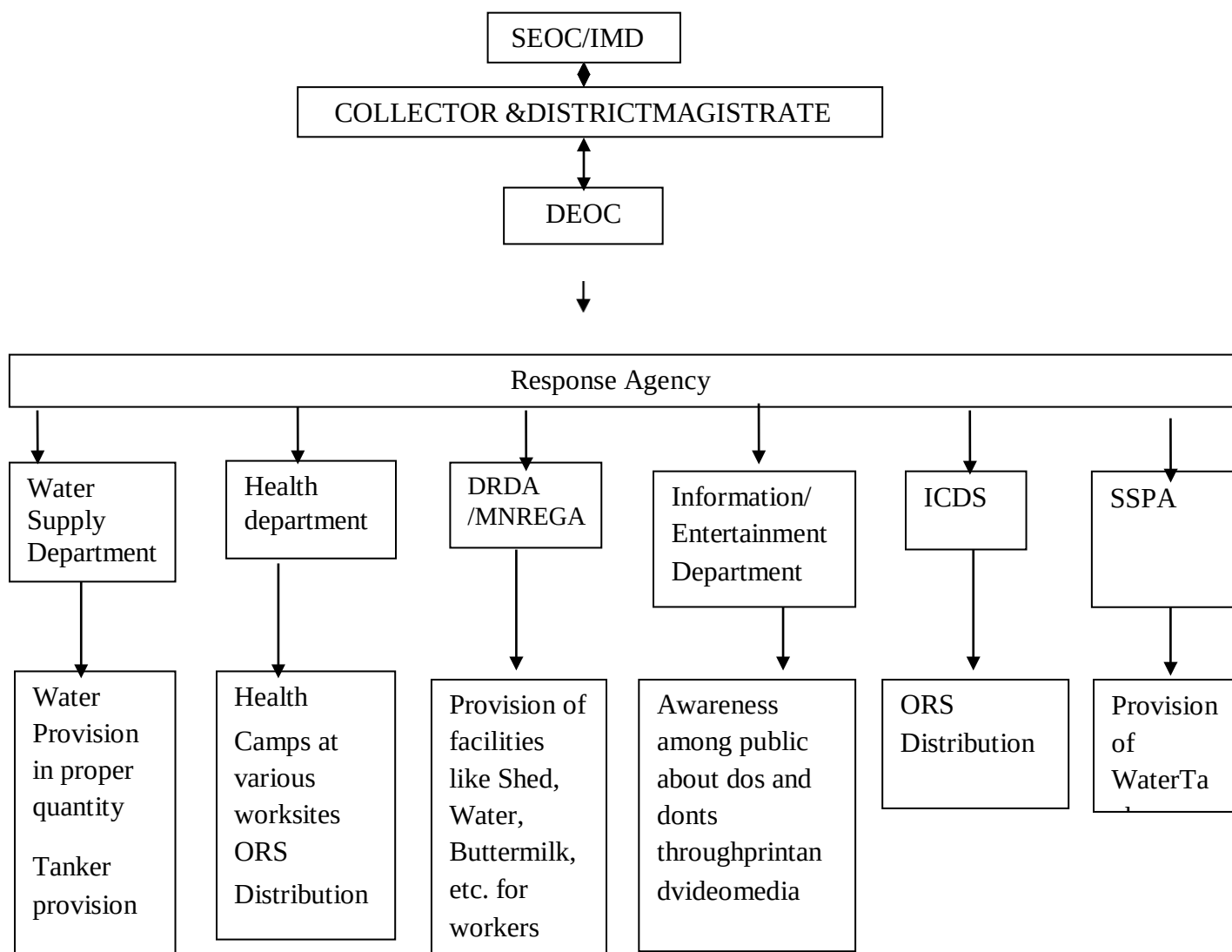
The possibility of the above stated disaster is very less with respect to Sabarkantha District, but if the effect to it is felt by the other district will accordingly respond as per the State directions

(7) Heat Wave ActionPlan:

Due to global warming effect, Heat Waves have become hazard for the humanlife. Though it cannot be called Disaster because according to Disaster's definition it does not fit into the condition of harming infrastructure and precautionary measures and timely response are required to cope up with it. Sabarkantha's Idar Taluka have Heat wave Action Plan. India Meterological department has started issuing different alerts for high temperature which areas follows:

YellowAlert	41.1to 43.0 DegreeCelsius
Orange Alert	43.1 to 44.9 Degree Celsius
Red Alert	Greater or Equal to 45 Degree Celsius

Thus, according to these alerts, Sabarkantha has already been issued orange alert in the year 2024. And keeping in mind the impact of heat wave on human life following roles and responsibilities has been given to various departments inorder to reduce the impact of heat wave:



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



Beat the Heat

Heat Wave conditions can result in physiological strain, which could even result in death. To minimize the impact during the heat wave and to prevent serious ailment or death because of heat stroke, the following measures are useful:

Do's

- ✓ Listen to Radio, watch TV, read News paper for local weather forecast to know if a heat wave is on the way
- ✓ Drink sufficient water and as often as possible, even if not thirsty
- ✓ While travelling, carry water with you.
- ✓ Keep animals in shade and give them plenty of water to drink.
- ✓ Use fans, damp clothing and take bath in cold water frequently.



- ✓ Provide cool drinking water near work place.
- ✓ Caution workers to avoid direct sunlight.
- ✓ Schedule strenuous jobs to cooler times of the day.
- ✓ Increase the frequency and length of rest breaks for outdoor activities.
- ✓ Pregnant workers and workers with a medical condition should be given additional attention.

- ✓ Keep your home cool. Use curtains, shutters or sunshade during day. Open windows at night.
- ✓ If you work outside, use a hat or an umbrella and also use a damp cloth on your head, neck, face and limbs.
- ✓ Use ORS (oral rehydration solution), home made drinks like lassi, lemon water, buttermilk, etc. which help to re-hydrate the body.
- ✓ Wear lightweight, light-coloured, loose fitting and porous cotton clothes. Use protective goggles, umbrella, pagri/dupatta/hat, shoes or chappals while going out in sun.
- ✓ Recognize the signs of heat stroke, heat rash or heat cramps such as weakness, dizziness, headache, nausea, sweating and seizures. If you feel faint or ill, see a doctor immediately.

Dont's

- ✗ Do not leave children or pets in parked vehicles.
- ✗ Avoid going out in the sun, especially between 12.00 noon and 3.00 p.m.
- ✗ Avoid wearing dark, heavy or tight clothing.
- ✗ Avoid high-protein food and do not eat stale food.
- ✗ Avoid alcohol, tea, coffee and carbonated soft drinks, which dehydrate the body.
- ✗ Avoid strenuous activities when the outside temperature is high. Avoid working outside between 12 noon and 3 p.m.
- ✗ Avoid cooking during peak hours. Open doors and windows to ventilate cooking area adequately.



The best defence against extreme heat is to be prepared, and remember:-

Get ready

Take steps now to prepare your home, workplace, and community for preparation and prevention of heat wave.

Get set

Know the symptoms of heat-related illness and what to do in an emergency.

Go

Check on those who may need help during an extreme heat event, like children, elderly family members, homebound neighbours, or outdoor workers.

LINKAGES WITH OTHER STAKEHOLDERS

CHAPTER- 7

LINKAGES WITH OTHER STAKEHOLDERS

Partnership and Linkages with Stake Holders:

With respect to regular communication, all the departments and agencies including specified departments like office of:

1. Dy. Director, DISH
2. Gujarat Pollution control Board
3. Railways Authority
4. Air Force
5. Off Site Control Room is in regular contact with District Emergency Operation Centre.

Regular Meetings of District Crisis Group (DCG) consisting various departments head has been conducted in every three months period in which various issues have been discussed regarding Chemical /Industrial hazards like...

- Potential of chemical hazards in GIDC Areas.
- Mitigation steps to minimize the potential
- Regarding Awareness Generation Activities in Industrial Areas
- Training and Sensitization Programmes
- Regular onsite and Offsite Mockdrills
- Seminars and workshops with various local partners (Village Panchayat & Associations)
- Availability of experts
- Availability of Antidotes
- Escape routes
- Strengthening of Communication network
- Strengthening of resources
- Identification and validation of temporary shelters

Herein Sabarkantha district, an offsite control room (OCR) has been functioning since long with the support of Mutual Aid Group, which focuses on the Chemical hazards and is in close coordination with DEOC. The OCR mainly deals with the preparedness and response aspects.

DM Plan of GPCB, Offsite Emergency Plan through the office of the Joint Director, DISH has been received herein DEOC, certain environmental and industrial hazard related issues always discussed and directed to them for further technical guidance with respect to particular issue.

(2) Academic / Scientific and Technical Organizations:

There are many of the academic, scientific and technical institutions / organizations in Sabarkantha district that are directly or indirectly concerned with Disaster Management Issues.

For instance:

1. Gujarat Energy and Research Institute which studies and research on energy related issues,
2. Many Fire Safety and Disaster Management institutions run in various parts of the district, mainly in Himatnagar Taluka which are focused on Fire Safety and Disaster Management Studies.
3. Health related institutions like Red Cross Society which are concerned with DM

Media Management

The role of print and electronic media is important in conveying disaster warnings and details. The media can play an important role in mitigating the problems of the public by acting decently at such times. It can provide good information about disaster preparedness, response methods, survival methods etc. to the people in a wide manner. Generally clear to the community in any crisis or disaster

And it is very important to get correct information. So the role of the media is very important. The state government has planned to coordinate with the media by starting a media cell at the state level EOC. Which is continuously working. Periodical updating of print and electronic media by proper authorities during disaster to prevent the spread of unnecessary rumors and irresponsible information. Such an arrangement is a disaster

During the monsoon of 2017, the in-charge Minister, Collector Shri Sabarkantha and DDO Shri Sabarkantha visited about 15 villages of flood affected Poshina and KhedBrahma talukas and provided information to the public through a press conference from the Control Center. Had fallen and took necessary steps by taking a meeting of Turtaj district officials.

RECONSTRUCTION, REHABILITATION AND RECOVERY MEASURES

CHAPTER- 8

RECONSTRUCTION AND REHABILITATION RECOVERY MEASURES

Introduction:

Rehabilitation and Reconstruction plays an important role in the disaster recovery phase. The reconstruction and rehabilitation activities, which follow the disaster response stage, aim at achieving long term recovery. On the expiry of a disaster declaration, the GSDMA shall, where necessary, act as an agency for facilitating and coordinating rehabilitation and reconstruction activities by departments of the Government.

Globally, the approach towards post-disaster reconstruction and rehabilitation has shifted to building back stronger, faster and inclusive to achieve resilience. While disasters result in considerable disruption of normal life, enormous suffering, loss of lives and property, global efforts consider the recovery, rehabilitation and reconstruction phase as an opportunity to **“Build Back Better”** (BBB) integrating disaster risk reduction into development measures and making communities resilient to disasters.

The proposed reconstruction and rehabilitation actions/ measures in this plan are keeping in view the worst -case scenarios in which the capacity of the State and District administration would be overwhelmed and require assistance from the Central Government for re-establishing normalcy in the disaster affected areas. This chapter provides a general framework for the role of Government and its development partners in restoring after a disaster, various essential and basic services. Much of this support will involve the coordinated working of multiple agencies – government and non-government. All the agencies are required to closely monitor response activities and to obtain valuable data regarding the severity and intensity of the event, the affected geographical area and the potential unmet critical needs of the affected population while evolving a comprehensive recovery plan. The key activities in the phase are discussed as below.

Recovery Process

Effective post -disaster recovery usually has the following three broad aspects:

- Physical aspects of recovery, i.e. restoration and reconstruction of damaged community infrastructure, critical infrastructure, private houses and cultural heritage buildings
- Economic aspects of recovery, i.e. livelihoods, productive activities and market services
- Social recovery, i.e. social and psychological aspects of personal, family and community functioning and wellbeing.

Recovery is most successful when the wide-ranging needs of communities, organizations, different vulnerable groups and individuals are addressed in the coordinated manner that recovery frameworks enable. Disaster recovery process is rarely a set of orderly actions. It will consist of several related activities such as the following:

Relief Memorandum [for seeking assistance from National Disaster Response Fund (NDRF)]

While a preliminary rapid damage assessment is carried out during disaster phase, a damage and loss assessment is conducted following the provisions and norms in the manual of National Disaster Response Fund/ State Disaster Response Fund. The COR / Revenue Department of each is mandated to collect information on damage and losses after any disaster and to provide the required disaster response thereafter.

The relevant government departments and local authorities shall initiate a detailed assessment at their respective level for the damages occurred in their respective jurisdiction in the

affected regions.

For assessing the damage and need of the affected community, the damage and need assessment team should take into account the composite representation of all the different communities and vulnerable groups in the affected area. An ideal team would include expert in the related field, government official and representatives from majority and minority communities, Women, Scheduled Caste, Schedule Tribes, Panchayat member or nagarpalika member, etc.

Post Disaster Needs Assessment

The primary objective of any Post Disaster Needs Assessment (PDNA) is to assess the full extent of a disaster's impact, define the needs for recovery and design a recovery strategy. A PDNA looks ahead to restoring damaged infrastructure, houses, livelihoods, services, governance and social systems, and includes an emphasis on reducing future disaster risks and building resilience.

National Disaster Management Authority (NDMA) with the assistance of National Institute of Disaster Management (NIDM) has developed PDNA Tools for India with the objective to establish a standardized mechanism based on scientific approach for conducting post disaster needs assessment for recovery and reconstruction.

The PDNA is an assessment covering 23 thematic areas as follows.

- Social Sectors:
 1. Housing
 2. Health & Population
 3. Nutrition
 4. Education
 5. Cultural Heritage
- Productive Sectors:
 1. Agriculture
 2. Irrigation
 3. Commerce & Industry
 4. Tourism
 5. Financial Sector
- Infrastructure Sectors:
 1. Electricity
 2. Communications
 3. Community Infrastructure
 4. Transport
 5. Water, Sanitation & Hygiene
- Cross-cutting Sectors:
 1. Governance
 2. Disaster Risk Reduction
 3. Environment & Forestry

4. Employment & Livelihoods
5. Social Protection
6. Gender Equity & Social Inclusion
7. Poverty and Human Development
8. Macroeconomic Impact Assessment

Developing Reconstruction and Rehabilitation Strategy for Resilient Recovery

In parallel to the PDNA planning process, the formulation of Reconstruction and Rehabilitation will be initiated by GSDMA / Revenue Dept. (R &R) with the objectives to –

- Provide indicative steps to facilitate a sequenced, prioritized and flexible multisectoral planning guide for recovery programmes.
- Provide guidance to state for organizing post-disaster recovery in accordance with the damages, losses and needs following a disaster event.
- Plan and implement a post-disaster recovery programme in an inclusive and transparent manner (including financial planning and institutional arrangements).
- Recommend policies, strategies, areas of technical assistance and monitoring support needed for recovery programming.
- Optimize the use of national and state flagship programmes, other schemes and resources for implementing recovery.

Provide guidance to reduce future disaster risks and allow for further opportunities for long-term sustainable development.

Repair and Restoration

The state governments as per the existing policy provide assistance to the affected citizen to repair and restore damaged houses and dwellings. Respective departments should carry out repair and restoration of the related infrastructure, facilities, services, etc. at the earliest so that the essential services can be resumed to bring the life back to normalcy.

The government shall also coordinate with national and international NGOs, donor agencies and other government bodies to prioritize restoration of critical infrastructure like health, temporary housing, lifesaving facilities, critical government infrastructure, etc.

Reconstruction

Gujarat State Disaster Management Authority (GSDMA) shall oversee reconstruction and rehabilitation work and ensure that it takes into account the overall development plans for the state. These reconstruction efforts include:

- Reconstruction of public infrastructures and social services damaged by the disaster, which can be completed over long-term.
 - Re-establishment of adequate housing to replace that which has been destroyed.
 - Restoration of jobs / livelihood that was lost
- Restoration of the economic base of the disaster areas

a. Owner Driven Reconstruction

- Reconstruction should be done on the principle of Owner Driven Reconstruction. Here the district administration aids in provision of funds and technical expertise for construction activity. In principle allow active participation of the affected family/ owner in rebuilding their houses and ensures that their houses suit their cultural, occupational and other personal needs and context. It also gives them a sense of ownership and change their mindset from ‘being a beneficiary’ to ‘being an owner’ which also aids in psychological rehabilitation.
- The active participation of the owner also ensures regular monitoring of the process, quality of material used, etc. which helps in speeding up the reconstruction process.

b. Build Back Better

- Reconstruction post disaster also gives an opportunity to build back better. The new construction post disaster should comply with all safety norms, guidelines and building codes. The design of these buildings should be disaster resilient as per the hazard profile of the state.
- Government of Gujarat shall monitor the reconstruction process and ensure that the principle of build back better is followed through disaster resilient reconstruction.

Rehabilitation

Holistic rehabilitation post disaster includes many inter linked aspects. It is critical to address the need of the affected population in order to achieve early recovery and to bring life back to its normalcy.

Socio-economic Rehabilitation

Socio-economic rehabilitation is aimed at revamping the social and economic fabric to the pre- disaster or a better situation. It also addresses issues like that of restoration and generation of livelihoods. This is done by providing required training, skill, tools, and equipment to restart the previous or new livelihood options.

Care should also be taken to address the needs of various socially and economically vulnerable groups like that of women, adolescent girls, old age persons, person with disabilities, children, destitute, below poverty line population, scheduled castes, scheduled tribes, particularly vulnerable tribal groups, etc.

Psychological Rehabilitation

Disasters often lead to long time stress and trauma due to loss of near and dear ones, injuries, loss of limbs, loss of housing and related property, trauma generated by facing the disaster and fearful sites, fear of repetition of the disaster, etc. If not addressed appropriately, it may lead to lifelong psychological fear and disorders, thus it is necessary to provide psycho-social first aid and psychological care to the affected population.

Environmental Rehabilitation

Environmental impacts of disasters can result in serious risk to life and livelihoods if not addressed. Environmental emergencies like uncontrolled, unplanned or accidental release of a substance into the environment not only impact human life in many ways but also damage the environment to a great extent which may be impossible or may take years to restore to its original.

Thus, without proper consideration of the environment, pre-existing vulnerabilities may be re-created or exacerbated. Thus, GoG along with other departments concerned should ensure measures to decontaminate the affected elements like air, river, water bodies, forests, etc.

Relocation

The state government believes that need-based considerations and not extraneous factors drives the relocation of people. The local authorities, in consultation with the affected persons and under the guidance of GSDMA, shall determine relocation needs taking into account criteria relevant to the nature of the calamity and the extent of damage. Relocation efforts will include activities like:

1. Gaining consent of the affected population
2. Land acquisition.
3. Urban/ rural land use planning
4. Customizing relocation packages
5. Obtaining due legal clearances for relocation
6. Getting the necessary authorization for rehabilitation
7. Livelihood rehabilitation measures for relocated communities, wherever necessary

While planning on site reconstruction or relocation, care should be taken to provide the community with all basic amenities in close vicinity of the reconstruction site. This leads to inclusive and holistic reconstruction process. Some of the basic amenities are as follows:

1. Health
2. Education
3. Provision of adequate drainage system
4. Provision to drinking water.
5. Provision for proper sanitation.
6. Provision for Electricity.
7. Provision for waste collection and management.
8. Marketplace.
9. Connectivity to road and railway

Restoration of Damaged Cultural Heritage Sites, their Precincts and Museums

Post disaster repairs and reconstruction of damaged sites / precincts to be undertaken based on sound documentation and assessment practices. Poor reconstruction practices cause further physical damage to heritage structures, may worsen its structural vulnerability and carries the risk of erasing the heritage features. Restoration or reconstruction of heritage after disasters should go beyond buildings and it should look at heritage livelihood, traditional trades/ crafts etc.

Project Management

Since rehabilitation and reconstruction effort typically involves the coordinated efforts of several entities / institutions, the GoG shall encourage the respective entities to strengthen program management capabilities to ensure that synergies across and within entities are managed efficiently. In addition, it is also necessary to constantly monitor the activity to ensure that the project is executed on time, in accordance with the technical specifications and to the satisfaction of the beneficiaries. GSDMA, in coordination with relevant government departments, will monitor the reconstruction activity that is carried out by various implementation agencies.

Typical implementation activities would include:

- Disaster proofing and retrofitting of houses.
- Creation/ retrofitting of structures – including roads, bridges, dams, canals etc. that may be destroyed/ damaged due to the disaster.
- Restoration of basic infrastructure facilities, for example, ports, airports, power stations etc.
- Creation of health centers, first aid centers, hospitals, groups of doctors and surgeons etc.
- Restoration of the industrial viability of the affected area.
- Restoration of livelihood.

For managing long-term rehabilitation programmes, such as reconstruction of houses, infrastructure and other social amenities, the responsibilities will be that of respective line departments through a well-structured R & R Programme.

Information, Education and Communication

Communication activities are necessary to convey to the larger community the scope and nature of the proposed reconstruction and rehabilitation effort so as to increase the stakeholder's awareness and buy-in for the ongoing activities. Hence, GSDMA and relevant government departments, district administration and local authorities shall undertake:

- **Ongoing media management/ Public Relations:** To ensure that accurate communication of the reconstruction and rehabilitation measures are being informed to the various stakeholders.
- **Community management:** This includes communicating to the affected communities with a view to appraising them of efforts being made for their relocation/ rehabilitation/ reconstruction.
- **Feedback mechanisms:** Using the communication network to get feedback on reconstruction and rehabilitation measures.

Short-term, Mid-term and Long-term Recovery

The disaster recovery programmes usually proceed in three distinct stages to facilitate a sequenced, prioritized, and flexible multi-sectoral approach. Three recovery stages, in which appropriate policies and programmes tend to be planned and implemented are: a) Short term, b) Mid -Term, and c) Long- term.

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

1. Immediate and Short-Term Recovery

While a preliminary damage assessment is carried out during disaster phase, a detailed assessment must be conducted before commencing reconstruction and rehabilitation activities. The relevant Government departments and local authorities shall initiate detailed assessment at their respective level for damage 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.

Restoration of Basic Infrastructure

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

Roads and Bridges

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

a) Drinking Water Supply

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

Responsible Department: Electricity Department & Water supply Department

b) Electricity: Restoration of power supply is also critical to immediate recovery. Responsible Department: Electricity Department

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

Responsible Department: BSNL & Mobile Service Provider, Electricity Department

d) Reconstruction & Repair of Lifeline Buildings

Lifeline buildings are those necessary to keep the administrative machinery functioning despite the damage caused by disaster. The following buildings must be repaired as a priority:

- Collectorate
- Line Department Buildings
- Block Offices
- Hospitals

e) Rehabilitation

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

f) Mass Care / Sheltering and Housing

The management of relief shelters is continued from the response phase to the immediate recovery phase and done through Incident Response System. The Incident Commander over sees the operations while the Relief Camp Manager manages the shelter. During this

period, the number of victims must be identified for whom construction of houses under Indira Aawas Yojna & Sardar Awas Yojna shall be sanctioned.

g) Food

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

h) Debris Removal and Disposal of Dead Bodies

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

i) Drainage and Sewage

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

j) Health Care

First Aid and Emergency Health care has to be provided at the earliest. In case the health care centers are affected by the disaster, temporary medical relief camps need to be installed while the building is retrofitted or reconstructed. Reconstruction of buildings has to I this phase.

k) Livelihood Recovery

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

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

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

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

2406) Material Assistance: In case where the replacement of crucial assets or fresh requirement of some resources is crucial and not easily available in local markets, material assistance shall be provided. For instance, the distribution of seeds to farmers can be done.

Mitigation Activities

As a part of conducting a detailed damage and loss assessment, an assessment of prospective risks and vulnerabilities will also have to be done. For example, refurbishing embankments or retrofitting houses and other buildings.

2. Long Term Recovery

Long-term recovery must be completed in 2 months to 24 months' time. (i) Housing Development of permanent housing solutions for victims will happen during this period. (ii) The construction of houses for victims identified under Indira Awas Yojana and Sardar Awas Yojna shall be undertaken during this time.

2.1. Reconstruction and Repair

a) Infrastructure

Restoration of social infrastructure has to be done to reinstate the normal functioning of district infrastructure. Schools & Hospitals will have to be reconstructed and repaired in this recovery phase. Re-establishment of disrupted health care services will have to be done at the earliest.

Responsible Department for Hospitals: Health Department, R& B

Responsible Department for Schools: Education Department

b) Economic Infrastructure

Restoration of economic infrastructure (Banks) is essential for accessibility of money and the smooth functioning of the economy of the district. Unless addressed, it severely affects the

livelihood and employment potential of the district. Thus, bank buildings shall be quickly instated.

c) **Livelihood Recovery**

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

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

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

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

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

3. Restoration of Essential Services and Infrastructure

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

Power

Item/Services	No. of unit damaged	No. of villages affected	Population affected	Recovery measures	Implementing agency	Tentative Duration (Months)
Feeder						
Transformers						
HTLines						
LTLines						
ElectricPoles						

To be planned after an initial damage assessment by departments

Health

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

To be planned after an initial damage assessment by departments

Social

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

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

Water Supply

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

Road and Transport

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

Road and Transport

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

Communication

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

Food Supply

List of village affected by disruption in food supply

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

Housing

PartialDamage		FullyDamaged/ Collapsed		Recovery Measures	Prog /Schem e	Implementing Agency	Tentative Duration (Months)
Kacha	Pakka	Kacha	Pakka				

Public Utilities

Public Buildings	Partial damage (No. of units)	Fully Damaged/ Collapsed (No. of Unit)	Recovery Measures	Prog./ Scheme	Implementing Agency	Tentative Duration (Months)
Panchayat						
Educational Buildings						
Anganwadi						
Hospitals						
OfficeBuildings						
Market						
Policestation						
Community Halls/ Functionplots						

4. Restoration of Livelihood Provisioning of Employment

Occupationalcategory	No. of workers	Implementing Agency	Tentative Duration (Months)
Skilled labours			
Unskilled and Agricultural labours			
Small and marginal farmers			
Construction workers			

Salt pan workers			
Fisher folk			
Weavers			
Other artisans			

Land Improvement

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

Agricultural

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

Non-farm livelihood

Cottage Industry	Extend of damage/disruption		Recovery Measures	Implementing Agency	Tentative Duration (Months)
	Tools and equipment (Specify no.and type)	Goods and material (Specify type and qty)			
Hand loom					
Pottery					
Food Processing					

Diamond sorting etc					
Printing/ Dying					
Other					

Shops and establishments

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

CHAPTER- 9

Financial Arrangements For DDMP

The DM Act, 2005 recommended central government and state government to have Disaster Mitigation and Response Funds. The 15th Finance Commission recommended setting up National and State Disaster Risk Management Funds (NDRMF and SDRMF) for the promotion of local-level mitigation activities. The Commission has recommended retaining the existing cost-sharing patterns between the center and states to fund the SDRMF and the SDRF (existing). The cost-sharing pattern between the center and Gujarat is 75:25.

The DM Act, 2005 was clearly mandated upon the Government to ensure that the funds are provided by the Ministries and Departments within their budgetary allocations for the purpose of disaster management. The Act has stressed upon the need for mainstreaming of Disaster Risk Management by way of making definite budgetary arrangements for the purpose by the respective Ministries and Departments within their overall agenda.

Funds at National Level

National Disaster Risk Management Funds (NDRMF)

National Disaster Risk Management Funds (NDRMF) has been set up as per the recommendation of 15th Finance Commission (FC). NDRMF comprises of the National Disaster Mitigation Funds (NDMF) and National Disaster Response Funds (NDRF). Out of the total NDRMF, the share of NDRF shall be 80 % and the share of NDMF 20 per cent. Within the NDRF allocation of 80 percent, there would be three sub-allocations. They are Response and Relief (40 per cent), Recovery and Reconstruction (30 per cent) and Preparedness and Capacity-building (10 per cent). While the funding windows of NDRF and NDMF are not interchangeable, there could be flexibility for re- allocation within the three sub-windows of the respective Funds and such re-allocation shall not exceed 10 percent of the allotted amount of that sub-window.

Prime Minister's National Relief Fund (PMNRF)

Prime Minister's National Relief Fund (PMNRF) was established entirely with public contributions and does not get any budgetary support. PMNRF accepts voluntary contributions from Individuals, Organizations, Trusts, Companies and Institutions etc. All contributions towards PMNRF are exempt from Income Tax under section 80(G) of the Income Tax Act, 1961.

The resources of the PMNRF are utilized to render immediate relief to families of those killed in calamities like floods, cyclones and earthquakes, etc. Assists partially to defray the expenses for medical treatment like heart surgery, kidney transplantation, cancer treatment of needy people and acid attack etc. The corpus of the fund is invested in various forms with scheduled commercial banks and other agencies. Disbursements are made with the approval of the Prime Ministe

State Level

State Disaster Risk Management Funds (SDRMF)

State Disaster Risk Management Funds (SDRMF) has been set up as per the recommendation of 15th Finance Commission (FC). SDRMF comprises of the State Disaster Mitigation Funds (SDMF) and State Disaster Response Funds (SDRF). Out of the total SDRMF, the share of SDRF shall be 80 per cent and the share of SDMF 20 per cent. Within the SDRF allocation of 80 per cent, there would be three sub-allocations. They are Response and Relief (40 per cent), Recovery and Reconstruction (30 per cent) and Preparedness and Capacity-building (10 per cent). While the funding windows of SDRF and SDMF are not inter-changeable, there could be flexibility for re-allocation within the three sub- windows of the respective Funds and such re-allocation shall not exceed 10 percent of the allotted amount of that sub-window.

SDMF shall be used for those local level and community-based interventions which reduce the risks and promote environment-friendly settlements and livelihood practices. However, large-scale mitigation interventions such as construction of coastal walls, flood embankments, support for drought resilience etc. should be pursued through regular development schemes and not from the mitigation fund. The detailed guidelines for the constitution and utilization of these funds shall be issued by the Ministry of Home Affairs,

Chief Minister's Relief Fund

This provides immediate support to the distressed people affected by the disasters, or road, air or railway accidents, Communal riots, Crop failure, Floods etc. The funds can be used for those people who have been affected by cancer, Heart surgery and other ailments, too.

Other Sources of Funds

a. Public Private Partnership

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

b. Grant in Aid

State government may receive a grant in aid from Central Govt, or a local authority, bilateral or multilateral funding agencies, etc. to carry out specific projects/schemes related to disaster risk reduction and management.

c. Corporate Social Responsibility (CSR) Funds

Corporate social responsibility is a broad concept that can take many forms depending on the company and industry. Through CSR programs, philanthropy, and volunteer efforts, businesses can benefit society while boosting their brands.

Section 135 of the Act, Schedule VII and Companies (CSR) Policy Rules, 2014, provide a robust framework for companies to partner in contributing to the country's development challenges through its managerial skills, technology and innovation. Besides providing an overall guidance framework for the corporates to carry out their CSR initiatives, it also provides them with ample autonomy and flexibility to design and implement programmes. The monitoring is based on disclosures made by the company in the prescribed form and annual report. The company has to disclose its details on CSR implementation, including allocation of funds, destination state and development sector where the CSR expenditure is done, etc. annually to this Ministry through filing of annual report on CSR. The mandatory CSR reporting has its advantages as it allows the corporates to demonstrate their commitment towards CSR and communicate with different stakeholders, including shareholders, regulators, customers and society at large.

d. Loan

GSDMA may borrow money from the open market with the previous approval of State government to carry out disaster management functions as described in DM Act, 2003.

e. Disaster Bonds

State government can also raise funds for major disasters by exploring the options of long-term disaster bonds.

f. Donations

As per the provisions of clause 33 of The Gujarat State Disaster Management Act, 2003 the Authority may accept grants, subventions, donations and gifts from the Central or State Government or a local authority or any individual or body, whether incorporated or not.

g. Recovery Measures -Introduction of Special Tax

The GoG shall finalize and implement select recovery measures such as imposing tax surcharge levies (central), imposing local taxes, facilitation of funding responsibility sharing by beneficiaries etc.

h. Funds Disbursement and Audit

The funds raised from funding agencies are usually accompanied by stringent disbursement and usage restrictions. It is therefore important to monitor the disbursement of such funds to ensure that none of the covenants are breached. GSDMA, in conjunction with relevant agencies, shall monitor disbursement of funds by:

- Prioritizing resource allocation across approved projects
- Establishing mechanisms (like a chain of banks, collection centers, nature of accounts, spread etc.) for collection of funds.
- Ongoing monitoring and control of fund usage throughout actual project implementation

With respect to the Updation of the DM plan the expenditure shall be booked either from the grant provisions of GSDMA under the DM Plan Updation head and time to time guidelines of GSDMA or as per the directions of District Collector the expenditure will be booked under the head of 2245 and DRM Program grant for DDMP Updation.

There are other provisions which are utilized in different kinds of relief measures as per the directions released from Central Government, State Government and so the Collector & DM viz. the funds like Calamity Relief Fund (CRF) which is utilized for the affected people / nature / cattle death in case of the natural calamities, NCCF, CM Relief Fund, PM Relief Fund etc.

CHAPTER- 10

Procedure and Methodology for Monitoring, Evaluation, Updating, and Maintenance of the District Disaster Management Plan

Introduction

Effective disaster management is crucial for minimizing the loss of life and property during emergencies. It involves not only planning and preparedness but also continuous monitoring, evaluation, updating, and maintenance. This guide outlines the procedures and methodologies necessary to ensure that a district disaster management plan remains relevant and effective.

Monitoring

Monitoring is a continuous process that involves tracking the implementation of the disaster management plan to

ensure its adherence and effectiveness. The methodology includes:

- **Regular Inspections:** Conduct routine inspections of disaster management resources and infrastructure.
- **Performance Metrics:** Define key performance indicators (KPIs) to measure the effectiveness of the disaster management strategies.
- **Reporting Systems:** Establish systems to report on the status of various disaster management activities.
- **Community Feedback:** Gather feedback from the community on the effectiveness of the disaster management plan.

Evaluation

Evaluation involves assessing the effectiveness and impact of the disaster management plan. The methodology includes:

- **Data Analysis:** Analyze data collected during monitoring to evaluate the performance against KPIs.
- **Incident Reviews:** Review past incidents to identify strengths and weaknesses in the response efforts.
- **Stakeholder Meetings:** Hold meetings with key stakeholders to discuss findings and recommendations.
- **Cost-Benefit Analysis:** Evaluate the cost-effectiveness of different disaster management strategies.

Updating

Updating the disaster management plan ensures that it incorporates new information, technologies, and strategies. The methodology includes:

- **Policy Reviews:** Regularly review and revise policies to reflect current best practices and legal requirements.
- **Training Programs:** Update training programs to ensure that personnel are equipped with the latest knowledge and skills.
- **Resource Allocation:** Adjust the allocation of resources based on current needs and risks.
- **Technological Advancements:** Integrate new technologies to improve the effectiveness of the disaster management plan.

Maintenance

Maintenance involves the ongoing upkeep of the disaster management plan and its components. The methodology includes:

- **Regular Audits:** Conduct audits to ensure that all components of the disaster management plan are functioning correctly.
- **Infrastructure Maintenance:** Ensure that disaster management infrastructure, such as shelters and communication systems, are well-maintained.
- **Resource Inventory:** Maintain an up-to-date inventory of disaster management resources.

- Continuous Improvement: Implement a system for continuous improvement based on feedback and evaluation.

Effective disaster management requires a dynamic and responsive approach. By employing systematic procedures and methodologies for monitoring, evaluation, updating, and maintenance, districts can ensure that their disaster management plans remain robust and effective in the face of evolving challenges.

This comprehensive guide serves as a foundation for districts to develop and refine their disaster management strategies, ultimately enhancing community resilience and safety.

Chapter 11

Coordination Mechanism for implementation of DDMP

11.1. Coordination Mechanism

Dealing with major disasters necessitates the mobilization of resources beyond the district's capacity. In instances where the district administration is overwhelmed, higher authorities are called upon to provide assistance. Additionally, assets and capabilities within the corporate and non-governmental sectors surrounding the district can be leveraged to mitigate the impact of disasters. Participants in disaster management undertake various actions both before and after disasters to achieve this objective. Pre-disaster measures aim to prevent or minimize potential damage, while post-disaster efforts focus on recovery. These activities ideally mitigate the effects of disasters significantly. To achieve this, the District Disaster Management Plan (DDMP) should establish a pre-established and practiced mechanism for inter-agency, intra-agency, and extra-agency coordination.

Effective communication is paramount for coordination during emergencies. Typically, the Emergency Operation Centre (EOC) serves as the focal point for communication and coordination efforts. Pre-disaster meetings, involving all stakeholders, are crucial for reviewing the DDMP and ensuring alignment of strategies and resources. The District Disaster Management Authority (DDMA) and District Emergency Operation Centre (DEOC) play pivotal roles in coordinating with all department heads, Incident Response Teams (IRTs), Emergency Support Functions (ESFs), Block Development Officers (BDOs), Disaster Management Teams (DMTs), Task Forces, Non-Governmental Organizations (NGOs), Community-Based Organizations (CBOs), corporate entities, and the community to effectively implement disaster management plans at all levels.

Coordination with local self-government bodies, including Panchayat Raj institutions (Zila Parishad, intermediate level bodies, if applicable, and Gram Panchayats) and Urban Local Bodies (ULBs), is essential for effective disaster management. While the responsibilities of local authorities are outlined in relevant legislation, such as the Disaster Management Act, they operate under the direction of the district authority, as stipulated in Section 41. Therefore, establishing a vibrant coordination system at these levels is crucial to ensure seamless cooperation and alignment of efforts in disaster preparedness, response, and recovery.

To facilitate coordination with local self-government bodies, the district disaster management framework typically involves the following components:

1. **Establishment of Coordination Mechanisms:** District Disaster Management Authorities (DDMAs) establish coordination mechanisms to engage with local self-government bodies effectively. This may include establishing regular coordination meetings, joint planning sessions, and information-sharing platforms.
2. **Clear Communication Channels:** Ensure clear communication channels between the district authority and local self-government bodies to convey directives, share information, and coordinate actions during emergencies. This includes establishing dedicated communication lines, liaison officers, and communication protocols.

Incorporation of Local Plans: Integrate disaster management plans and guidelines developed by local self-government bodies into the broader district-level plans. This ensures that local priorities, resources, and capacities are considered and aligned with overall disaster management strategies.

1. **Capacity Building and Training:** Provide capacity building and training programs for officials and staff of local self-government bodies to enhance their understanding of disaster risks, response procedures, and coordination protocols. This empowers local authorities to effectively fulfill their roles and responsibilities during emergencies.
2. **Collaborative Planning and Implementation:** Foster collaboration between the district authority and local self-government bodies in planning and implementing disaster risk reduction measures, preparedness activities, response plans, and recovery efforts. This includes joint exercises, drills, and simulations to test coordination mechanisms and build confidence among stakeholders.
3. **Resource Mobilization and Support:** Facilitate resource mobilization and support for local self-government bodies to strengthen their disaster management capabilities. This may include providing financial assistance, technical expertise, and access to equipment, supplies, and infrastructure.
4. **Community Engagement and Participation:** Encourage active involvement of local communities in disaster preparedness, response, and recovery efforts. Local self-government bodies play a crucial role in mobilizing community resources, raising awareness, and facilitating community-based initiatives for resilience building.

By fostering vibrant coordination with local self-government bodies, districts can leverage local knowledge, resources, and networks to enhance the overall effectiveness of disaster management efforts. This collaborative approach ensures that response measures are well-coordinated, locally relevant, and responsive to the needs of communities, ultimately contributing to greater resilience and disaster risk reduction at the grassroots level.

Co-Ordination Matrix							
Hazard	Co-ordination	Subject of Co-ordination	Specification of the entity(Which department/ agency etc)	Nature of Co-ordination during different DM Phase			
				Preparedness Phase	Response Phase	Mitigation Phase	Recover and Reconstruction Phase
Inter Departmental Co- ordination							
Intra Departmental							
Inter Block							

Inter Villages							
Intermediate level(Zila Parishad, ULB's etc)							
State level agencies							
NGO's/ CBO's/SHG's etc							
UN agencies							

Linkage with the District Disaster Management Plans (DDMPs) of neighboring districts and the State Disaster Management Plan (SDMP) is crucial for ensuring effective coordination and response to disasters that transcend administrative boundaries. These linkages facilitate information sharing, resource mobilization, and coordinated action in managing disaster risks and responding to emergencies. Here's how these linkages are established and utilize

Linkage With DDMPs of Neighboring Districts):

- Establish Communication Channels: District Disaster Management Authorities (DDMAs) establish communication channels with neighboring districts to facilitate the exchange of information, coordination of response efforts, and mutual support during emergencies.
- Sharing of Information and Resources: DDMAs exchange relevant information such as hazard assessments, vulnerability maps, response capabilities, and available resources. This sharing enables better situational awareness and helps identify areas where mutual assistance may be required.

Inter-District Coordination (Linkage with DDMPs of Neighboring Districts):

- Establish Communication Channels: District Disaster Management Authorities (DDMAs) establish communication channels with neighboring districts to facilitate the exchange of information, coordination of response efforts, and mutual support during emergencies.
- Sharing of Information and Resources: DDMPs exchange relevant information such as hazard assessments, vulnerability maps, response capabilities, and available resources. This sharing enables better situational awareness and helps identify areas where mutual assistance may be required.
- Mutual Aid Agreements: DDMPs may enter into mutual aid agreements or memoranda of understanding (MoUs) with neighboring districts to formalize cooperation and support arrangements. These agreements outline the terms and conditions for sharing resources, personnel, and expertise during emergencies.
- Joint Exercises and Drills: Conduct joint exercises, drills, and simulations with neighboring districts to test coordination mechanisms, identify inter-district response challenges, and build mutual trust and confidence among stakeholders.
- Coordinated Response Planning: Collaborate with neighboring districts in the development of joint response plans and protocols for managing cross-border emergencies. This ensures a coordinated and cohesive approach to disaster response across administrative boundaries.

State-Level Coordination (Linkage with SDMP):

- Alignment with State Priorities: Ensure that the DDMP aligns with the priorities, strategies, and guidelines outlined in the SDMP. This alignment ensures consistency and coherence in disaster management efforts at the district and state levels.
- Coordination Mechanisms: Establish coordination mechanisms between the district authority and the State Disaster Management Authority (SDMA) to facilitate communication, information sharing, and joint decision-making during emergencies.
- Resource Mobilization: Coordinate with the SDMA to access state-level resources, including personnel, equipment, and funds, to support district-level response efforts. This may involve requesting assistance, submitting resource requirements, and coordinating deployments as per the SDMP.

- **Policy and Regulatory Alignment:** Ensure that district-level policies, regulations, and protocols are consistent with state-level directives and guidelines outlined in the SDMP. This alignment facilitates seamless integration and interoperability of disaster management systems across different administrative levels.
- **Regular Reporting and Updates:** Provide regular updates and reports to the SDMA on the implementation of the DDMP, status of preparedness measures, response actions, and lessons learned. This enables the SDMA to monitor progress, identify challenges, and provide necessary support and guidance to districts as required.

By establishing strong linkages with neighboring districts and the SDMP, districts can enhance their resilience and capacity to effectively respond to disasters, irrespective of geographical boundaries. These linkages facilitate coordinated action, resource sharing, and mutual support, thereby strengthening overall disaster management capabilities at the local, regional, and state levels.

Chapter 12

Standard Operating Procedures (SOPs) and checklist

12.1. Definition of disaster situations

The Sendai Framework for Disaster Risk Reduction (SFDRR) defines disaster situations as events triggered by natural hazards or human-induced factors that cause significant disruption to communities, resulting in extensive damage, loss of life, and negative socio-economic impacts. These events exceed the capacity of affected areas to cope and often require national or international assistance for effective response and recovery. The SFDRR emphasizes the importance of reducing disaster risk and enhancing resilience to mitigate the impact of such events and ensure sustainable development. By addressing underlying risk factors and vulnerabilities, the SFDRR aims to minimize the occurrence and severity of disaster situations, thereby promoting the well-being and safety of communities worldwide.

12.2. Action on receipt of warning and warning dissemination

Action on receipt of warning and warning dissemination are critical components of disaster preparedness and response efforts. Upon receiving a warning of an impending disaster, authorities must swiftly disseminate this information to the public through various communication channels, including emergency alerts, sirens, social media, and mass media outlets. Simultaneously, individuals and communities must take immediate action to implement preparedness measures, such as evacuating to safe locations, securing property, and accessing emergency supplies. Prompt and effective action in response to warnings can save lives, minimize damage, and enhance overall resilience in the face of disasters.

12.3. SOP's and Checklist

Standard Operating Procedures (SOPs) and checklists are essential for effective disaster response by various stakeholders. These documents provide clear guidance and reference points for executing specific tasks during emergencies. SOPs and checklists are developed based on Emergency Support Functions (ESFs) or Incident Response Systems (IRS), aligning responsibilities and actions with functional areas. They are tailored to the district's hazard profile and level of exposure through participatory risk assessments. Stakeholders are involved in their development and training, ensuring relevance and applicability. Regular review and updates maintain their effectiveness. Overall, SOPs and checklists streamline response efforts, enhance coordination, and contribute to efficient disaster management.

1. Standard Operating Procedures for Response

Primary Department	Support Department	Emergency Function
National Informatics Centre	- BSNL and other service providers - All India Radio/Television - Mobile Police Wireless	- To restore communication facilities after disaster. - To provide emergency communication linking for EOCs, IMS. - To ensure early warning communication to identified stakeholders at community level. - To ensure communication facilities to support state and district actions - To coordinate the temporary communication requirements

2. Search and Rescue

Primary Department	Support Department	Emergency Function
Warden, Civil Defence S.P., Police / Fire Officer, Fire Services (In case of Fire)	- Home Guards - NSS / NCC / NYKS <u>Additional State/National Units:</u> - SDRF - Paramilitary Forces – CRPF and SSB - NDRF - APSDRF - Air Force / Army	- To restore communication facilities after disaster. - To provide emergency communication linking for EOCs, IMS. - To ensure early warning communication to identified stakeholders at community level. - To ensure communication facilities to support state and district actions - To coordinate the temporary communication requirements

2. Relief and Shelter

Primary Department	Support Department	Emergency Function
• RAC (In-charge of Disaster Management), • Revenue Department	• Department of Food and Civil Supplies • Civil Defense • Home Guards • Department of Housing • State Food Corporation • Red Cross Society • Corporates / CBOs • NCC/NSS/NYKS	• To carry cooked dry, fast food materials in properly packaged form for immediate distribution. • To organize the supply of drinking water • To setup Shelter camps, Kitchen camps, mobilize volunteers for cooking, serving, washing etc. • To organize Supply of food grains and vegetables • To line up teams of local youths to carry those rescued to relief and shelter camps. • To maintain record of names, villages, Panchyat and Talukas to which the victims belong • To setup latrine and bathrooms • To take special care of children, women, old and disabled, especially those separated from families. • To setup disaster relief centre to receive, collect, sort out and distribute

3. Health and Sanitation

Primary Department	Support Department	Emergency Function
• Civil Superintendent, CMO, Health Department	• Public Health Engineering Department (PHED) • Medical College • Hospitals • Red Cross Society • Civil Defence	• To check the equipments and stock of medicines • To teams formation of medical personnel • To organize first aid providing team in larger number • Public health advice and warnings to participating agencies and the community • To organize mobile medical van to attend to emergency needs • To carry medical camp setting facilities • To establish trauma counseling desks for disaster affected persons • To keep an eye on the possibilities of outbreak of epidemics • To include locally available medical staff in health check up exercise. • To keep record of patients treated • To visit shelter camps to keep an eye on sanitation and make adequate arrangements for the same.

4. Livestock Shelter and Fodder

Primary Department	Support Department	Emergency Function
• Nayab Pasupalan Niyamak, Dept. of Animal Husbandry	• Veterinary Hospitals • Fodder Suppliers	• To setup feeding camp for animals at some distance from shelter for human beings • To vaccinate the animal if not vaccinated earlier. • To organize disposal of garbage. • To mobilize veterinary team locally

5. Drinking Water and Supplies

Primary Department	Support Department	Emergency Function
Executive Engineer, Gujarat Water Supply and Sewerage Board	- Minor Water Resources (Tube Well Division) - DRDA - Electricity Department - Corporate Support - NGOs	- To identify the sources to provide drinking water and restore supply. - Restoration of well - To install hand pumps - To provide halogen tablets - To distribute mineral water bottles of available in large stock.

6. Power

Primary Department	Support Department	Emergency Function
Executive Engineer, MGVCL	- Corporate Support - NGOs	- To carry repair and maintenance kits for generator sets and other devices. - To check electricity supply line and restore supply - To organize alternative source to provide electricity - To carry replacement generator set where need be. - To organize and ensure power supply to hospitals, shelter camps, kitchen, onsite EOCs and other important institutions. - To carry candles, match boxes, solar lamps, petromax, etc.

7. Transport

Primary Department	Support Department	Emergency Function
R.T.O., Transport Department	- Private Transport Carriers - Private Boat Owners - Ambulance Service - Railways - Air Force	- To know loading and unloading point nearest to the incident site. - To coordinate the transport requirements of the emergency support forces. - To arrange transportation of relief and rescue materials. - To coordinate and provide transport facilities to all support agencies - To regulate the movement of traffic

		onsite To organize transportation of sick and wounded
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8. Public Works

Primary Department	Support Department	Emergency Function
Executive Engineer, R&B Department	- Road and Bridge Construction Dept - Building Construction Dept	- To restore the road connectivity in collaboration with Road Construction Department - To construct temporary bridges where required - To organize repairing of health centre, schools, important buildings - To undertake supervision and surveillance of construction works done.

9. Information Dissemination and Helpline

Primary Department	Support Department	Emergency Function
Assistant Director of Information, District Information Department	- Panchayati Raj Dept. - Scouts and Guides - Media - Colleges and Universities - NCC / NSS / NYKS	- To gather correct information from authorities onsite. - To keep the list of persons rescued with full details about each - To keep the list of persons missing - To keep the no. of dead bodies and the locations they have been put - To keep a track of which team is positioned where - To make use of the public address system to call any body - To keep 5 to 6 scouts around to provide escort services. - To schedule working in short duration shifts

Police, Police Dept.	Commandant • Para-military (CRPF, SSB) • Armed Forces	Defense forces in strategic places • Preservation of peace and good order (Particularly in case of Riots/Accidents/Fire) • Prevention of crime • Security of any site as a possible crime scene (Particularly in case of Riots/Accidents/Fire) • Investigation of the criminal aspect of any event • Traffic control, including assistance with road closures and maintenance of road blocks • Crowd management/public safety • Coordination of search and rescue • Security of evacuated areas
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Incident Response System

The Incident Response System (IRS) is one of the most critical components of the phase of emergency response. This system adopts both top-down and bottom-up approach to make the responses effective, where top administrative officers prepare strategies and make plans, while also ensuring requisition of required resources, manpower, equipment and the support of various inter-disciplinary agencies. On the other side, the on-field response personnel also provide feedback to officers designated for the purpose to help improvise the response strategies.

IRS structure as defined by guidelines issued by the National Disaster Management Authority. In sum, the command staff is comprised of the Incident Commander, Information & Media Officer, Safety Officer, and Liaison Officer. The general staff encompasses three sections – operations, planning, and logistics –, each of which being comprised of various groups and units.

12.4. Media Management

The coordination between the District Administration and media has to be maintained both during and after a disaster. During the response phase it is especially important as it helps to ensure that communities and people in the district are better aware about the situation and interventions being made by the administration. The following will be performed by the Information and Media Officer as per responsibilities described in the IRS section:

- Organize media briefing by senior officer in-charge.
- Provide graphic and statistical details to the extent possible.
- Organize visits to shelters, relief and various activity camps.
- Organize briefing on daily basis towards the end of the day.
- Facilitate media personnel in their interaction with other emergency functionaries, if possible.

- Prepare and release information about the incident to the media agencies and others
- with the approval of IC;
- Jot down decisions taken and directions issued in case of sudden disasters when the
- IMT has not been fully activated and hand it over to the PS on its activation for incorporation in the IAP;
- Ask for additional personnel support depending on the scale of incident and workload;
- Monitor and review various media reports regarding the incident that may be useful for incident planning;
- Organize IAP meetings as directed by the IC or when required;
- Coordinate with IMD to collect weather information and disseminate it to all concerned;
- Maintain record of various activities performed and
- Perform such other duties as assigned by IC.

12.5. Relief and Rehabilitation Norms (Standards)

Emergency Response/ Support Functions:

Relief and Rehabilitation Norms establish standards for emergency response and support functions during disasters. These norms guide various critical activities aimed at mitigating the impact of disasters and facilitating recovery. Here's a description of some key emergency response/support functions:

- **Evacuation:** Evacuation involves safely relocating individuals from areas at risk of disaster to designated safe locations. This process ensures the protection of lives and minimizes casualties.
- **Search and Rescue:** Search and rescue operations aim to locate, extract, and provide medical assistance to individuals who are trapped or injured during a disaster. Trained personnel deploy specialized techniques and equipment to locate and extricate survivors.
- **Cordoning the Area:** Cordoning off affected areas helps restrict access to hazardous zones, ensuring the safety of responders and preventing further harm to individuals. It also facilitates the organization of rescue operations and the management of resources.
- **Traffic Control:** Traffic control measures are implemented to manage vehicular and pedestrian movement around disaster-affected areas. This helps prevent congestion, facilitate emergency response efforts, and ensure the safe passage of vehicles transporting supplies and personnel.

- **Law and Order and Safety Measures:**
- Maintaining law and order is crucial during emergencies to prevent looting, vandalism, and other criminal activities. Safety measures, including the deployment of security personnel and the establishment of temporary shelters, ensure the security and well-being of affected populations.
- **Dead Body Disposal:**
- Proper disposal of deceased individuals is essential to prevent the spread of diseases and maintain dignity. Trained personnel handle the identification,

retrieval, and disposal of bodies according to established protocols and cultural sensitivities.

- **Carcass Disposal:** In cases involving mass animal casualties, carcass disposal measures are implemented to prevent contamination and the spread of disease among livestock and wildlife. Proper disposal methods, such as burial or incineration, are carried out in accordance with environmental regulations.

These relief and rehabilitation norms provide a framework for coordinated and effective response actions during disasters. By adhering to established standards and protocols, emergency responders can ensure the timely and efficient delivery of life-saving assistance and support to affected populations, thereby minimizing the impact of disasters and facilitating recovery efforts.

12.6. Humanitarian relief and assistance

Humanitarian relief and assistance play a critical role in addressing the immediate needs of individuals and communities affected by disasters. Here's a description of key components of humanitarian relief and assistance:

- **Food:** Provision of food supplies ensures that affected populations have access to nutritionally adequate and safe food during and after a disaster. This includes distribution of ready-to-eat meals, food packets, and food vouchers based on assessed needs.
- **Drinking Water:** Access to clean and safe drinking water is essential for preventing waterborne diseases and ensuring hydration. Emergency water supply systems, distribution of bottled water, and purification methods are employed to meet this need.
- **Medicines:** Availability of essential medicines and medical supplies is critical for treating injuries, illnesses, and medical emergencies resulting from disasters. Medical teams provide first aid, treatment, and preventive care to affected individuals.
- **Trauma Care:** Specialized trauma care services are provided to individuals with serious injuries, including emergency medical treatment, surgical interventions, and rehabilitation support to aid in recovery.
- **Clothing:** Distribution of clothing and personal hygiene items helps address basic needs and promote dignity among affected populations, especially those who have lost their belongings or been displaced from their homes.
- **Shelter Management:** Establishment and management of emergency shelters provide safe and temporary accommodation for displaced individuals and families. Shelter management includes site selection, setup, maintenance, and provision of basic amenities.
- **Providing Helpline:** Helplines are established to facilitate communication between affected individuals and response agencies, enabling them to seek assistance, report emergencies, and access information about available services and resources.
- **Repairs and Restoration of Basic Amenities:** Rapid repairs and restoration of essential infrastructure, such as water supply systems, power grids, transportation networks, and communication channels, are undertaken to ensure the resumption of normalcy and facilitate recovery efforts.

- **Management of VIP Visits:** Coordination and management of visits by dignitaries, government officials, and other VIPs ensure that their presence does not disrupt ongoing relief operations and that they receive accurate briefings on the situation.
- **Maintenance of Emergency Reserves:** Private agencies and government entities maintain emergency reserves of essential supplies, including food, water, medical supplies, and equipment, to ensure readiness for rapid deployment during disasters.

By providing humanitarian relief and assistance, responders address the immediate needs of affected populations, alleviate suffering, and support the process of recovery and rebuilding in disaster-affected areas. These efforts are essential for restoring stability, resilience, and well-being in communities impacted by disasters.

Standard operation procedure for Borewell

MEASURES BEFORE BORE WELL INCIDENT

- The owner of the land/premises, before taking any steps for construction bore well/tube well must inform in writing at least 15 days in advance to the concerned authorities in the area.
- Registration of all the drilling agencies, viz., Govt./Semi Govt./Private etc. should be mandatory with the district administration or Statutory Authority wherever applicable.
- Erection of signboard at the time of construction near the well is mandatory. The following details should be included on the signboard ☹️ a) Complete address of the drilling agency at the time of construction/rehabilitation of well. (b) Complete address of the user agency/owner of the well.
- Erection of barbed wire fencing or any other suitable barrier around the well during construction.
- Construction of cement/concrete platform measuring 0.50x0.50x0.60 meter (0.30 meter above ground level and 0.30 meter below ground level) around the well casing.
- Capping of well assembly by welding steel plate or by providing a strong cap to be fixed to the casing pipe with bolts and nuts.
- In case of pump repair, the tube well should not be left uncovered.
- Filling of mud pits and channels after completion of works.
- Filling up abandoned bore wells by clay/sand/boulders/pebbles/drill cuttings etc. from bottom to ground level.
- On completion of the drilling operations at a particular location, the ground conditions are to be restored as before the start of drilling.
- District Collector should be empowered to verify that the above guidelines are being followed and proper monitoring check about the status of boreholes/tube wells are being taken care through the concerned State/Central Government agencies.
- District/Block/Village wise status of bore wells/tube wells drilled. In the rural areas monitoring of these should be done through village Sarpanch and the Executive from the Agriculture Department. In case of urban areas, the monitoring should be done through Junior Engineer and the Executive from the concerned Department of Ground

Water or Public Health or Municipal Corporation.

- If a bore well/tube well is 'Abandoned' at any stage, a certificate from the concerned department of Ground Water/Public health/Municipal Corporation/Private contractor must be obtained by these agencies.
- Information on all such data on the above are to be maintained in the District Collector/Block Development Office of the State.

MEASURES AFTER BORE WELL INCIDENT

- Secure the scene by cordoning the bore well to avoid any unwanted objects falling into the bore well and causing harm to the child and thus hamper the rescuing efforts.
- Cordon the affected area and control unnecessary movements/crowd gathering near the bore well.
- Try to stabilize the victim, if possible, with the help of rope.
- Make arrangements for supplying of oxygen to the child with the help of pipe.
- Arrangement of sufficient lights in the area for the night operation.
- Immediately contact the nearby NDRF Unit.
- As per the direction of NDRF unit, start digging earth vertically and parallel to the depth of bore well at the sufficient distance from the bore well or as directed by the NDRF.
- Keep motivating the victim by regular talking of parents or relatives.
- District medical officer should be made aware about the compartment compression syndrome and action to be taken in such cases.

Don'ts

- Don't leave the tube well/bore well uncovered after repair/daily work done.
- Do not throw any food article or pour water in the Bore well.
- Do not allow underground water seepage in bore well.
- Do not allow heavy machines to work at full power to avoid heavy vibration which may result in loosening of surrounding soils and collapse of the bore well.
- Do not allow crowd to gather around the incident site.

GUIDELINES REGARDING BORE WELL SAFETY MEASURES BY SUPREME COURT:

Safety measures/guidelines as given in the Order dated 11.02.2010 of Hon'ble Supreme Court is to be observed by all the States: -

2406) The owner of the land/premises, before taking any steps for construction bore well/tube well must inform in writing at least 15 days in advance to the concerned authorities in the area, i.e., District Collector/District Magistrate/Sarpanch of the Gram Panchayat/ Concerned officers of the Department of Ground Water/ Public Health/Municipal Corporation, as the case may be, about the construction of bore well/tube well.

2406) Registration of all the drilling agencies, viz., Govt./Semi Govt./Private etc. should be mandatory with the district administration.

2406) Erection of signboard at the time of construction near the well with the following

details ☹️ a) Complete address of the drilling agency at the time of construction/
rehabilitation of well. (b) Complete address of the user agency/owner of the well.

2406) Erection of barbed wire fencing or any other suitable barrier around the well during construction.

2406) Construction of cement/concrete platform measuring 0.50x0.50x0.60 meter (0.30 meter above ground level and 0.30 meter below ground level) around the well casing.

vi) Capping of well assembly by welding steel plate or by providing a strong cap to be fixed to the casing pipe with bolts and nuts.

vii) In case of pump repair, the tube well should not be left uncovered.

viii) Filling of mud pits and channels after completion of works.

ix) Filling up abandoned Bore wells by clay/sand/boulders/pebbles/drill cuttings etc. from bottom to ground level.

x) On completion of the drilling operations at a particular location, the ground conditions are to be restored as before the start of drilling.

xi) District Collector should be empowered to verify that the above guidelines are being followed and proper monitoring check about the status of boreholes/tube-wells are being taken care through the concerned State/Central Government agencies.

xii) District/Block/Village wise status of bore wells/tube-wells drilled viz. No. of wells in use, No. of abandoned bore wells/tube wells found open, No. of abandoned Bore wells/tube wells properly filled up to ground level and balance number of abandoned Bore wells/tube-wells to be filled up to ground level is to be maintained at District Level. In rural areas, the monitoring of the above is to be done through village Sarpanch and the Executive from the Agriculture Department.

xiii) If a Bore well/tube-well is 'Abandoned' at any stage, a certificate from the concerned department of Ground Water/Public health/Municipal Corporation/Private contractor etc. must be obtained by the aforesaid agencies that the 'Abandoned' Bore well/tubewell is properly filled up-to the ground level. Random inspection of the abandoned wells is also to be done by the Executive of the concern agency/department. Information on all such data on the above are to be maintained in the District Collector/Block Development Office of the State

ANEXURES AND MAPS

ANNEXURE – 1

DISTRICT PROFILE

History:

The Sultan Ahmed I (the first) established Himmatnagar in 1426 AD to put a control on the political Activities of the Rao of Idar. The sultan loved the place so much that it was renamed as Ahmednagar from the name of the sultan.

Thereafter, in 1848 AD, it was again handed over to the kingdom of Idar and got re-christened to its current name Himmatnagar, derived from Himmatsinghji, the ruler of the state in those times. Idar is a beautifully established town located at the foothills of the 500 ft high rocky hill on which the Fort of Idargadh lies. The construction of the fort was so strong as per those times that its strength has become proverbial. To set an objective to achieve an impossible task is addressed as ‘to conquer the fort of Idargadh’. The renowned Chinese traveler Hyuen Sang has noted the place called Vadali, in his travelogues. It is called Ochalee in Chinese.

The Pahiya Rajputs are believed to have re-established Idar. These rajputs have ruled over Idar by operating from Chittor. During the 12th century, the king of Idar joined hands with king Pruthviraj Chauhan to fight against the Muslim rulers and eventually got killed in 1193 during the battle of Thanesar, a battle that proved to be a fatal loss for the Hindus. Thereafter Idar went into the hands of Hathi Sord Koli after whose death his son Shamaliyo came into the throne. The Rathod king Sonangji killed Shamaliyo and established his dynasty in Idar. Thereafter the Rathod dynasty ruled Idar for many decades. Vijaynagar was the second most important kingdom amongst the merged kingdoms. Most of the people here belonged to the backward communities. The entire area is covered with mountains and forests. The ancient temples of Shiv, Mahavir and Sun are located near Abhapur that lies about 8 km from Vijaynagar. While on his campaign to attack Patan, Alf Khan, the brother of Allaudin Khilji, destroyed the Sharaneshwar Mahadev temple constructed in 1100 AD. The temple has beautiful sculptural designs on all of its four sides. The archeological department has taken good measures for its maintenance.

The several agencies like Ambiyara, Mohanpur, Malpur, Bayad etc. are integrated with this district. In this way, the current district of Sabarkantha comprises of the 29 different united and merged kingdoms. The Prantij and the Modasa talukas that were once a part of Ahmedabad district

are also merged in this district. During the major division of the Mumbai State in 1956, several subdivisions like Vidarbha, Marathwada, Saurashtra and Kutch were formed. When the bilingual state was divided into two states, the Sabarkantha district also came into its existence just like the Ahmedabad district.

During 1st May 1960, the State of Bombay was divided and the two separate states of Gujarat and Maharashtra came into existence. On this date, Sabarkantha also came into existence as a part of the state.

Area & Administration:

Sabarkantha District is situated in North Eastern part of Gujarat State. The administrative headquarters of the district is Himatnagar, about 80 km from Ahmedabad.

Sabarkantha District is surrounded by Rajasthan state to the northeast, Banaskantha and Mehsana districts to the west, Gandhinagar to the south and Aravalli District to the South – East.

Sabarmati River flows on western border of Sabarkantha district. The district is situated between 23.03 N latitude and 24.30 N latitude & 74.43 E longitudes to 73.39 E longitudes. The “Tropic of Cancer” passes through Sabarkantha district. The total area of the district is 5390 Sq.km. North – Eastern part of the district is covered by the rows of “Aravalli” hills. Sabarmati, Meshwo, Vatrak, Hathmati, Mazum, Vaidi, Harnav, Khari are main rivers in the district.

The district has a population of 14,73,673 as per last census 2011. The district is divided in 4 Revenue Sub-Divisions & 8 Talukas. There are 6 Municipalities in the District. Poshina, Khedbrahma & Vijaynagar Talukas are mainly tribal Talukas. These Talukas are hilly and forest areas. Remaining Talukas are mainly flat areas. Patel's & Darbar's are major groups of communities in the district. However Dungari garasiya is the dominant community among tribal's.

3.2 Administrative Details

Distance between District Headquarter and State Headquarter (km) : 60 km.

Distance to Nearest Districts (km):

(1) Mehsana 55 km. (2) Gandhinagar 60 km. (3) Aravalli 55 km. (4) Banaskantha 60 km.

The district consists of 8 Talukas and 6 Nagar Seva Sadan (Municipalities) through which the

administrative function has been operated. There is a separate department specific administrative tructure existed and functioning accordingly.



Map: 1 : District Map



Demography:

In 2011, Sabarkantha had population of 2,428,589 of which male and female were 1,244,231 and 1,184,358 respectively. In 2001 census, Sabarkantha had a population of 2,082,531 of which males were 1,069,554 and remaining 1,012,977 were females. Sabarkantha District population constituted 4.02 percent of total Maharashtra population. In 2001 census, this figure for Sabarkantha District was at 4.11 percent of Maharashtra population.

There was change of 16.62 percent in the population compared to population as per 2001. In the previous census of India 2001, Sabarkantha District recorded increase of 18.25 percent to its population compared to 1991.

Sabarkantha Literacy Rate

Average literacy rate of Sabarkantha in 2011 were 75.79 compared to 75.79 of 2001. If things are looked out at gender wise, male and female literacy were 86.44 and 64.69 respectively. For 2001 census, same figures stood at 80.42 and 52.30 in Sabarkantha District. Total literate in Sabarkantha District were 1,578,734 of which male and female were 918,625 and 660,109 respectively. In 2001, Sabarkantha District had 1,171,555 in its district.

Sabarkantha Sex Ratio

With regards to Sex Ratio in Sabarkantha, it stood at 952 per 1000 male compared to 2001 census figure of 947. The average national sex ratio in India is 940 as per latest reports of Census 2011 Directorate. In 2011 census, child sex ratio is 903 girls per 1000 boys compared to figure of 879 girls per 1000 boys of 2001 census data.

Occupational Structure:

Sabarkantha District Urban/Rural 2011

Out of the total Sabarkantha population for 2011 census, 14.98 percent lives in urban regions of district. In total 363,720 people lives in urban areas of which males are 188,090 and females are 175,630. Sex Ratio in urban region of Sabarkantha district is 934 as per 2011 census data. Similarly child sex ratio in Sabarkantha district was 860 in 2011 census. Child population (0-6) in urban region was 43,623 of which males and females were 23,455 and 20,168. This child population figure of Sabarkantha district is 12.47 % of total urban population. Average literacy rate in Sabarkantha district as per census 2011 is 84.58 % of which males and females are 91.18

% and 77.59 % literates respectively. In actual number 270,745 people are literate in urban region of which males and females are 150,120 and 120,625 respectively.

Climate:

The Climate of District can be regarded as one of the extreme kinds with hot summers & cold winters and witnessing of very good monsoon.

Temperature:

Sabarkantha district has a semi-arid climate with annual maximum temperatures ranging from 27.7°C in January to 39.7°C in May, and minimum temperatures ranging from 11.9°C in January to 25.6°C in May.

Rainfall:

The average rainfall in the district is 592-1091 mm, but the monsoon is erratic and long dry spells are common, even during the rainy season. The maximum humidity ranges from 98.2%, while the minimum range is from 28–83.5%.

Sabarkantha district receives much of its rainfall from the south-west monsoon during the period between June & October; its maximum intensity being in the month of July & August. Total rainy days ranges from 30 to 40 days/ year. Long term annual rainfall data of 7 rain-gauge stations of the district

In Last 10 Years, Sabarkantha district rain fall data is as under:

Table:4

No	Taluka	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1	Himatnagar	740	1318	902	1180	797	560	1200	729	1132	1118
2	Idar	865	1290	763	1085	1072	685	1365	880	990	1640
3	Khedbrhma	726	1156	502	1104	965	553	1122	893	812	1730
4	Poshina	676	1140	503	1232	938	845	1186	1007	790	9033
5	Prantij	452	836	415	992	1034	612	729	1013	1340	9084
6	Talod	613	811	418	972	1085	598	701	1065	1255	1228
7	Vadali	563	1073	556	923	870	669	1263	728	831	1687
8	Vijaynagar	789	917	673	1085	986	794	1161	822	884	1261
	Avg.	678	1068	592	1072	968	665	1091	892	1004	1322

Soil:

Soil types	% Area in percentage
Black	70%
Goradu	20%
Sandy	10%

Crops:

Major kharif crop	Major rabi crop	A major summer crop
Cotton, Tuwer and Mug	Sorghum and wheat	Millets, Cotton, Raido

Infrastructure details

Education:

School complex should be the safest place for children. SMCs are constituted under the Right to Education Act 2008 in the district. Make a safety plan in every school under its coordination. To include details of such school level plan in DDMP to make schools safe and empower students and teachers under such plan.

- Assessing the risk, vulnerability and capacities of school buildings.
- Identify helpful organizations around the school that can help in a disaster.
- Preparing training, mock drill topics and schedule for school safety.
- Prepare a plan for safe evacuation of children in an emergency.
- To lay down work methods and measures for complete safety of fire, laboratory etc.
- Prepare a list of important telephone numbers, contact people and addresses of Service providers at the school level.
- Collect and store safety equipment, machines, medicines, first aid, clothes etc.
- so that they can be used during disaster

Schools:

Total Primary Schools-

There is total 1161 primary schools run by District Panchayat and 20 other schools are under Tribal Department.

Secondary School –

Total 343 Secondary schools are run in Sabarkanatha

Health Facilities:

The district has approx more than 41 major private Hospitals, 48 PHCs and 12 CHCs in the District to cater the people. Major hospitals are Civil Hospital, located in area which can be viewed in Annexures.

Table:6: Details of CHC & PHC:

No	Health institutions	Total
1	GMRES Medical College and District Hospital, Himmatnagar	1
2	Sub District Hospital	2
3	Community Health Centre	12
4	Primary Health Centre	48
5	24x7 Primary Health Centre	10
6	Sub Center	281
7	Mobile Health Unit	1
8	Urban Primary Health Centre	4

Annexure - 2

Interim Guidance & Risk and Vulnerability Ranking

(Adapted from Technical Note No.1.4.1.-Probability, Impact and Risk Ranking Disaster Management Planning Workshop module (pages 20-21), prepared by Jeff Klenk, Interworks, for the ADB-funded CBERR Project.)

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

Identify the Hazards of Concern:

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

Hazard	Probability	Impact	Vulnerability Rating (Probability Times Impact)	Specific Locations and populations of concern.
Earthquake (resulting in damage)	1	4	4	Whole District
Flood	3	2	6	Lowlines areas
Industrial Accident	3	3	9	Modrate
Drought	3	3	9	Whole District
Heat wave	3	2	6	Whole District
Hail storm	1	1	1	
Landslides	1	1	1	

Road/ rail /air accident	1	1	1	National Highway 8 and Hmt To Udaipur Rail Line, Hmt To Khedbrhama Rail Line
Building collapse	1	2	2	
Human Disease (epidemics)	1	4	4	Modrate
Food poisoning	1	1	1	
Animal disease(epidemics)	1	1	1	
Terrorism (consequences)	1	1	1	
Critical Infrastructure Failure (e.g.extended power outage)	1	3	3	

Step2: Assign the Probability Ratings:

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

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

Assign the Impact Ratings:

Assess the potential magnitude or impact of each hazard and assign each an “ImpactLevel” as in the following table. Enter the impact score for each hazard in the table in Step 1.

Impact	Scope	Description
Catastrophic	5	Massive insecurity, substantial loss of life likely. Large and generalized assistance urgently needed for large segments of population. Additional management, administrative, and technical expertise urgently needed. Large volumes of materials inputs needed.
Major	4	Security threatened for large segments of population; substantial impacts on vulnerable groups likely. Some loss of life likely. Life-saving programs likely needed to handle impact of emergency situation. Large volumes of material inputs and additional administrative staff and technical expertise likely to be needed.
Moderate	3	Security is threatened for potential target groups, some interventions may be needed, particularly for groups who likely face increase in vulnerability. Organization can likely respond with existing country/ regional management structures.
Minor	2	Momentary insecurity local groups able to respond adequately to those in need. Some technical assistance by organization may be helpful to local respondents, although not urgently needed.
Insignificant	1	Little or no significant change in conditions, no expected loss of life, injuries or significant loss of property for usual target groups as the result of the hazard Normal operations continue.

Assign the “Vulnerability” Ranking:

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

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

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

Note that the rating process presumes that:

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

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

Identify Areas with Highest Vulnerability:

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

Annexure - 3

River and Dams

The main rivers in Sabarkantha district are Sabarmati, Hathmati, Harnao, Guhai and Khari. Sabarkantha district has Guhai, Harnao-1 and Khedwa, Jawanpura and Gorthia barrage projects. As part of warning system in case of flood storm or other emergency situation, wireless system at closed site of Guhai, Harnao-1 & 2, Indrasi, and Hathmati, Khedwa, Jawanpura Gorthia schemes and Idargarh (repeater station) as well as floodcell, Sinchai Bhawan, Himmatnagar are owned by this circle Is performed. Messages received from floodcell at Gandhinagar are forwarded to floodcell at Himmatnagar.

Table:5:

Sheet -5/1

Guhai Reservoir Scheme, Dist. Sabarkantha

Himmatnagar Irrigation Scheme Circle, Himmatnagar. A table showing the details of the Villages affected by the quantity of water released from the schemes

Name of the Scheme :- Guhai Reservoir Scheme

Cumecs	District	Villages Signal		
Cusecs	Taluko	White Signal	Blue Signal	Red Signal
2831.65	Sabarkantha			
100000	Himatnagar	Khandhol		
3539.57	Sabarkantha	Bholano math	Khandhol	
125000	Himatnagar	Rampur		
		Karanpur		
3964.32	Sabarkantha	Kump	Bholano math	Khandhol
142000	Himatnagar		Rampur	
			Karanpur	
5380.15	Sabarkantha	Khanusa	Kump	Bholano math
190000	Himatnagar	Kaniyol		Rampur
		Torniya Kampa		Karanpur
		Demoi		
5493.41	Sabarkantha		Khanusa	Kump
194000	Himatnagar		Kaniyol	
			Torniya Kampa	
			Demoi	
5493.41 And Above	Sabarkantha			Khanusa
194000 And Above	Himatnagar			Kaniyol
				Torniya Kampa
				Demoi

Sheet 5/2

Harnav-2 Reservoir Scheme, Dist. Sabarkantha Table showing the details of the villages affected by the quantity of water released from the owned schemes

Name of the Scheme:- Harnav-2 Reservoir Scheme

Cumecs	District	Villages Signal		
Cusecs	Taluko	White Signal	Blue Signal	Red Signal
566.33	Sabarkantha			
20000	Khedbrhama	Shilvaad		
1132.66	Sabarkantha			
40000	Khedbrhama	Vagha kampa	shilvaad	
		Sadhara kampa		
1699	Sabarkantha			
60000	Khedbrhama		Vagha kampa	shilvaad
			Sadhara kampa	
	Sabarkantha			
	Vijaynagar	Antarsumba		
		Matoli		
		Bandhana		
		Virapur		
		Antari		
2123.74	Sabarkantha			Vagha kampa
75000	Khedbrhama			Sadhara kampa
	Vijaynagar	Abhapur	Antarsumba	
			Matoli	
			Bandhana	
			Virapur	
			Antari	
2406.9	Sabarkantha		Abhapur	Antarsumba
85000	vijaynagar			Matoli
				Bandhana
				Virapur
				Antari

Sheet -5/3**Jawanpura Reservoir Scheme, Di. Sabarkantha**

Table showing the details of the villages affected by
the quantity of water released from the owned schemes

Name of the Scheme :- Jawanpura Reservoir Scheme

Taluko : Talod		Taluko : Dahegam	
No	Village Name	No	Village Name
1	Badodara	1	Vadol
2	Panapur	2	baval ni muvadi
3	Nana	3	Masung
4	Simliya	4	khakhra
5	Gadhval		
6	lala ni muvadi		
7	Mahekal		

Sheet -5/4**Khedwa Reservoir Scheme, Di. Sabarkantha**

Table showing the details of the villages affected by the quantity of water released from the Hasta schemes

Name of the Scheme :- Khedwa Jalashaya Yojana

Taluka:- Khedbrahma	
No	Village Name
1	Basola
2	Nava nana
3	Bhutiya
4	Paroya
5	Rodhara
6	Jagannathpura
7	Sitol
8	Bordi
9	Vartol

Sheet -5/5

Gorthia Reservoir Scheme, Di. Sabarkantha

A table showing the details of the villages affected by the quantity of water released from the schemes

Name of the Scheme:- Gorthia Reservoir Scheme, Talod

Taluko : Talod			
No	Village Name	No	Village Name
1	Mohanpur	8	Surpur
2	Varvada	9	Vastaji na movada
3	Takar	10	Jethaji na movada
4	Mota Chekhala	11	Antroli
5	Ratanpur	12	Tajpur
6	Lavari	13	Harsol
7	Kathvada		

Sheet-5/6

Hathmati (Indrasi) Reservoir Scheme,G. Aravalli

A table showing the details of the villages affected by the quantity of water released from the schemes

Name of the Scheme:- Hathmati (Indrasi) Reservoir Scheme

Ungated scheme

Taluko :- Himmatnagar.			
No	Village Name	No	Village Name
1	Fatehpura	13	Chandrani
2	Khaprerta	14	Khed
3	Medirimba	15	Champlanar
4	Mankadi	16	Mordungra
5	Motipura	17	Ambavada
6	Kadodari	18	Jambudi
7	Vasna (Chandrani)	19	Balavantpura
8	kesharpura	20	kump
9	Amrapur	21	Surpur
10	Purthvipura	22	Demai
11	Himatnagar	23	Pratappura
12	Rajpura (Nava)	24	Balochpur

Sheet-6
Detail of road connecting dam site

Sabarkantha District

No	Detail of the dam	Road Detail/Status
1	Guhai Reservoir Scheme	Tejpura, Jamla District Panchayat Owned Jamla Kaniyol Dam District Panchayat Asphalt Road 10 km. Dam site is 3 km from Kaniyol Rampur Kaniyol owned by District Panchayat. Asphalt Road
2	Harnav – 2 Reservoir Scheme	Eder, Intersuba, Abhapur, Vijayanagar State Highway Vijaynagar Eder State Highway Approach Asphalt Road Zilla Panchayat Owned 9 KM.
3	Jawanpura Recharge Scheme	4.50 km from Salatpur Chowk to Jawanpura Road near Harsol on Ahmedabad Highway. 15 KM from Asphalt Road, Talod. Asphalt road owned by Irrigation Department
4	Khedwa Reservoir Scheme	From Khedbrahma to Vartol to Khedwa Site Asphalt Road 15 KM.
5	Gorthia Reservoir Scheme	From Ahmedabad-Modasa Highway to Harsol to Gambhoi Road to Mohanpur Patia to Gorthia Dam

Sheet-7
A sheet detailing the villages along the river

N o.	Taluko	Rivar	detailing the villages along the river	No. of Villages
1	Himatnagar	Sabarmati	Mahadevpura (Khedawada), Khedawada, Kadoli, Pethapur, Dedhrota, Derol, Saibapur, Saroli,	8
		Hathmati	Nakhi, Khapareta, Meditimba, Naroda, Fatepur, Mankadi, Siholi, Kadodari, Jambudi, Khandhol, Vasana (Kump), Rampur (Go), Nani Demai, Nava, Dhandha, Balwantpura, Parbada, Himmatnagar, Katwad, Tajpuri, Rajpur (Nava)), Amrapur	22
		Debhol	Sachodar, Pimpodar	2
2	Prantij	Hathmati	Ged, Waghpur, Morwad, Moyd, Katwad, Sampad,	6
		Sabarmati	Waghpur, Ged, Sadolia, Galesara, Poyda, Sitwada, Indrajpur, Oran, Morwad, Sampad,	10
		Khari	Chhadarada, Nikodia, Asaroda, Mauchha, Waghrota, Mahadevpura, Morali, Jainpur, Lalpur, Baini Muwadi (Jainpur), Mavani Muwadi, Dalani Muwadi, Badarni Muwadi, Punadara, Padhayda, Tajpur	16
3	Talod	Kanjan	Charwanta, Warwada, Mohanpur	3
		Khari	Mudhasana	1
		Meshvo	Harsol, Aantrolivas dolaji, Aantrolivas punjaji, Sultanpur, Gadhvad, Badodara	6
4	Khedbrahma	Kausambi	Bordi, Valran, Basol, Bhutiya, Paroya, Rodhara, Jagnathpura, Shitol, Navanana, Khedva, Vartol, Padhara	12
		Sabarmati	Tuvar, Panthal, Ratanpur, Kheroj, Mohudi, Ambaigadha, Changod, Dholi, Vikharan, Kaleka, Gadhada (Sha), Navamota, Pathora, Dan mahudi, Begod.	15
		Harnav	Khedbrahma, Nichi Dhanal, Vasna, Galodiya, Jagmer, Padradi, Rudramala, Derol)va(, Paroya, Jagnathpura, Vagheshvari, Kalol, Valran, Shilvad, Laxmipura.	15
5	Vijaynagar	Harnav	Bandhna, Abhapur, Matali, Dholivav, Virpur, Antarsuba, Androkha, Bhupatgadh, Kundla.	9
6	Poshina	Sei	Anjani, Kali kankar, Ziznat, Ajas, Salera, Valsadi, Kathiya, Ganchhali, Khandhora, Kajhavas, Dantral,	11
		Sabarmati	Gunbhankhari, Delvada) Chho), Kukdi, Laxmanpura, Ganer, Demati, Lambadiya, Dantad, Tebda, Kharaniya, Choliya, Golvada,	12
		Panari	Bara, Koland, Chandrana, Poshina	4
7	Vadali	Sabarmati	Mahor, Surajpura, Jalampura, Fudeda, Rampur)	5
8	Idar	Sabarmati	Chandap, Golvada, Falasan, Sudrasana, Sundarpur, Bhavnagar, Eklara, Aarsodiya (Sapteshvar), Madhva, Patliya,	10
		Gaunvav	Ankala, Kukdiya, Badoli, Sherpur, Punjpur, Kadiyadra, Bhadresar, Budhiya, Bhanpur	9
		Bheska	Tasiya, Zinzava, Kanpur, Ganthiyol, Chitroda, Pratapgadh (Sa)	6

Annexure - 4

List of Codes/ Guidelines for Safety of Building/Structures

As these codes and guidelines are being updated from time to time by different Institutions/ organizations therefore the latest updated version shall be referred at the time of conceiving a project. List has been attempted which may not be complete.

I. General Structural Safety

1. BIS National Building Code 2005
2. IS: 456:2000 "Code of Practice for Plain and Reinforced Concrete
3. IS: 800-1984 "Code of Practice for General construction in Steel
4. IS: 801-1975 "Code of Practice for Use of Cold Formed Light Gauge Steel Structural Members in General Building Construction
5. IS 875 (Part 2) : 1987 Design Loads (other than earthquake) for buildings and structures part 2
Imposed Loads
6. IS 875 (Part 4) : 1987 Design Loads (other than earthquake) for buildings and structures part 4 Snow
Loads
7. IS 875 (Part 5) : 1987 Design Loads (other than earthquake) for buildings and structures part 5
special load and load combination
8. IS: 883:1966 "Code of Practice for Design of Structural Timber in Buildings
9. IS: 1904:1987 "Code of Practice for Structural Safety of Buildings: Foundation's
10. IS:1905:1987 "Code of Practice for Structural Safety of Buildings: Masonry Walls
11. IS 2911 (Part 1): Section 1: 1979 "Code of Practice for Design and Construction of Pile Foundation
Section 1
Part 1: Section 2 Based Cast-in-situ Piles
Part 1: Section 3 Driven Precast Concrete Piles
Part 1: Section 4 Based precast Concrete Piles
Part 2: Timber Piles
Part 3: Under Reamed Piles
Part 4: Load Test on Piles

II. Protection from Cyclones / Windstorms

1. IS 875 (3) -1987 "Code of Practice for Design Loads (Other than Earthquake) for Buildings and Structures, Part 3, Wind Loads"
2. IS: 15498 - 2004 "Guidelines for construction of cyclone shelters."
3. IS: 15498 - 2004 "Guidelines for improving the cyclonic resistance of low-rise houses & other building/structures.
4. Guidelines (Based on IS 875 (3)-1987) for improving the Cyclone Resistance of Low-rise houses and other building.

III. Earthquake Protection

1. IS: 1893-2002 "Criteria for Earthquake Resistant Design of Structures (Fifth Revision)"
2. IS: 13920-1993 "Ductile Detailing of Reinforced Concrete Structures subjected to Seismic Forces - Code Practice"

3. IS:4326-1993 "Earthquake Resistant Design and Construction of Buildings - Code of Practice (Second Revision)"
4. IS:13828-1993 "Improving Earthquake Resistance of Low Strength Masonry Buildings - Guidelines"
5. IS:13827-1993 "Improving Earthquake Resistance of Earthen Buildings -Guidelines"
6. IS:13935-1993 "Repair and Seismic Strengthening of Buildings - Guidelines"

IV. Flood Management / River Valley Projects

1. IS: 4189-1985 "Guide for preparation of project report for river valley projects."
2. IS: 4410 (Part 3): 1988 "Glossary of terms relating to river valley project part 3 River and river training."
3. IS: 4410 (Part 11): Sec 5-1977 "Glossary of terms relation to river valley projects: Part 11 Hydrology Section 5 Floods."
4. IS: 4410 (Part 21): 1987 "Glossary of terms relating to river valley projects: Part 21 Flood control."
5. IS:11532-1995 "Construction and maintenance of river embankments (levees) -Guidelines"
6. IS: 12094 - 2000 "Guidelines for planning and Design of River Embankments (Levees)"
7. IS: 14262 - 1995 "Planning and design of revetments - Guidelines".
8. IS: 5477 (Part 4) : 1971 "Methods for Fixing the capacities or reservoirs: part 4 Flood storage"
9. IS: 7323 - 1994 " Operation of Reservoirs - Guidelines".
10. IS: 8408 - 1994 "Planning and design of groynes in alluvial river - Guidelines".
11. IS: 14815 - 2000 "Design Flood for River Diversion Works - Guidelines".

V. Landslide Hazard

1. IS: 14458 (Part 1): 1998 Guidelines for retaining wall for hill area: Part 1 Selection of type of wall.
2. IS: 14458 (Part 2): 1997 Guidelines for retaining wall for hill area: Part 2 Design of retaining? Breast walls.
3. IS: 14458 (Part 3): 1998 Guidelines for retaining wall for hill area: Part 3 Construction of dry stone walls.
4. IS: 14496 (Part 2): 1998 Guidelines for preparation of landslide - Hazard Zonation maps in mountainous terrains: Part 2 Macro-Zonation.
5. IS: 14680: 1999 Guidelines for land slide control.
6. IS: 14948: Code of practice for Reinforcement of Rock Slopes with plain edge of failure
7. BIS 12023: Code of practice for Field Monitoring and Movement of Structures using Tape Extensometer.
8. BIS: 14804: Guidelines for Sitting, Designing and selection of materials for Residential Building in Hilly Areas.

VI. For Protection of Saline Embankments and Coastal Canals

1. IS: 8835 - 1978 "Feasibility study and preparation of preliminary project report".
2. IS: 10635 - 1993 (reaffirmed 2003) "Freeboard requirements in embankments and dams".
3. IS: 12169 - 1987 - "Criteria for design of small embankment dams."
4. IS: 8835- 1978: Feasibility study, preparation of
5. IS: 12094 - 1978: Preliminary Project Report
6. IS: 10635 - 1993 (reaffirmed 2003): Freeboard requirements in embankments in embankments and dams.

7. IS: 11532 - 1995 (reaffirmed 2005): Construction and maintenance of river embankments
8. IS: 12094 - 2000 (reaffirmed 2005): Planning and design of river embankment
9. IS: 12169 - 1987: Criteria for design of small embankments dams.

VII. Railway Codes & Manuals - RDSO Publications

1. RBF - 20: "Estimation of design discharge based on regional flood frequency approach for sub-zones 3(a), 3(b), 3(c), 3(e)".
2. RBF - 22: "50 year 24 hour set of is pluviat maps of India maps of short duration ratios".
3. RBF - 23: "Validation of flood estimation report No.UTN-7-1983 for sub-zone-3 (f)".
4. RBF - 24: "Validation of flood estimation report No.3/1980 for sub-zone-3 (f)".
5. RBF - 25: "Estimation of design discharge based on regional flood frequency approach for sub-zone-3 (f)".
6. RBF - 26: "Validation of flood estimation report No.UGP-9-1984 for sub-zone-1 (e)".
7. RBF - 27: "Validation of design discharge based on regional flood frequency approach for sub-zone-3 (e)".
8. RBF - 28: "Estimation of design discharge based on regional flood frequency approach for sub-zone-3 (i)".
9. RBF - 29: "Estimation of design discharge based on regional flood frequency approach of sub-zone-3 (b)".
10. RBF - 32: "Validation of flood estimation report no.c/16/1988 subzone - 1 (b) (chambal basin)".
11. RBF - 33: "Estimation of design discharge based on regional flood frequency approach for sub-zone-1 (d) (sone basin)".
12. RBF - 34: "Validation of flood estimation report no.S/15/1987 sub-zone-1 (d) (sone basin)".
13. GE - 1: "Guidelines - Erosion control on slopes of banks and cuttings".
- GE - 6: "Guidelines for earthwork in conversion projects".

VIII. Indian Road Congress (IRC) Codes/Manuals

1. IRC: 5 -1998 (Seventh Revision) - "Standard specifications and codes of practice for Road, Bridges Section 1 - General features of Design".
2. IRC: 10-1961 - "Recommended Practice for Borrow pits for Road Embankments constructed by Manual Operation".
3. IRC: 34-1970 - "Recommendations for Road Construction in Waterlogged Area".
4. IRC: 36-1970 - "Recommendations Practice for the construction of Earth Embankments for Road Works".
5. IRC: 45-1972 - "Recommendations for Estimating the Resistance of Soil Below the Maximum Scour Level in the Design of well foundations of Bridges".
6. IRC: 52-2001 (Second Revision) - "Recommendations about the Alignment Survey and Geometric Design of Hill Roads."
7. IRC: 56-1974 - "Recommendations Practice for treatment of Embankment Slopes for Erosion Control."
8. IRC: 75-1979 - "Guidelines for the Design of High Embankments."
9. IRC: 78-2000 (Second Revision) - "Standard specifications and Code of practice for road, bridges, section VII - Foundations and substructure.
10. IRC: 89-1997 (First Revision) - "Guidelines for Design and Construction of River Training and Control Works for Road Bridges".

11. IRC: 104-1988 - "Guidelines for Environmental Impact Assessment of Highway Projects".
 12. IRC: SP: 13-2004 (First Revision) - "Guidelines for the Design of Small Bridges and Culverts."
 13. IRC: SP: 35-1990 - "Guidelines for Inspection and Maintenance of Bridges".
 14. IRC: SP: 42-1994 - "Guidelines on Road Drainage".
 15. IRC: SP: 50-1999 - "Guidelines of Urban Drainage".
 16. IRC: SP: 54 -2000 - " Project preparation Manual for Bridges".
 17. IRC: 6 - 2000 - "Standard specifications and code of practice for road bridges - section II Loads & Stresses".
 18. IRC: SP: 57 -2001 - "Guidelines for quality systems for road construction."
 19. IRC: 28 - 1967 - "Recommendation of road construction in waterlogged areas".
 20. IRC: SP: 26 1984 - "Project preparation manual for bridges".
 21. IRC: 87 - 1984 - "Guidelines for design and erection."
 22. IRC: 21 - 2000 - "Standard specification and codes for roads and bridges."
 23. IRC: SP: 20 - 2002 - "Rural Roads."
 24. MORT & H Pocketbook for Highway Engineers, 2002 (Second Revision)
- IRC: SP33: 1989 Guidelines on supplemental Measures for Design, Detailing & Durability of Important Bridge Structures.

Annexure - 5

Standard of Emergency Relief kit

1. Immediate Family Relief Kit (For initial 1-2 days)

- a. Packaged drinking water
- b. Roasted peanuts/ roasted gram (*chana*)
- c. Salt, sugar
- d. Local snacks- *thepla*, *khakhra*, flattened rice, *sukhi puri*, *sev* (dry snacks)
- e. Glucose biscuits
- f. Energy drink (Glucon-D/Electrolyte)

2. Family Ration Kit (1 Month)

Items	Description
Non-Perishable Food Items	• Milk (Powdered or canned) • Sugar- 1 kg • Salt- 1 kg • Tea leaves- 500gm • Jaggery (1 kg) • Local snacks- peanuts, <i>chana</i>, <i>khakhra</i>, flattened rice, etc • Dry fruits • Rice- 15 kg • Green Moong Dal- 2 kg • Edible Oil- 2 kg • Spices- Red Chilli Powder (100 gm), Coriander Powder (100 gm), Turmeric Powder (100 gm)
Cooking Set and Associated Items	• Bowl -5 (1 L, stainless steel) • Plates -5(deep, stainless steel, diameter 22 cm, capacity 0.75 L) • Cooking pot- 1 (7 L, stainless steel, diameter 24 cm, with handles) • Cup- 5(stainless steel, with handle, 300 ml) • Knife -1 (stainless steel) • Serving Spoons-2 (stainless steel) • Spoons -5 (stainless steel) • Scrubber pad -1 (for cleaning dishes) • Soap- 2 • Plastic Bucket-1 • Plastic tumbler 1

3. Household Kit

Items	Description
Male Clothes	2
Female Clothes	4
Children Clothes	6
Blanket Cotton	1-2
Blanket Woolen	1
Mosquito Net	1-2
Tarpaulin White (4 x6 m)	1-2
Candle Packet	5
Match Box	5
Torch and Cell	1
Washing Powder	1kg
Bathing Soap	3
Detergent Soap	4
Toothpaste	2 tubes (200gm)
Toothbrush	5
Sleepers	5 pair
Sanitary Napkins	3 packets
Blankets/ Bed sheets	3 (Depending on weather)
Tarpouline Sheets	2 (12'*8')

Annexure - 6

Resources with District

Information on tools available with municipalities

N o	Name of Municipality	Number of available										
		Tractor	Jeep	Water Tanker	Lodar	Road Loadr	City Bus	Ambulance	Fire Fighter	Vaccum Tankaer	D Watering Pump	Water Broser
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Himatnagar	18	0	2	1	1	4	2	3	1	1	1
2	Idar	6	1	2	2	0	0	1	2	1	1	1
3	Prantij	3	1	1	3	0	0	1	1	0	0	1
4	Talod	4	0	4	1	0	0	1	1	1	1	1
5	Khedbrhma	4	0	1	1	0	0	1	1	1	1	1
6	Vadali	2	0	1	1	0	0	0	1	1	1	0
TOTAL		22	2	8	3	1	5	2	8	4	0	7

Information on tools available with R&B State Office

No.	List	No.
1	Dumper 16TN	GJ 09 GA 0074
2	Dumper 16 TN	GJ 09 GA 0404
3	TATA Tiper	GJ 09 GA 0577
4	Leylund HEYVA	GJ 09 GA 0590
5	LeyLund HEYA	GJ 09 GA 0798
6	JCB	GJ 09 GA 0780

S.N	Machinery Details	Machinery Number	Machinery Department
1	Bolero Jeep	GJ 18 GB 3294	Roads and Building Department Himatnagar
		GJ 09 GA 0515	Roads and Building Sub-Division, Khedbrahma
		GJ 09 GA 0455	Roads and Building Sub-Division, Himatnagar
		GJ 09 GA 0634	Roads and Building Sub-Division, idar
2	Tata Hiwa	GJ 09 GA 0074	Roads and Building Sub-Division, Khedbrahma
		GJ 09 GA 0404	Roads and Building Sub-Division, Khedbrahma
		GJ 09 GA 0577	Roads and Building Sub-Division, Khedbrahma
3	Ashok Leylan	GJ 09 GA 0544	Roads and Building Sub-Division, Himatnagar
		GJ 09 GA 0590	Roads and Building Sub-Division, Himatnagar
		GJ 09 GA 0798	Roads and Building Sub-Division, Himatnagar
		GJ 09 GA 0980	Roads and Building Sub-Division, Himatnagar
4	Tata Sprayer	GJ 18 GA 3291	Roads and Building Sub-Division, Himatnagar
5	Tractor	GJ 09 GA 0707	Roads and Building Sub-Division, Khedbrahma
		GJ 09 GA 0728	Roads and Building Sub-Division, Himatnagar
		GJ 18 GB 9003	Roads and Building Sub-Division, Himatnagar
6	Loader	GJ 09 GA 0529	Roads and Building Sub-Division, Himatnagar
		GJ 09 GA 0780	Roads and Building Sub-Division, Himatnagar

7	Vibrator	GJ 09 GA 0361	Roads and Building Sub-Division, Himatnagar
		GJ 09 GA 0679	Roads and Building Sub-Division, Himatnagar
8	Paver	GJ 09 GA 0195	Roads and Building Sub-Division, Himatnagar

Sr No	Address of the person in charge of the vehicle	Dumper	Loader	Tractor	Bulldozer
1	J.S.Patel Construction Sardar Patel Market, Durga Oil Mill Compound Himatnagar Mo 9824188751	2	1	0	0
2	Umiy Construction ear Hanumanji Temple, Tower Road, Himatnagar Mo 9428816224	4	2	0	0
3	P.S.Patel,3 Vibhuti City Center Complex, Opposite Brahmakumaris Hall,Himatnagar Mo 9426575659	3	1	0	0
4	J,s,Patel,2 Ambika Shopping Center, Opposite Taluka Panchayat Taluka idar Mo 9427691008	2	1	0	0
	Total	11	5	0	0

List of Helipads

Sr No	taluka	Helipads location	Name of the concerned officer	Contact: Number	Number of helipads
1	Himatnagar	Arts and Commerce College,Himmatnagar	H.m.Parmar	9726744990	1
2	Himatnagar	Kankanol Ground, Himmatnagar	H.m.Parmar	9726744990	1
3	Prantij	Vadrad Mukame on Prantij Harsol Road	H.m.Parmar	9726744990	5
4	Iadar	Arts and Commerce College,Idar	N.c.Patel	9825650020	1
5	Vadali	Santnagari Mohor, Taluka Vadali	N.c.Patel	9825650020	

List of 108 Ambulance

Sr No	New Amby No.	Location	Amby contact nos. (EMT)	Amby contact nos. (Pilot)	Taluka
1	GJ18GC0328	Gambhoi	6357423075	7016492951	Himmatnagar
2	GJ18GB9342	Himmatnagar	6357423067	7016486031	Himmatnagar
3	GJ18GB5138	Himmatnagar2	9016123695	7016483346	Himmatnagar
4	GJ18GB9606	ICU_Himmatnagar	8160239879	8160275187	Himmatnagar
5	GJ18GC0286	Bamna	9274387217	9274387216	Himmatnagar
6	GJ09GA0832	GMERS Himatnagar IFT	9227979880	9274388055	Himmatnagar
7	GJ06GA3355	CHC Gambhoi IFT		9227985830	Himmatnagar
8	GJ09GA0916	GMERS Himmatnagar IFT	9213011501	9227985916	Himmatnagar
9	GJ18GB8250	Idar	6357423068	7016491390	Idar
10	GJ18GB2589	Jadar	6357423071	7016495072	Idar
11	GJ18GB5214	Idar2	9016123546	7016485113	Idar
12	GJ18GB8253	SDH Idar IFT	9227985895	9274388154	Idar
13	GJ06GA3149	PHC Kadiyadra IFT		9227985932	Idar
14	GJ06GA3403	CHC Davad IFT	9213011448	9227986115	Idar
15	GJ18GB1717	CHC Chorivad IFT	9213011695	9227986070	Idar
16	GJ02GA1054	PHC Jashvantgad IFT		9227985909	Idar
17	GJ09GA0896	SDH IDAR IFT2		9227986025	Idar
18	GJ18GC0502	CHC Badoli IFT	9274387124	9227979677	Idar
19	GJ18GC0066	Khedbrahma	6357423065	7016494054	Khedbrahma
20	GJ18GB9097	Kheroj	6357423069	7016493987	Khedbrahma
21	GJ18GB4726	Khedbrahma2	9016123974	7016484900	Khedbrahma
22	GJ09GA0694	Nana Ambaji IFT	9274387154	9274388133	Khedbrahma
23	GJ18GB8218	SDH khedbrahma IFT	9227985880	9274388134	Khedbrahma
24	GJ09AU8643	PHC Derol IFT	9213011694	9227985774	Khedbrahma
25	GJ05GV1581	CHC Matoda IFT		9227986164	Khedbrahma
26	GJ09GA0685	PHC Khedva IFT	9213011693	9227986044	Khedbrahma
27	GJ09GA0573	PHC Kalol IFT	9213011692	9227986165	Khedbrahma
28	GJ09GA0864	PHC Mithibili IFT	9213011571	9227986050	Khedbrahma
29	GJ09GA0671	PHC UnchiDhanal IFT	9213011626	9227979931	Khedbrahma
30	GJ09GA0857	PHC Kheroj IFT	9213011624	9274387118	Khedbrahma
31	GJ18GC0324	Poshina	6357423072	7016494798	Poshina
32	GJ18GC0151	CHC LAMBADIYA	9274387514	9274387328	Poshina
33	GJ06GA3076	CHC Lambadiya IFT	9213011609	9227986214	Poshina
34	GJ09GA0771	PHC Ajasvas IFT	9213011690	9227986024	Poshina
35	GJ09GA0702	PHC Chandrana IFT	9213011570	9227985960	Poshina

36	GJ09GA0571	PHC Dantral IFT	9213011569	9227985845	Poshina
37	GJ09GA0587	PHC Kotda IFT	9213011625	9227979892	Poshina
38	GJ18GB9486	Prantij	6357423073	7016486011	Prantij
39	GJ06GA3574	CHC Prantij IFT	9213011617	9227986216	Prantij
40	GJ18GC0566	CHC Takhatgadh IFT	9227979618	9227979644	Prantij
41	GJ18GB5477	Talod	6357423074	7016485848	Talod
42	GJ18GC0326	Ranasan	6357423070	7016493118	Talod
43	GJ18GC0718	CHC Talod IFT	9227979596	9227979851	Talod
44	GJ18GB9339	Vadali	6357423066	7016494712	Vadali
45	GJ18GC0136	Vijaynagar	6357423064	7016495108	Vijaynagar
46	GJ18GB1907	CHC Vijaynagar IFT	9213011519	9227985891	Vijaynagar
47	GJ09GA0615	PHC Kanadar IFT	9213011627	9227986226	Vijaynagar

List of Taluk Health Officer

SN	Taluka	Name	Mobile No	Landline No		FAX Number	Email ID
				STD Code	Number		
1	2	3	4	5	6	7	8
1	Himmatnagar	Dr. Rajesh Patel	9687679019	02772	241505	241505	thohimatnagar.health.sk@gmail.com
2	Idar	Dr. Dhruv Patel	9978017789	02778	253005	253005	thoidar.health.sabarkantha@gmail.com
3	Khedbrahma	Dr. K M Dabhi	9825220272	02775	222652	222652	thokhedbrahma.health.sabarkant@gmail.com
4	Poshina	Dr. B S Gadhvi	9979315703	02775	222652	222652	thoposhina.health.sabarkantha@gmail.com
5	Prantij	Dr.Pankaj	9723729231	02770	233811	233811	thoprantij.health.sabarkantha@gmail.com
6	Talod	Dr. Vinod J. Mugad	9687679086	02770	220692	220692	thotalod.health.sabarkantha@gmail.com
7	Vadali	Dr. Pradip B. Gadhvi	9909816326	02778	222056	222056	thovadali.health.sabarkantha@gmail.com
8	Vijaynagar	Dr. P.L. Asari	968767008/ 9484795217	02775	254193	254193	thovijaynaga.health.sabarkanth@gmail.com

CHC Contact Details

S.No	Taluka Name	CHC Name	Superintendent Mobile Number	E-Mail
1	Himatnagar	Gambhoi	9099064616	chcgambhoi.health.sabarkantha@gmail.com
2	Himatnagar	Rupal	9099064564	chcrupal.health.sabarkantha@gmail.com
3	Himatnagar	Takhatgadh	9099064531	chctakhatgadh.health.sabarkant@gmail.com
4	Idar	Chorivad	9428642001	chcchorivad.health.sabarkantha@gmail.com
5	Idar	Davad	9426083934	chcdavad.health.sabarkantha@gmail.com
6	Idar	Badoli	9974655800	chcbadoli.health.sabarkantha@gmail.com
7	Khedbrahma	Matoda	8200905619	chc.matoda.health.sabarkantha@gmail.com
8	Poshina	Lambadiya	9898131701	chc.lambadiya.health.sabar@gmail.com
9	Poshina	Poshina	9426083934	chc.poshina.health.sabarkantha@gmail.com
10	Prantij	Prantij	9909979325	chc.prantij.health.sabarkantha@gmail.com
11	Prantij	Takhatgadh	9099064531	chctakhatgadh.health.sabarkant@gmail.com
12	Talod	Talod	9099064546	chc.talod.health.sabarkanth@gmail.com
13	Vadali	Vadali	9099064522	chcvadali.health.sabarkantha@gmail.com
14	Vijaynagar	Vijaynagar	9428642001	chcvijaynagar.health.sabarkant@gmail.com

SDH Contact Details

S.No	SDH Name	Superintendent Mobile Number	E-Mail
1	SDH Idar	8799673562	sdhidar.health.sabarkantha@gmail.com
2	SDH Khedbrahma	9726078090	sdhkhedbrahma.health.sk@gmail.com

PHC Contact Details

Sr.	Taluka	Village	Mobile/ Contact No.	E mail ID
1	Himatnagar	Adapur	9227714489	phcadapur.health.sabarkantha1@gmail.com
2	Himatnagar	Bamna	9687679319	phcbamana.health.sabarkantha@gmail.com
3	Himatnagar	Chandarni	9687679040	phcchandrani.health.sabarkanth@gmail.com
4	Himatnagar	Derol	9512020541	derolhmt.health.sabarkantha@gmail.com
5	Himatnagar	Desasan	9909385375	phcdesasan.health.sabarkanth@gmail.com
6	Himatnagar	Hadiyol	9687679020	phchadiyol.health.sabarkanth@gmail.com
7	Himatnagar	Ilol	9687679028	phcilol.health.sabarkanth@gmail.com
8	Himatnagar	Jamla	9687679047	phcjamla.health.sabarkantha@gmail.com
9	Himatnagar	Viravada	9687679035	phcviravada.health.sabarkantha@gmail.com
10	Idar	Aroda	9687679556	phcaroda.health.sabarkantha@gmail.com
11	Idar	Chitroda	9924883781	phcchitroda.health.sabarkantha@gmail.com
12	Idar	Finchod	7014081995	phcfinchod1.health.sabarkantha@gmail.com
13	Idar	Jashvantgadh	9033519171	phcjashwantgadh.health.sk@gmail.com
14	Idar	Kadiyadara	9687679327	phckadiyadra.health.sabarkatha@gmail.com
15	Idar	Mudeti	9687679349	phcmudeti.health.sabarkatha@gmail.com
16	Idar	Revas	8849309965	phcrevas.health.sabarkatha@gmail.com
17	Idar	Verabar	7575086221	phcverabar.health.sabarkantha@gmail.com
18	Idar	Virpur	9978492230	phcvirpur.health.sabarkanth@gmail.com
19	Khedbrahma	Derol (Va)	9173813371	phcderol.health.sabarkantha@gmail.com
20	Khedbrahma	Khedva	7573814887	phckhedva.health.sabarkantha@gmail.com
21	Khedbrahma	Kheroj	9016976771	phckheroj.health.sabarkantha@gmail.com
22	Khedbrahma	Kalol	8866371300	phckalol.health.sabarkantha@gmail.com
23	Khedbrahma	Mithi Bili	9054004975	phcmithibili.health.sabarkantha@gmail.com
24	Khedbrahma	Sembaliya	8320934936	phcsembaliya.health.sabarkantha@gmail.com
25	Khedbrahma	Unchi Dhanal	9879355830	phcunchidhanal.health.sabarkan@gmail.com

Sr.	Taluka	Village	Mobile/ Contact No.	E mail ID
26	Poshina	Ajavas	8154016555	phcajavas.health.sabarkantha@gmail.com
27	Poshina	Chandrana	8160266705	phcchandrana.health.sabarkantha@gmail.com
28	Poshina	Dantral	6355343118	phcdantral.health.sabarkantha@gmail.com
29	Poshina	Delvada	9898425259	phcdelwada.health.sabarkantha@gmail.com
30	Poshina	Demti	9328992201	phcdemti.health.sabarkantha@gmail.com
31	Poshina	Kotda	8488891441	phckotada.health.sabarkantha@gmail.com
32	Poshina	Bedi	7016960118	phclambadiya.health.sabarkantha@gmail.com
33	Prantij	Balisana	7567886704	phcbalisana.health.sabarkantha@gmail.com
34	Prantij	Fatepur	7016371601	phcfatepurm.health.sabarkantha@gmail.com
35	Prantij	Majra	9328648313	phcmajara.health.sabarkantha@gmail.com
36	Prantij	Moyad	7698595395	phcmoyad.health.sabarkantha@gmail.com
37	Prantij	Poglu	9099862855	phcpoglu.health.sabarkantha@gmail.com
38	Talod	Aniod	9687679109	phcaniyod.health.sabarkantha@gmail.com
39	Talod	Antroli	9687679095	phcantroli.health.sabarkantha@gmail.com
40	Talod	Kherol	9687679102	phckherol.health.sabarkantha@gmail.com
41	Talod	Punsri	9913397846	phcpunsari.health.sabarkantha@gmail.com
42	Talod	Rojhad	9328206321	phcrozad.health.sabarkantha@gmail.com
43	Vadali	Dobhada	9687679384	phcdobhada.health.sabarkantha@gmail.com
44	Vadali	Therasana	6356554473	phctherasana2.health.sabarkantha@gmail.com
45	Vadali	Raheda	9265255660	phcraheda.health.sabarkantha@gmail.com
46	Vijaynagar	Antarsumba	9662955123	phcantarsum.health.sabarkantha@gmail.com
47	Vijaynagar	Chithoda	9687295322	phcchithoda.health.sabarkantha@gmail.com
48	Vijaynagar	Kanadar	9974861733	phckanadar.health.sabarkantha@gmail.com
49	Vijaynagar	Kodiyavada	6353208539	phckodiyava.health.sabarkantha@gmail.com
50	Vijaynagar	Sarsav	8690559184	phcsarsav.health.sabarkantha@gmail.com

List of Major Private Hospitals

No.	Doctor's Name	Name of Hospital	Location	Contact number	Speciality of Hospital
1	Dr. C S Patel	Sarvoday Surgical Hospital	Near Bus Stand, Himatnagar	241135	General Surgeon
2	Dr. Kalpesh C Patel	Kidney Care Hospital	Opp: Bus Stand, Himatnagar	247535	General Surgeon
3	Dr. D M Patel	Sapna Surgical Hospital	Opp: Bus Stand, Himatnagar	245134	General Surgeon
4	Dr. P R Patel	Ami Surgical Hospital	Near Nyay Mandir, Himatnagar	242236	General Surgeon
5	Dr. Yashvant V Patel	Bhagyoday Surgical Hospital	Opp: Bus Stand, Himatnagar	240834	General Surgeon
6	Dr. Arvind R Patel	Aavkar Hospital	Arogay Nagar, Himatnagar	244411	Physician
7	Dr. K P Patel	Ashish Hospital	Near Bus Stand, Himatnagar	241432	Physician
8	Dr. K K Patel	Aanad Hospital	Arogay Nagar, Himatnagar	241201	Physician
9	Dr. P C Gandhi	Vasudha Hospital	Himatnagar	241386	Physician
10	Dr. Bhupendra Shah	Aavrada Hospital	Near Bus Stand, Himatnagar		Physician
11	Dr. Vinod M Bhatt	Gaytri Medicare	Arogay Nagar, Himatnagar	241488	Physician
12	Dr. M M Surti	Sanjivani Heart and Medicare	Aakashganga Complex, Himatanagar	245916	Physician
13	Dr. A M Patel	Hetal Orthopadic Hospital	Arogay Nagar, Himatnagar	241076	Orthopadic Surgeon
14	Dr. D K Shah	Maitri Orthopadic Hospital	Opp: Medical College Himatnagar	242732	Orthopadic Surgeon
15	Dr. Nilesh Acharya	Yash Orthopadic Hospital	Near Mehta Petrol Pump, Himatnagar	242089	Orthopadic Surgeon
16	Dr. Kamlesh Patel	J K Orthopadic Hospital	Near Mehta Petrol Pump, Himatnagar	241326	Orthopadic Surgeon
17	Dr. Jaykrushna Soni	Arogay Hospital	Sahkari Jin Road, Himatnagar	244246	Orthopadic Surgeon
18	Dr. Pallav Patel	Pujan Hospital	Arogay Nagar, Himatnagar	242005	Orthopadic Surgeon
19	Dr. Brijesh Modi	Ved Orthopadic Hospital	Opp: Bus Stand, Himatnagar	9714566862	Orthopadic Surgeon

Annexure-8

Forest Details

- In view of the flood and cyclone situation, an emergency center has been set up at the district level at Van Chetna Kendra Dhand Himmatnagar by the department here, whose contact number is 02772-33418.
- An emergency center has been set up under the range office at the taluka level by this department regarding the flood and storm situation.
- If trees fall on the side of the road due to storms or rain and the road is closed, then this department of Sabarkantha district uses the equipment and staff in its range to remove the fallen trees and open the road. For this operation, a team of laborers will be kept ready at each taluka emergency center with the necessary equipment and supplies.
- If trees fall in roadside plantations in Sabarkantha district, they are immediately removed and the road is cleared, and field staff are kept alert for this work.
- The necessary axes, shovels, trike, ropes, etc. are kept in the range offices of the department here, which are used as per the requirement
- Tree cutting cutter chain saw No. 7 is kept at the taluka range level which is used as per the requirement.

Contact numbers of officials of Social Forestry Department, Sabarkantha Himmatnagar regarding Purvavajodu Contingency Plan 2026

Sn	Officer's name	Designation for Monsoon Action Plan	Designation	Contact number
1	D.f.Gadhavi	Nodal at district level	Assistant Conservator of Forests Shri Social Forestry Department Sabarkantha	7574950202
2	B.c.Dabhi	Nodal Officer Himmatnagar at Taluka Level	Pariksha Forest Officer Extension Range Himmatnagar	9427557759
3	N.a.chodhry	Nodal Officer Idar at Taluka Level	Pariksha Forest Officer Extension Range Idar	9427322488
4	D.p.Ninama	Nodal Officer Vadali at Taluka Level	Pariksha Forest Officer Extension Range Vadali	9723824838
5	K.b.Bharvad	Nodal Officer Kedbrahma at Taluka Level	Pariksha Forest Officer Extension Range Kedbrahma	9426282370
6	S.l.kharadi	Nodal Officer Vijaynagar at Taluka Level	Pariksha Forest Officer Extension Range Vijaynagar	9978269887
7	D.bBariya	Nodal Officer prantij at Taluka Level	Pariksha Forest Officer Extension Range Prantij	6359581947
8	B.d.Bhatt	Nodal Officer Talod at Taluka Level	Pariksha Forest Officer Extension Range Talod	8849772424

Annexure-9
LIST OF AAPDAMITRA SWIMMERS (Home Guards)

No	Home Guard Name	S.No	Unit	Address	Mobile number
1	K.H.Dodiyar	14041	Antarsuba	Antarsuba	7990900428
2	P.D.Katara	14040	Antarsuba	Antarsuba	9054140233
3	S.D.Damor	14047	Antarsuba	Antarsuba	9429752821
4	M.D.Damor	14011	Antarsuba	Antarsuba	9824251585
5	B.K.Damor	14039	Antarsuba	Antarsuba	7383475693
6	S.B.Katara	14052	Antarsuba	Antarsuba	7069311238
7	J.S.Gameti	14064	Antarsuba	Antarsuba	9408543618
8	D.M.Modiya	14069	Antarsuba	Antarsuba	9316147629
9	S.R.Ninama	14029	Antarsuba	Antarsuba	9484680369
10	D.M.Dun	14045	Antarsuba	Antarsuba	9409242734
11	R.M.Gomati	14057	Antarsuba	Antarsuba	9426414315
12	N.B.Balediya	14034	Antarsuba	Antarsuba	9429201948
13	C.V.Ninama	14062	Antarsuba	Antarsuba	9429191560
14	M.K.Asari	14025	Antarsuba	Antarsuba	9408276302
15	C.S.Asari	14006	Antarsuba	Antarsuba	9725532319
16	T.M.Dharani	12039	Vijaynagar	Vijaynagar	9409536062
17	B.S.Libat	12101	Vijaynagar	Vijaynagar	9408590215
18	T.R.Libat	12100	Vijaynagar	Vijaynagar	9408590215
19	B.D.Bamna	12099	Vijaynagar	Vijaynagar	9313987599
20	P.J.Dharani	12069	Vijaynagar	Vijaynagar	9408410724
21	H.U.Tral	11027	Lambdia	Lambdia	8238947287
22	V.M.Tral.	11033	Lambdia	Lambdia	8780892746
23	S.T.Gamat	11026	Lambdia	Lambdia	9726376156
24	H.J.Taral	11032	Lambdia	Lambdia	7359900612
25	M.M.Parmar	11023	Lambdia	Lambdia	8849302202
26	I.L.Gamat	11044	Lambdia	Lambdia	9328412142
27	R.B.Solanki	11054	Lambdia	Lambdia	9313211673
28	R.M..Parmar	11056	Lambdia	Lambdia	7990165013
29	L.B.Gamar	11064	Lambdia	Lambdia	7265818427
30	G.N.Gamar	11063	Lambdia	Lambdia	6355429467
31	G.V.Bhoi	15024	Prantij	Prantij	9727258831
32	L.K.Rathod	15038	Prantij	Prantij	9624359080
33	N.A.Rathod	15062	Prantij	Prantij	9624365440
34	A.J.Bhoi	15066	Prantij	Prantij	9328430070

35	A.J.Makwana	15089	Prantij	Prantij	9909686900
36	N.D.Rathod	15092	Prantij	Prantij	7096286361
37	B.G.Rathod	15108	Prantij	Prantij	9316537336
38	V.H.Pranami	2013	Ganbhoi	Ganbhoi	8980773436
39	G.B.Parmar	2023	Ganbhoi	Ganbhoi	9726677296
40	R.D.Makwana	2025	Ganbhoi	Ganbhoi	9909351255
41	B.R.Makwana	2032	Ganbhoi	Ganbhoi	8160361947
42	A.A.Rathod	2035	Ganbhoi	Ganbhoi	8160422928
43	P.P.Raval	1066	Himatanagar	Tajpuri	9586711546
44	G.J.Chuhan	1039	Himatanagar	Himatanagar	9638973369
45	S.R.Parmar	1072	Himatanagar	Tajpuri	7878015290
46	C.D.Parmar	1137	Himatanagar	Hapa	6353516570
47	R.D.Gameti	1152	Himatanagar	Himatanagar	9426944665
48	K.J.Tejavat	1291	Himatanagar	Mahetapura	9510928981
49	B.C.Makwana	1123	Himatanagr	Himatanagar	8128465830
50	C.H.Makwana	10104	Poshina	Poshina	9316976101
51	G.H.Dabhi	10075	Poshina	Poshina	9924422128
52	R.L.Dabhi	10106	Poshina	Poshina	9313458716
53	F.J.Dabhi	10069	Poshina	Poshina	9824930198
54	A.S.Dabhi	10045	Poshina	Poshina	6351142506
55	R.A.Gmar	10018	Poshina	Poshina	9023197203
56	M.J.Bubdiya	10094	Poshina	Poshina	6355206524
57	T.L.Bubdiya	10095	Poshina	Poshina	9726346480
58	V.C.Gmar	10021	Poshina	Poshina	9316335525
59	M.D.Gmar	10062	Poshina	Poshina	6355712842
60	A.K.Gmar	10070	Poshina	Poshina	9638669655
61	S.K.Parmar	10107	Poshina	Poshina	9909838747
62	V.C.Bubdiya	10063	Poshina	Poshina	7365962124
63	B.A.Gmar	10071	Poshina	Poshina	8238137881
64	M.A.Bubdiya	10058	Poshina	Poshina	6351170139
65	D.K.Pardhi	9054	Khedbrahma	Khedbrahma	9316496798
66	S.A.Damor	9100	Khedbrahma	Khedbrahma	7046364135
67	S.B.Damor	9101	Khedbrahma	Khedbrahma	8849277661
68	A.B.Gmar	9087	Khedbrahma	Khedbrahma	7874310125
69	V.D.Vaghela	9053	Kukdiya	Kukdiya	8141544043
70	M.R.Raval	6023	Kukdiya	Kukdiya	9913316845
71	R.C.Raval	6024	Kukdiya	Kukdiya	9726306487
72	S.K.Vankar	6029	Kukdiya	Kukdiya	9913725716
73	V.I.Rathod	6033	Kukdiya	Kukdiya	9375191931
74	G.G.Vankar	6031	Kukdiya	Kukdiya	9099661884
75	P.K.Prjapati	6058	Kukdiya	Kukdiya	9727269234
76	K.K.Vanjhara	4093	Idar	Idar	7600101574
77	J.B.Thakor	4048	Idar	Idar	9913269038
78	M.K.Chuhan	4143	Idar	Idar	9737502324

79	P.K.Jadav	4067	Idar	Idar	9664577887
80	V.P.Makwana	4163	Idar	Idar	7874766574
81	V.S.Parmar	4193	Idar	Idar	9998781964
82	D.J.Parmar	4187	Idar	Idar	7831036100
83	N.D.Parmar	4190	Idar	Idar	9638421904
84	S.K.Jhala	3039	Elol	Elol	8469324040
85	I.M.Jhala	3025	Elol	Elol	6352536252
86	K.B.Chamar	3034	Elol	Elol	8469286024
87	N.H.Chamar	3031	Elol	Elol	8200276208
88	K.V.Chamar	3021	Elol	Elol	9409672885
89	N.H.Chamar	13015	Chitoda	Chitoda	9512168153
90	J.V.Pandor	13050	Chitoda	Chitoda	9408724188
91	S.D.Jadar	13052	Chitoda	Chitoda	9099539278
92	V.F.Pandor	13056	Chitoda	Chitoda	9499857237
93	J.S.Pandor	13006	Chitoda	Chitoda	9099124480
94	V.R.Damor	5061	Jadar	Jadar	9979357215
95	H.R.Makwana	5084	Jadar	Jadar	9725720412
96	M.M.Chavada	5105	Jadar	Jadar	9898789397
97	J.A.Saiyad	5110	Jadar	Jadar	9662214190
98	G.J.Chuhan	5104	Jadar	Jadar	8401131733
99	S.R.Sipai	8032	Vadali	Vadali	9106531943
100	K.N.Vankar	8011	Vadali	Vadali	8758171911
101	K.S.Parmar	8023	Vadali	Hathrva	9558031305
102	V.K.Parmar	8086	Vadali	kambosani	9909302183
103	M.R.Rhevar	8034	Vadali	bavsar	9904966908
104	M.H.Chenva	8027	Vadali	kodreli	9512911575
105	S.L.Barot	8051	Vadali	Vadali	9510115055
106	V.R.Hada	17035	Tajpur	Tajpur	9328160794
107	P.L.Parmar	17032	Tajpur	Tajpur	9274453649
108	L.K.Makwana	17034	Tajpur	Tajpur	9601156053
109	B.S.Jhala	17036	Tajpur	Tajpur	93163663194

List Of NGO

No.	Name of NGO	Address	Contact Person	Mobile no
1	Redcross Society	Himatnagar	Dr. H S Soni	02772-240789
2	Rotary Club	Himatnagar	Dr. Jagdishbhai Patel	
3	Lion's Club	Himatnagar	Dr. Yusufbhai Sabugar	9227480392
4	Lioness's Club	Himatnagar	Smt. Manjulaben Soni	02772-243155
5	Indian Medical Association	Himatnagar	Dr. K K Shah	9824061810 02772-242372
6	Sahyog Kushtha Yagna Trust	Rajendranagar Crossing, Himatnagar-Udaypur highway, Ta. Himatnagar,	Shri Dipak Soni	02772-254337 9825598900
7	Yuva Khedbrhma	Brijesh Auto Agency Bajaj Showroom Arbuda Complex Khedbrhma	Brijesh Kumar Barot	9825988558
8	Jeev Daya Team	Gambhirpura Idar	UpengSingh	994560606
9	Navsarjan Charitable Trust	Demti kadha Ta., Poshina	Aetari ben	9328802801
10	Navsarjan Charitable Trust	Malvas, Ta. Poshina	Navjivan Aarajan bhai	9313331416
11	Sewat Children Trust	Poshina	Bansi bhai	9978318890
12	Testing institute	-	Kaushalya Kuvarba	9825962218
13	Collaboration is difficult.	-	Suresh bhai	9825011185

Annexure- 11

List of Equipments Possessed by NDRF

Total Team in Gujarat:15 (Vadodara:12 Teams and Gandhinagar: 03Teams)

LIST OF MAJOR EQUIPMENTS FOR DEAL WITH FLOOD

SL. NO.	NAME OF EQUIPMENT	QTY Available with unit in Gujarat
1	IRB Boats	81
2	FRB Boats	3
3	OBM (25 HP)	85
4	OBM (40 HP)	3
5	Life buoy	980
6	Life Jackets	312
7	Deep Diving Sets	29
8	Fogging Machine	10
9	Hand Pump Complete Set	100
10	Plastic Sheet (Size:50*4mtr)	75
11	CGI tin sheet	1000
12	Blanket	NIL
13	Life Buoys	1000
14	Synthetic Life Jacket	1700
15	Family Ridge Single Fly Tent	1000
16	Family Ridge Double Fly Tent	100
17	Tent Extendable 4M	91

SL.NO.	NAME OF EQUIPMENT	QTY Available with unit in Gujarat
18	Sanjeevani body cover bag child	25
19	Sanjeevani body cover bag infant	25
20	Sanjeevani body cover bag adult	50
21	Synthetic Sleeping Mat	7500
22	Trolley Mounted Generator St (30KVA)	4
23	Dignity kit for women	NIL
24	Dignity kit for Men	NIL
25	Tent Big Size	NIL
26	Water Storage Tank (500Ltr)	41

In addition to above equipments, National disaster Response Reserve Stores are also available in the unit as per following details.

Communication Equipments available with the unit are as follows:

SL. NO.	NAME OF EQUIPMENT	QTY Available with unit in Gujarat
1	VHF Walkie Talkie	154
2	VHF Base Station	22
3	HF	22
4	V-Sat(QDA)	6
5	Sat Phone	4

Annexure- 12
District Contact Details

District Name :- Sabarkantha.					STD Code :- 02772
Sr. No.	Designation	Name	Mobile	Landline No.	E-mail ID
1	Collector	Shri Lalit Narayan Sing Sandu	9978406221	241001/ 240600	collector-sab@gujarat.gov.in
2	DDO	Shri H P Patel	9978406246	242350	ddo-sab@gujarat.gov.in
3	S.P.	Shri Dr. Parthrajsinh Gohil	9978405081	247333	sp-sab@gujarat.gov.in
4	Resi.Addl. Collector	Shri K A Vaghela	9978405219	246012	add-collector-sab@gujarat.gov.in
5	DY. DDO	Shri Gita ben thakor	8758172770		dyddosk@gmail.com
6	Deputy Conservator Of Forest.	Shri D.F.Gadhvi	7574950202	—	dcfs41766@gmail.com
7	Dy.S.P.	Shri Payalben Someshvar	9638899700	247233	sdpo-him-sab@gujarat.gov.in
8	Chief District Health Officer	Shri Raj Sutariya	9687679002	246422	cdho-sab@gujarat.gov.in
9	Director DRDA	Shri K P Patidar	9978407487	242521	drda-sab@gmail.com
10	DSO	Shri Maulik Donga	9974805675	240698	dso-sab@gujarat.gov.in
11	Medical Superintendent (Civil Hospital)	Dr. Ashishbhai katarkar	9426454958	—	cdmo.health.himmatnagar@ gmail.com
12	CDMO	Dr. Heena ben Shah	9978613308		cdmo-sab@gujarat.gov.in
13	DEO	Shri Mitaben Gadhavi	9909970217	240793	deo.sabarkantha@gmail.com
14	DPEO	Shri K D Upadhyay	9909971696	2240694	sabarkanthadpo@gmail.com
15	General Manager, DIC	Shri M.N.makvana	9998318589		gm-dic-sab@gmail.com
16	Asst. Director of Information	Shri Jigarbhai khunt	9429029268	—	dmo-sab@gmail.com

District Name :- Sabarkantha.					STD Code :- 02772
Sr. No.	Designation	Name	Mobile	Landline No.	E-mail ID
17	Port Officer, GMB	–	–	–	–
18	Chief Fire officer	Shri U P Gadhavi	7434926350	246720/246068	np-himatnagar@yahoo.com
19	Executive Engineer, R & B (State)	Shri R.D.Dhruv	9979886866	241651	eer nbhmt@gmail.com
20	Executive Engineer, R&B (Panchayat)	Shri V. M. BHAVASAR	9428555641	–	sabarkantha1@yahoo.com
21	Executive Engineer, Irrigation (State)	Shri N.P.Patel	9664861445	240771	floodcellhimatnagar@yahoo.in
22	Executive Engineer, irrigation (Panchayat)	Shri D P Rajput	9909921926	–	skjp.ej@gmail.com
23	Executive Engineer GWSSB	Shri K M Panchal	9558530906	245108	gssbeechmt@gmail.com
24	Superintendent Engineer, UGVCL	Shri V S Hatar	9873200758	–	sehmt@ugvcl.gmail.com
25	Dy Director of Animal husbandry	Dr. N D Malviya	9426566098	–	icos himatnagar@gmail.com
26	District Agriculture officer	Shri B J Joshi	9898000356	–	daoskhmt@gmail.com
27	Program Officer ICDS	Shri Alpaben Solanki	9327858363	–	poicdssk@gmail.com
28	Director Industrial Safe and Health	Shri J B Bodat	9601998852	079-23233231	–
29	DC/ ST Manager depot	Shri H R Patel	6359918508	–	himatnagardepo@gmail.com
30	Superintendent of Fisher	Shri D.N.Patel	9904844142	–	aaf-hmt@gmail.com
31	Regional officer, GPCB	Shri M.S.Batt	9824394243	–	ro-gpcb-hmm@gujarat.gov.in
32	DGM/AGM BSNL	Shri Sahil Sidki	7733367723	–	ggmhmr.nbsnl@gmail.com

District Name :- Sabarkantha.				STD Code :- 02772	
Sr. No.	Designation	Name	Mobile	Landline No.	E-mail ID
		Rajpal			
33	Mamlatdar Disaster	Shri Y H Parmar	9825470606	249039	mam-sab@gujarat.gov.in
34	DPO Disaster	Shri K K Solanki	9714856277	–	dis.sabar@gmail.com
35	Dy. Mamlatdar Disaster	Shri Santoshben Patel	8511430399	–	dis.sabar@gmail.com

Contact Details Of Taluka Mamlatdar & Executive Magistrates

Sr.	Officer Name	Taluka'S Name	Mobile	(O)	E-Mail
1	Shri R.J Padhariya	Himatnagar	9664922740	02772-246481	mam-sab@gujarat.gov.in
2	Shri Poojaben Joshi	Idar	8401909726	02778-250100	mam-idar@gujarat.gov.in
3	Shri Harshvardhn bhai parmar	Vadali	9727655355	02778-222017	mam-vadali@gujarat.gov.in
4	Shri Mitanshu.b Bumbadiya	Khedbrhma	9259205555	02775-220001, 222404	mam-khedbrahma@gujarat.gov.in
5	Shri Prakash Patel	Vijaynagar	9974982072	02775-254340	mam-vijaynagar@gujarat.gov.in
6	Shri Kiran singh Vihol	Poshina	7802802469	02775- 283533	dymam-posina-sab@gujarat.gov.in
7	Shri Sanjay bhai desai	Prantij	9106241443	02770-230425, 231525	mam-prantij@gujarat.gov.in
8	Shri Shilpaben Joshi	Mamlatdar, Talod	9825030467	02770-220641	mam-talod@gujarat.gov.in

Contact Details Of Taluka Development Officer

Sr.	Officer Name	Designation	Mobile	(O)	E-Mail
1	Shri Hardik bhai rathod	TDO Himatanagar	9664727170	02772 245152, 247152	tdo-himatnagar12@gmail.com
2	Shri B N Chaudhari	TDO Idar	9313847628	02778-250022	tdo-idar@gujarat.gov.in
3	Shri. A.j upalana	TDO Vadali	8511975019	02778-222630	Tdo-vadali@gujarat.gov.in
4	Shri Nitin bhai chaudhari	TDO Khedbrhma	9574957113	02775-220008	Tdo-khed@gujarat.gov.in
5	Shri S.P.bodar	TDO Vijaynagar	8320721719	02775-254024	tdo-vijaynagar@guharat.gov.in
6	Shri A.k jhala	TDO Poshina	9712987893	02775- 283313	tdoposhina @gmail.com
7	Smt.S.P. Rajput	TDO Prantij	9558166925	02770-230436	tdo-prantij@gujarat.gov.in
8	Shri. A.p. modi	TDO Talod	9016730858	02770-2 21872	tdo-talod@gmail.com

Contact Details of Chief Officer Nagarpalika

Sr.	Name	Nagarpalika'S Name	Contact No.	(O)	<u>E-mail</u>
1	Shri Upendra bhai Gadhavi	Himatanagar	7434926350	(02772) 241710/246067	np-himatnagar@yahoo.com
2	Shri Hiren b. Solanki	Prantij	7984611935	(02770) 233410	np-prantij@yahoo.com.
3	Shri Jaimin bhai chaudhari	Idar	9737949764	(02778) 250046/250271	np_idar@yahoo.com
4	Shri Savi ben soni	Talod	9662350149	(02770) 220652	np-talod@yahoo.com
5	Shri Parita ben Parmar	Vadali	7405818656	(02778) 222016/222516	vadalinagarpalika@yahoo.com
6	Shri Hitendr bhai Patel	Khedbrhma	9979873159	(02775) 220021	np_khedbhrama@yahoo.com

Appendix-24

UGVCL

As per the order of our head office, the following plan has been prepared to deal with the disruption of power supply in the district to meet the natural calamities that occur during the monsoon season.

1. Repairs to power lines have been made to prevent power outages.
2. Necessary pillar arrangements have been made in the district.
3. All necessary line equipments are kept ready.
4. All the district offices have given all necessary instructions to the employees to be prepared to meet such a situation. Also, the list of officer names, mobile numbers of all the district offices is attached herewith.
5. Instructions have also been given to keep the necessary vehicles of all the district offices ready.
6. A control room will be opened at Himmatnagar from 01.06.2021 and the name and phone number of the officer present on date will be prepared and sent later
7. Besides Talod, Idar, Bhiloda and Modasa divisional office dated The control room will be opened from 01.06.2021 who will be present in the control room.

The name and mobile number of the officer will be prepared and sent later. The details of the mobile numbers and e-mail addresses of the heads of departmental offices are as follows

Thus, all the preparations have been made to meet all the possible situations that may occur during the monsoon and to avoid interruption in the power supply.

**LIST OF CONTACT NOS. OF SENIOR
FIELD OFFICERS OF UGVCL**

SR NO	NAME OF OFFICER	DESIGNATION	PLACE OF WORKING	MOBILE	EMAIL ID
Himatnagar Circle					
1	Shri V S Katara	Superintenging Engineer	Himatnagar	9879200758	sehmt@ugvcl.com
2	Shri R D VARSAT	Executive Engineer	Himatnagar	9909940649	eehmtdo@ugvcl.com
3	Shri G B Solanki	Executive Engineer	Idar	9925212467	eeidardo@ugvcl.com
4	Shri M I Patel	Executive Engineer	Talod	7016283676	eetaloddo@ugvcl.com
5	Shri R M DAMOR	Executive Engineer	Modasa	6359873159	eemodasado@ugvcl.com
6	Shri A V Pandor	Executive Engineer	Bhiloda	9925212474	eebhilodado@ugvcl.com

LIST OF DISASTER MANAGEMENT NODAL OFFICERS OF UGVCL

SR NO	NAME OF NODAL OFFICER	DESI	PLACE OF WORKING	PHONE NO		MOBILE	E-MAIL ID
				STD CODE	PHONE NO.		
Himatnagar Circle							
1	B N Parmar	DE	Himatnagar CO			6359643796	hmtcotech2@ugvcl.com
2	Smt. N B Patel	DE	Himatnagar DO			9925212514	dehmttdot2@ugvcl.com
3	V.R.Barot	DE	Idar DO			9879200810	deidardot2@ugvcl.com
4	B D Patel	DE	Talod DO	02770	220605	9925234356	detaloddot2@ugvcl.com
5	A S Damor	DE	Modasa DO			9879200811	demodasadot2@ugvcl.com
6	Smt. A V Mehta	DE	Bhiloda DO			6357363384	debhilodadot2@ugvcl.com

NAME AND CONTACT NOS OF FIELD OFFICERS FROM CIRCLE TO SDN OFFICE - UGVCL

SR NO	DISCOM	CIRCLE	DIVISION	SUB-DIVISION	OFFICER	DESIG.	MOBILE
1	UGVCL	Himatnagar	-	-	V S Katara	Superintending Engineer	9879200758
2	UGVCL	Himatnagar	-	-	P J Patel	Dy.Engineer	6359960419
3	UGVCL	Himatnagar	-	-	B N PARMAR	Dy.Engineer	6359643796
4	UGVCL	Himatnagar	-	-	N U Pandey	Jr. Engineer	9925212480
5	UGVCL	Himatnagar	-	-	H N Patel	Jr. Engineer	7096585918
6	UGVCL	Himatnagar	-	-	R M Bodar	Jr. Engineer	9925212523
7	UGVCL	Himatnagar	-	-	D N Goswami	Jr. Engineer	8155806020
8	UGVCL	Himatnagar	Himatnagar		Shri R D Varsat	Executive Engineer	9909940649
9	UGVCL	Himatnagar	Himatnagar	-	N B Patel	Dy.Engineer	9925212514
10	UGVCL	Himatnagar	Himatnagar	-	U N Patel	Dy.Engineer	9879201651
11	UGVCL	Himatnagar	Himatnagar	-	N G Patel	Jr. Engineer	9925212487
12	UGVCL	Himatnagar	Himatnagar	-	F N Dabhi	Jr. Engineer	9274494670
13	UGVCL	Himatnagar	Himatnagar	-	G J Patel	Jr. Engineer	9925212486
14	UGVCL	Himatnagar	Himatnagar	-	P D Parmar	Jr. Engineer	9925212482
15	UGVCL	Himatnagar	Himatnagar	HMT (Town)	D B Patel	Dy.Engineer	9879201601
16	UGVCL	Himatnagar	Himatnagar	HMT (Town)	M P Songara	Jr. Engineer	9925212498
17	UGVCL	Himatnagar	Himatnagar	HMT (Town)	H C Patel	Jr. Engineer	9925212491
18	UGVCL	Himatnagar	Himatnagar	HMT(Rural)	S A Patel	Dy.Engineer	9925212466
19	UGVCL	Himatnagar	Himatnagar	HMT(Rural)	S P Rathod	Jr. Engineer	9925212493
20	UGVCL	Himatnagar	Himatnagar	HMT(Rural)	Z I Zaz	Jr. Engineer	9925212492
21	UGVCL	Himatnagar	Himatnagar	Mehtapura	A A Khanusia	Dy.Engineer	7043042899
22	UGVCL	Himatnagar	Himatnagar	Mehtapura	J J Modi	Jr. Engineer	9925212495
23	UGVCL	Himatnagar	Himatnagar	Mehtapura	S H Patel	Jr. Engineer	9925212494
24	UGVCL	Himatnagar	Himatnagar	Gambhoi	P M Tabiyar	Dy.Engineer	9879201606

25	UGVCL	Himatnagar	Himatnagar	Gambhoi	P N Dabhi	Jr. Engineer	9925212501
26	UGVCL	Himatnagar	Himatnagar	Gambhoi	N P BARANDA	Jr. Engineer	9925212500
27	UGVCL	Himatnagar	Himatnagar	Salal	S M Yadav	Dy.Engineer	9879201621
28	UGVCL	Himatnagar	Himatnagar	Salal	H D Parekh	Jr. Engineer	9925212497
29	UGVCL	Himatnagar	Himatnagar	Salal	S V Suthar	Jr. Engineer	9925212496
30	UGVCL	Himatnagar	Himatnagar	Prantij	R M Jaiswal	Dy.Engineer	9925212490
31	UGVCL	Himatnagar	Himatnagar	Prantij	Vacant Post	Jr. Engineer	
32	UGVCL	Himatnagar	Himatnagar	Prantij	S V Soni	Jr. Engineer	9925212499
33	UGVCL	Himatnagar	Himatnagar	Ranasan	R M Damor	Dy.Engineer	6359960250
34	UGVCL	Himatnagar	Himatnagar	Ranasan	H N Makwana	Jr. Engineer	6359960251
35	UGVCL	Himatnagar	Himatnagar	Ranasan	N R Damor	Jr. Engineer	6359960252
36	UGVCL	Himatnagar	Talod	-	Shri G S Bajat	Executive Engineer	
37	UGVCL	Himatnagar	Talod	-	R V Od	Dy.Engineer	9879200809
38	UGVCL	Himatnagar	Talod	-	B D Patel	Dy.Engineer	9925234356
39	UGVCL	Himatnagar	Talod	-	A K Bhabhor	Jr. Engineer	9925212519
40	UGVCL	Himatnagar	Talod	-	D G Kishori	Jr. Engineer	9925212515
41	UGVCL	Himatnagar	Talod	-	P J Patel	Jr. Engineer	9925212528
42	UGVCL	Himatnagar	Talod	-	Y S Kharadi	Jr. Engineer	9925212516
43	UGVCL	Himatnagar	Talod	Talod-1	M L Chaudhary	Dy.Engineer	9879201626
44	UGVCL	Himatnagar	Talod	Talod-1	V R Mistry	Jr. Engineer	9925212517
45	UGVCL	Himatnagar	Talod	Talod-1	Vacant Post	Jr. Engineer	9909936950
46	UGVCL	Himatnagar	Talod	Talod-2	K M Prajapati	Dy.Engineer	9879201627
47	UGVCL	Himatnagar	Talod	Talod-2	H R Limbachiya	Jr. Engineer	9909936964
48	UGVCL	Himatnagar	Talod	Talod-2	S N Sutariya	Jr. Engineer	9925212518
49	UGVCL	Himatnagar	Talod	Dhansura	S N Gameti	Dy.Engineer	9879201636
50	UGVCL	Himatnagar	Talod	Dhansura	A N Prajapati	Jr. Engineer	9925212522
51	UGVCL	Himatnagar	Talod	Dhansura	K S Parmar	Jr. Engineer	9925212521
52	UGVCL	Himatnagar	Talod	Bayad	Vacant Post	Dy.Engineer	9879201631
53	UGVCL	Himatnagar	Talod	Bayad	A L Prajapati	Jr. Engineer	9925212886

54	UGVCL	Himatnagar	Talod	Bayad	M K Rot	Jr. Engineer	9925212885	
55	UGVCL	Himatnagar	Talod	Sathamba	M N Chaudhary	Dy.Engineer	9925212526	
56	UGVCL	Himatnagar	Talod	Sathamba	D B Dhusa	Jr. Engineer	9925212527	
57	UGVCL	Himatnagar	Talod	Sathamba	K P Modiya	Jr. Engineer	9925212525	
58	UGVCL	Himatnagar	Talod	Choila	K L Thakor	Dy.Engineer	9879201646	
59	UGVCL	Himatnagar	Talod	Choila	Vacant Post	Jr. Engineer		
60	UGVCL	Himatnagar	Talod	Choila	G V Palas	Jr. Engineer	9925212529	
61	UGVCL	Himatnagar	Bhiloda	Choriwad	R N Bhagora	Dy.Engineer	9925212483	
62	UGVCL	Himatnagar	Bhiloda	Choriwad	H V Ninama	Jr. Engineer	8980041578	
63	UGVCL	Himatnagar	Bhiloda	Choriwad	A S Patel	Jr. Engineer	9925212484	
64	UGVCL	Himatnagar	Bhiloda	Vijaynagar	A N Champaneri	Dy.Engineer	6357363440	
65	UGVCL	Himatnagar	Bhiloda	Vijaynagar	V C Bhagora	Jr. Engineer	7069056940	
66	UGVCL	Himatnagar	Bhiloda	Vijaynagar	K N Malavia	Jr. Engineer	9978934010	
67	UGVCL	Himatnagar	Idar		Shri G B Solanki	Executive Engineer	9925212467	
68	UGVCL	Himatnagar	Idar	-	V R Barot	Dy.Engineer	9879200810	
69	UGVCL	Himatnagar	Idar	-	K V Joshiyara	Dy.Engineer	8980031181	
70	UGVCL	Himatnagar	Idar	-	K H Suthar	Jr. Engineer	9925212468	
71	UGVCL	Himatnagar	Idar	-	S J Sutariya	Jr. Engineer	9925212469	
72	UGVCL	Himatnagar	Idar	-	C S Nayi	Jr. Engineer	9925212470	
73	UGVCL	Himatnagar	Idar	IDAR(Town)	B Y Barot	Dy.Engineer	9925212464	
74	UGVCL	Himatnagar	Idar	IDAR(Town)	H H Soni	Jr. Engineer	9925212704	
75	UGVCL	Himatnagar	Idar	IDAR(Town)	S G Parker	Jr. Engineer	9925212705	
76	UGVCL	Himatnagar	Idar	IDAR(Rural)	B D Gadsa	Dy.Engineer	9879201684	
77	UGVCL	Himatnagar	Idar	IDAR(Rural)	H M Jaiswal	Jr. Engineer	9925212707	
78	UGVCL	Himatnagar	Idar	IDAR(Rural)	R G Rathod	Jr. Engineer	9925212706	
79	UGVCL	Himatnagar	Idar	Deshotar	S G Patel	Dy.Engineer	6359917412	
80	UGVCL	Himatnagar	Idar	Deshotar	S D Parmar	Jr. Engineer	6359917414	
81	UGVCL	Himatnagar	Idar	Deshotar	K S Patel	Jr. Engineer	6359917413	
82	UGVCL	Himatnagar	Idar	Vadali	N C Solanki	Dy.Engineer	9879201686	
83	UGVCL	Himatnagar	Idar	Vadali	R A Prajapati	Jr. Engineer	9925212889	

84	UGVCL	Himatnagar	Idar	Vadali	K K Priyadarshi	Jr. Engineer	9909939045	
85	UGVCL	Himatnagar	Idar	Khedbrahma	R V Baraiya	Dy.Engineer	9879201661	
86	UGVCL	Himatnagar	Idar	Khedbrahma	A H Khatri	Jr. Engineer	9925212709	
87	UGVCL	Himatnagar	Idar	Khedbrahma	S M Baranda	Jr. Engineer	9978934022	
88	UGVCL	Himatnagar	Idar	Jadar	Vacant Post	Dy.Engineer	9879201681	
89	UGVCL	Himatnagar	Idar	Jadar	A M Parmar	Jr. Engineer	9909936616	
90	UGVCL	Himatnagar	Idar	Jadar	R D Rathod	Jr. Engineer	9925212894	
91	UGVCL	Himatnagar	Idar	Kheroj	J A Damor	Dy.Engineer	9879201664	
92	UGVCL	Himatnagar	Idar	Poshina		Jr. Engineer	9409651705	
93	UGVCL	Himatnagar	Idar	Kheroj	J A Prajapati	Jr. Engineer	9925212710	
94	UGVCL	Himatnagar	Idar	Kheroj	V R Patel	Jr. Engineer	6357080689	

Sabarkantha District

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Legend

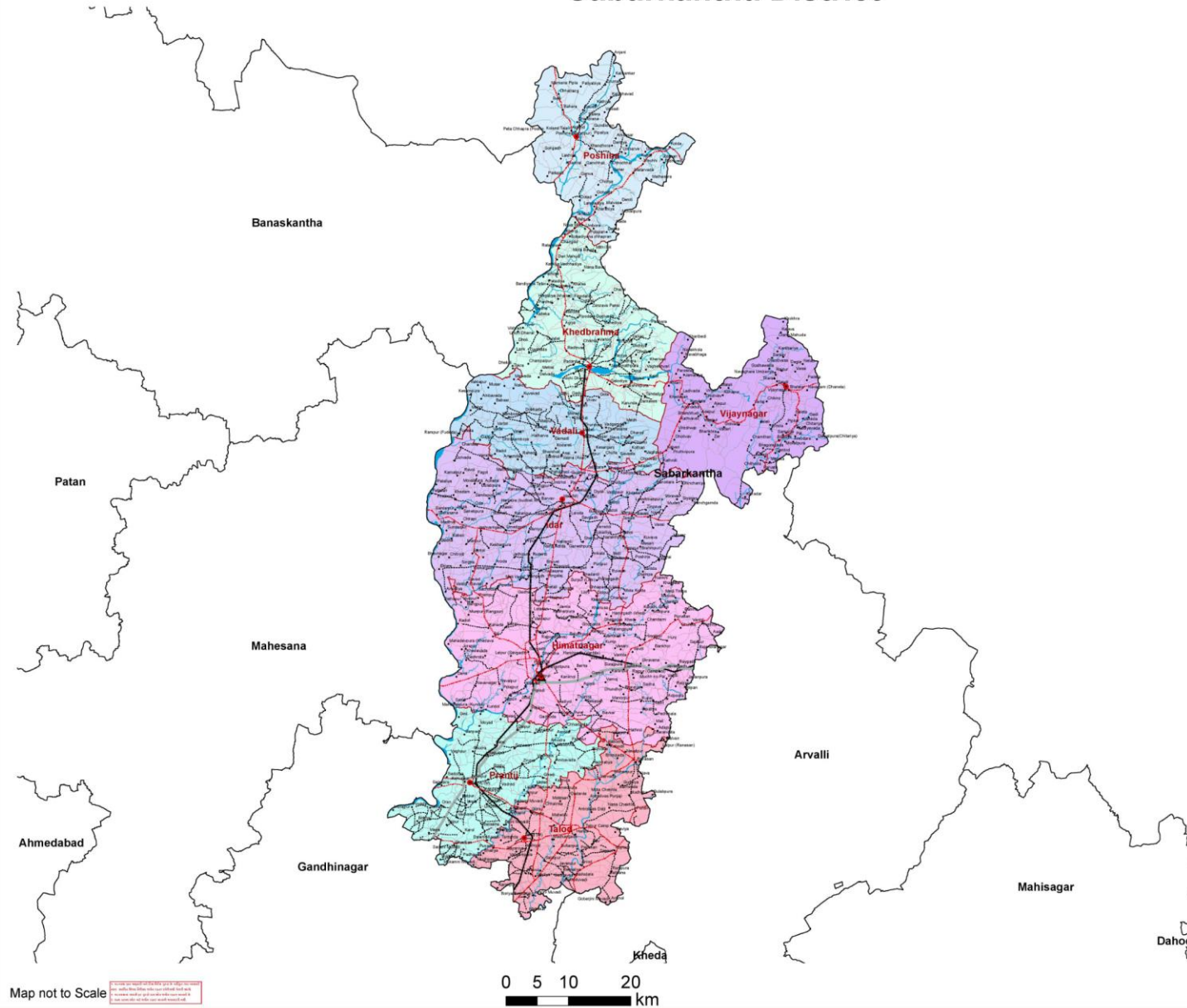
- Settlement
- Taluka Head Quarter
- ▲ District Head Quarter
- Village Boundary
- Taluka Boundary
- District Boundary
- Road**
 - Expressway
 - National Highway
 - State Highway
 - District Road
 - Village Road
- River
- Railway

Data Source:



Settlement commissionerate and Land Record

Prepared By:



Map not to Scale

For official use only

0 5 10 20 km

District : Sabarkantha Taluka : Himatnagar

For official use only



Legend

- Settlement
- Taluka Head Quarter
- Village Boundary
- Taluka Boundary
- District Boundary
- ~ River
- ≡≡≡ Railway
- Road**
 - Expressway
 - National Highway
 - - - State Highway
 - - - District Road
 - - - Village Road

Data Source:



Settlement commissionerate and Land Record

Prepared By:

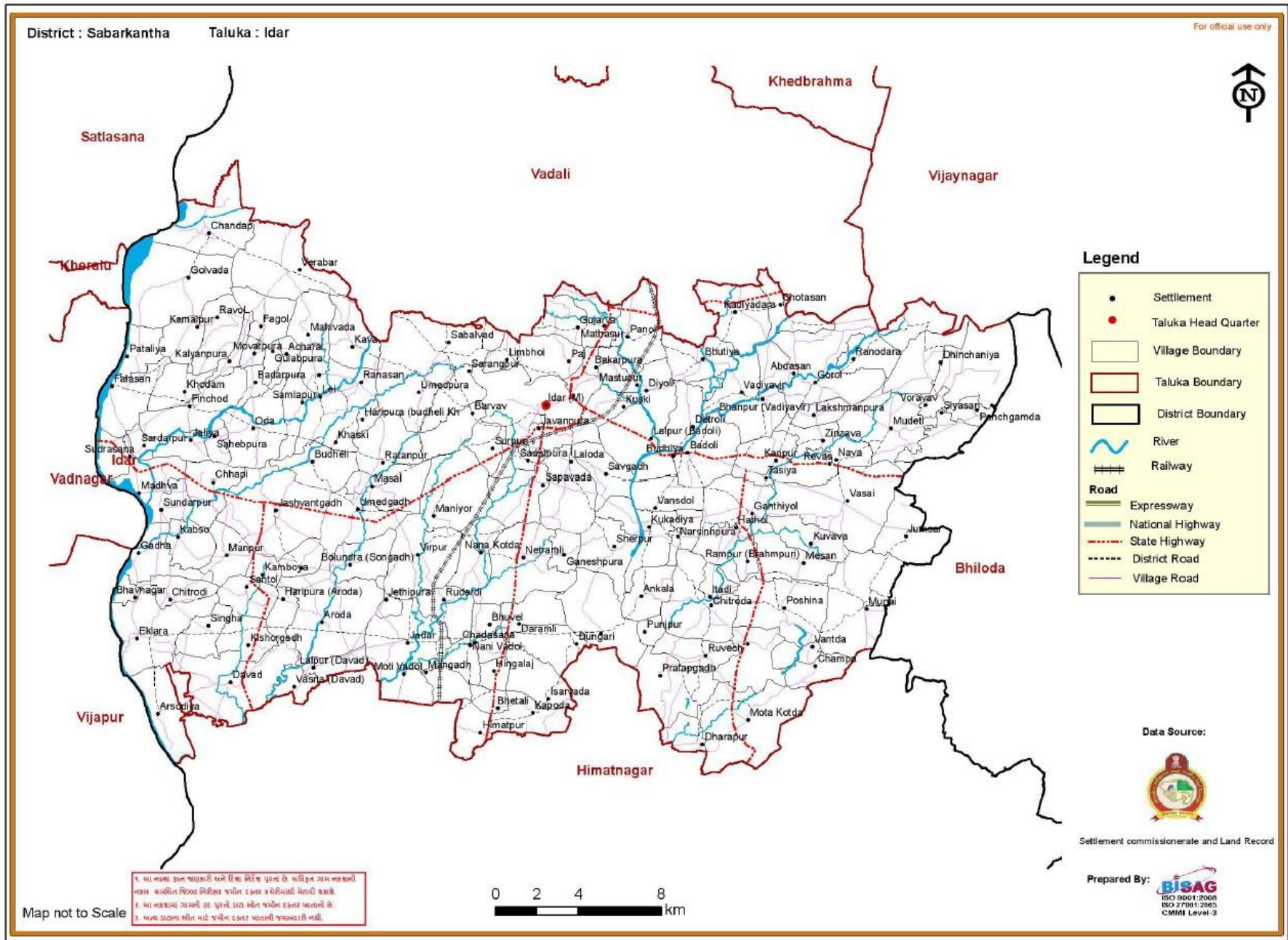


ISO 9001:2008
ISO 27001:2005
CMMI Level-3

Map not to Scale

૧. આ નકશા કલ્પનારથી અને વિશ્વકોષ પૂરાં છે. અવિરત ગુપ્ત નકશાની
સહાયતા સ્થાપિત વિસ્તાર નિર્માણ કરીને કાપેલ અને કાપેલીમાંથી વિતરણ કરાયેલ છે.
૨. આ નકશામાં ગામની કદ પૂરાં છે અને સ્થાન સ્થાન આપવામાં છે.
૩. આ નકશામાં સ્થાન અને સ્થાન સ્થાન આપવામાં છે.

0 1.5 3 6 km



District : Sabarkantha Taluka : Khedbrahma

For official use only



Legend

- Settlement
- Taluka Head Quarter
- Village Boundary
- Taluka Boundary
- District Boundary
- ~ River
- ≡ Railway
- Road**
 - Expressway
 - National Highway
 - - - State Highway
 - - - District Road
 - Village Road

Data Source:



Settlement commissionerate and Land Record

Prepared By:



ISO 9001:2008
ISO 27001:2005
CMMI Level-3

Map not to Scale

Idar

૧. આ નકશા ક્ષેત્ર જાણકારી અને ડિજિટાઇઝેશન પૂરતો છે. અધિકૃત ગ્રામ નકશાની તુલના સહિતના વિભાગ નિરીક્ષણ અંગેના દસ્તાવેજોની આધારે તૈયાર છે.
૨. આ નકશામાં ગ્રામની કુલ પુરતો ક્ષેત્ર અને જમીન ક્ષેત્ર માત્રનો છે.
૩. આ નકશામાં કોઈ પણ જમીન ક્ષેત્ર માત્રની જાણકારી નથી.

0 2 4 8 km

District : Sabarkantha Taluka : Poshina

For official use only



Legend

- Settlement
- Taluka Head Quarter
- Village Boundary
- Taluka Boundary
- District Boundary
- ~ River
- ≡≡≡ Railway
- Road**
 - Expressway
 - National Highway
 - State Highway
 - District Road
 - Village Road



1. આ નકશા કલેક્ટરશ્રી અને ટીકા સિદ્ધિ પુરાણે છે અધિકૃત ગ્રામ નકશાની નકલ. કાયદેસરના નિર્ણય અનુસાર કાયદેસરની પેટાલી છે.
2. આ નકશામાં ગ્રામની રેલ પુરાણે કલેક્ટરશ્રી અનુસાર આપવામાં છે.
3. આ નકશામાં ગ્રામની રેલ પુરાણે કલેક્ટરશ્રી અનુસાર આપવામાં છે.

Map not to Scale

Data Source:



Settlement commissionerate and Land Record

Prepared By:



ISO 9001:2008
ISO 27001:2005
CMMI Level-3

District : Sabarkantha Taluka : Prantij

For official use only



Legend

- Settlement
- Taluka Head Quarter
- Village Boundary
- Taluka Boundary
- District Boundary
- ~ River
- ≡ Railway
- Road**
- Expressway
- National Highway
- State Highway
- District Road
- Village Road

Data Source:



Settlement commissionerate and Land Record

Prepared By:



Map not to Scale

૧. આ નકશા ઉપર ગામડાઓ અને રેલ્વે લાઇન દર્શાવેલ છે. અન્ય વિગતો માટે સરકારી નકશાઓ જાણવા માટે સરકારી નકશા વિભાગ સંપર્ક કરવામાં આવેલા છે.
૨. આ નકશામાં ગામડાઓ અને રેલ્વે લાઇન દર્શાવેલ છે. અન્ય વિગતો માટે સરકારી નકશાઓ જાણવા માટે સરકારી નકશા વિભાગ સંપર્ક કરવામાં આવેલા છે.
૩. આ નકશામાં ગામડાઓ અને રેલ્વે લાઇન દર્શાવેલ છે. અન્ય વિગતો માટે સરકારી નકશાઓ જાણવા માટે સરકારી નકશા વિભાગ સંપર્ક કરવામાં આવેલા છે.

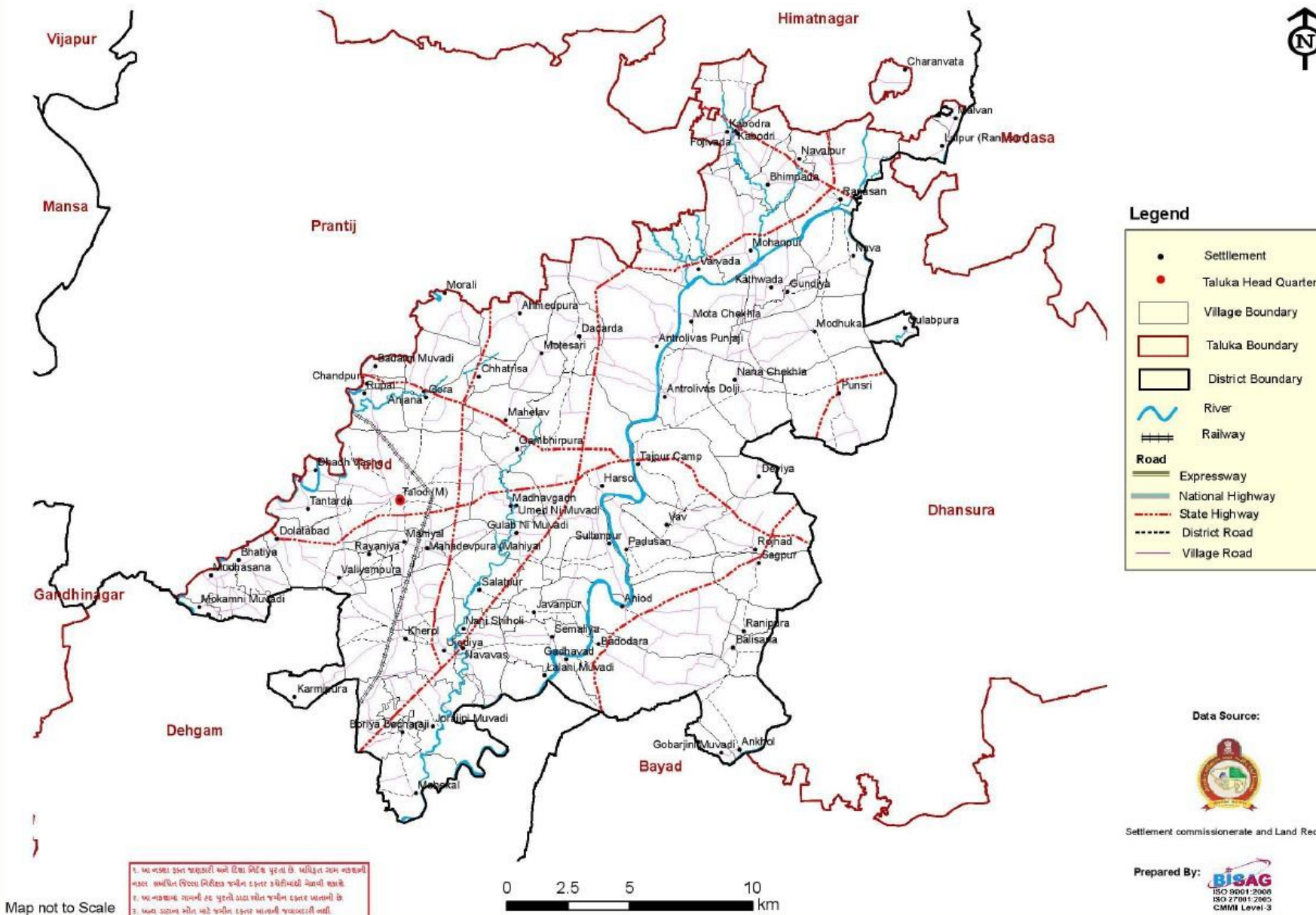
0 2 4 8

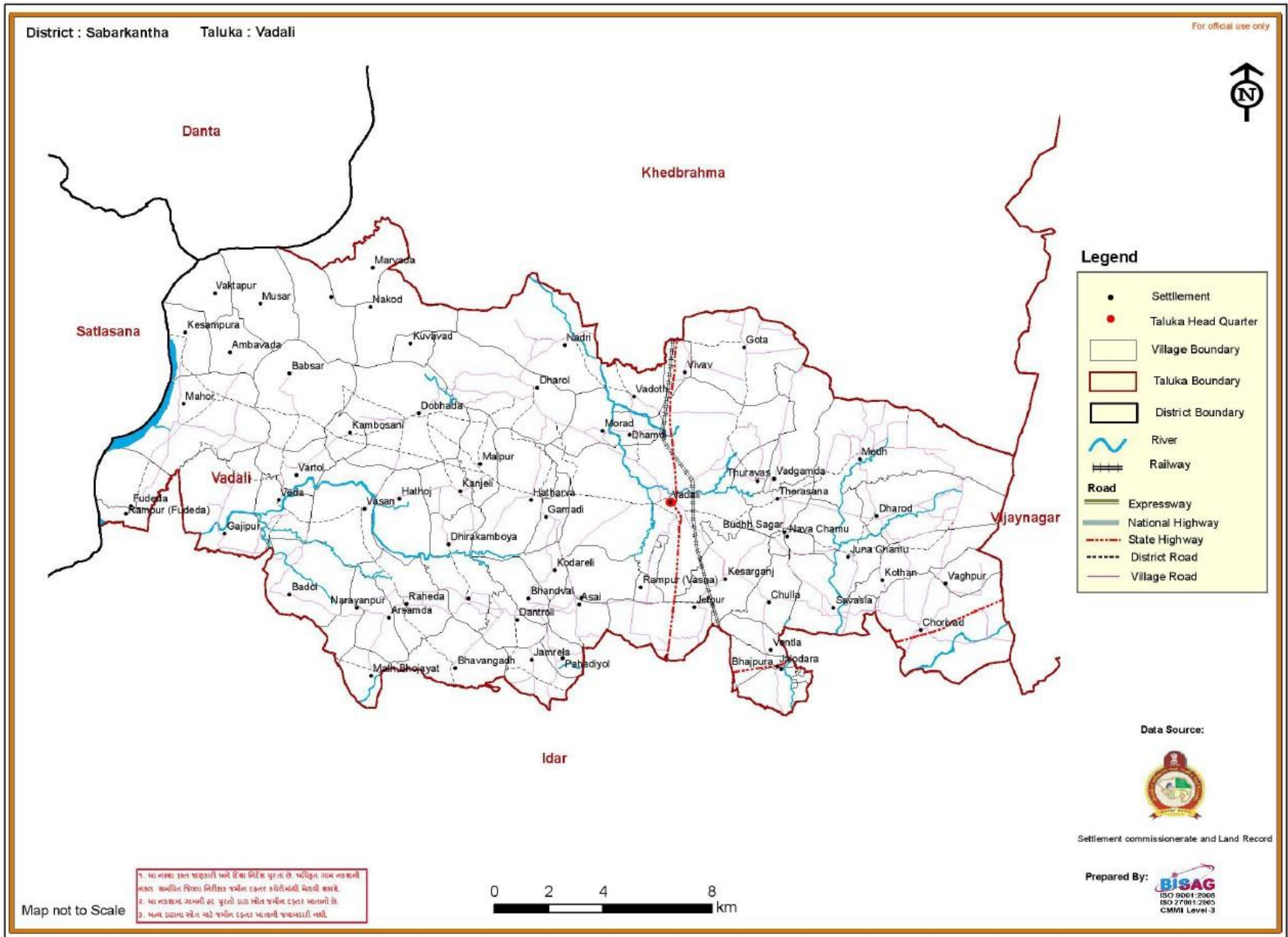
Ask AI Assistant

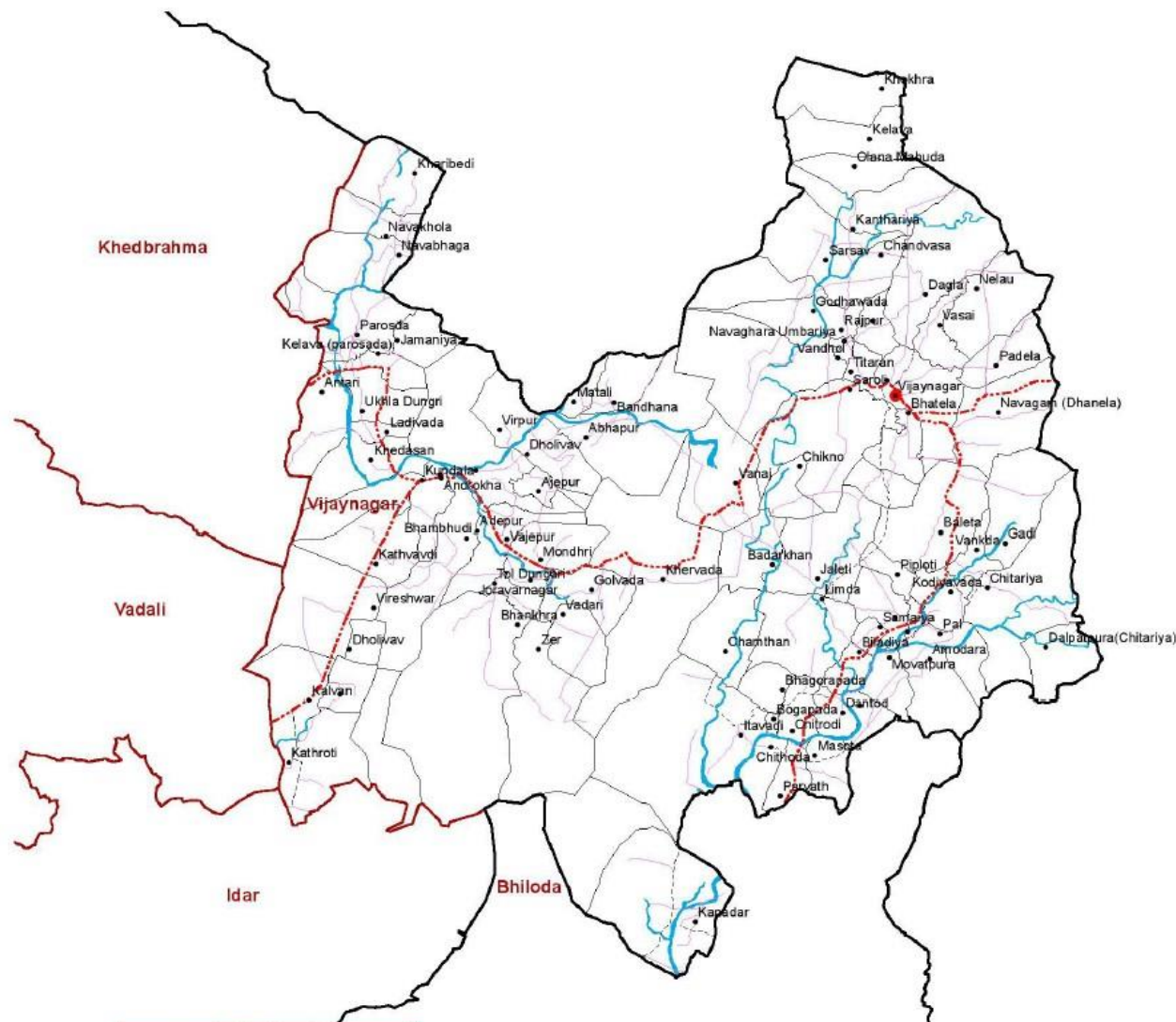
Why is this information important?

District : Sabarkantha Taluka : Talod

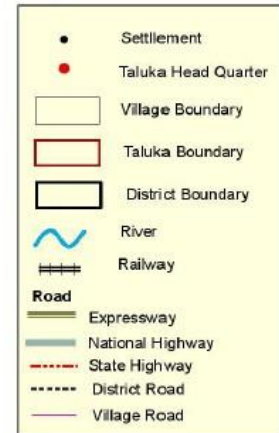
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Legend



Data Source:



Settlement commissioner and Land Record

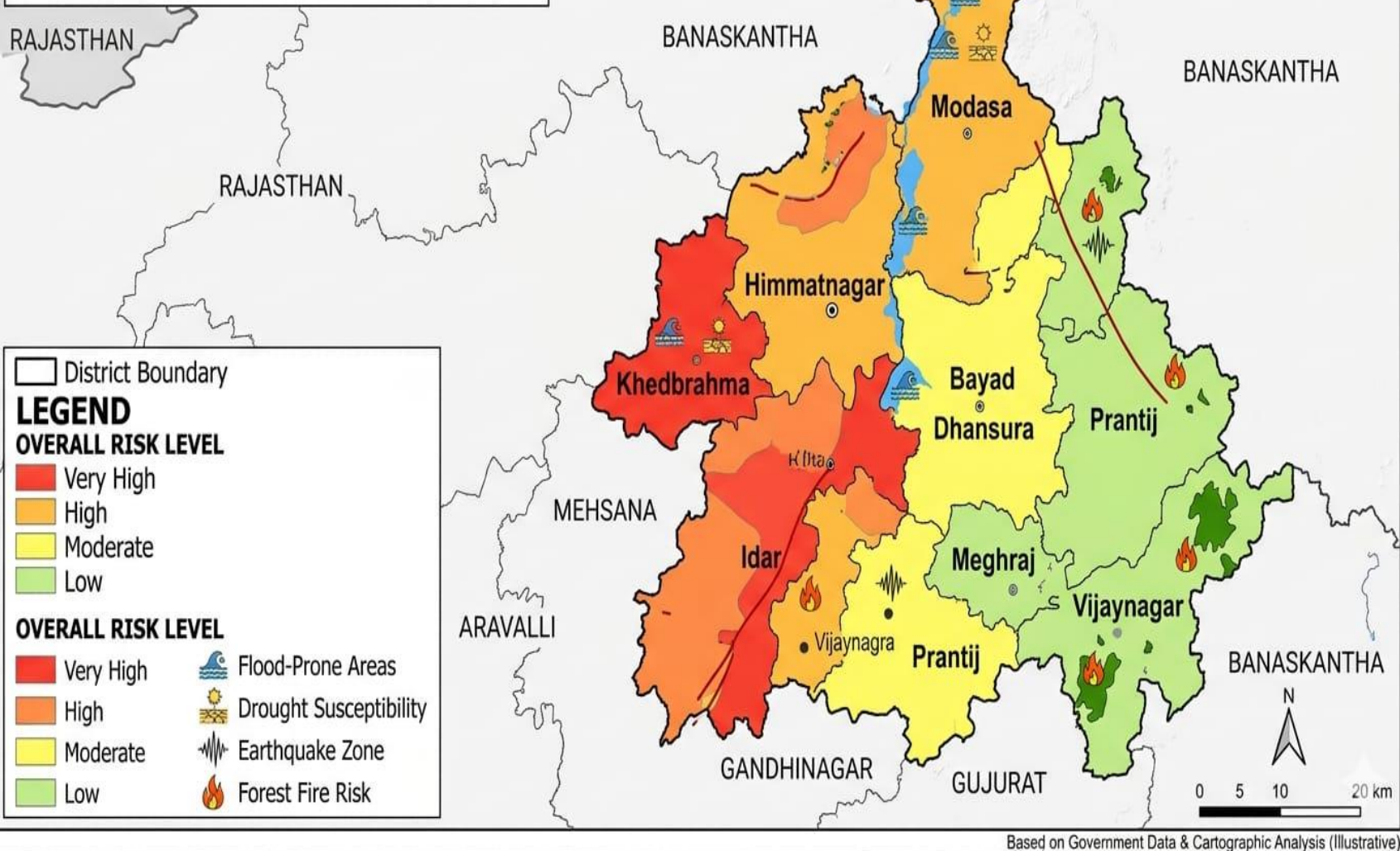
Prepared By: **BISAG**
ISO 9001:2008
ISO 27001:2005
CMMI Level-3

૧. આ નકશા રાજ્ય સરકારની અને રાજ્ય સરકારના પુરાતન અને સરકારી
નકશા સહિતના વિવિધ સ્ત્રોતોના ઉપરથી તૈયાર કરવામાં આવેલ છે.
૨. આ નકશામાં સમાવેલ છે. પુરાતન અને સરકારી નકશાઓના ઉપર
૩. આ નકશામાં સમાવેલ છે. પુરાતન અને સરકારી નકશાઓના ઉપર

Map not to Scale

0 2.5 5 10 km

SABARKANTHA DISTRICT: HAZARD RISK PROFILE MAP



SABARKANTHA DISTRICT HAZARD MAP

HAZARD ZONATION MAP



Legend

Hazard Zonation

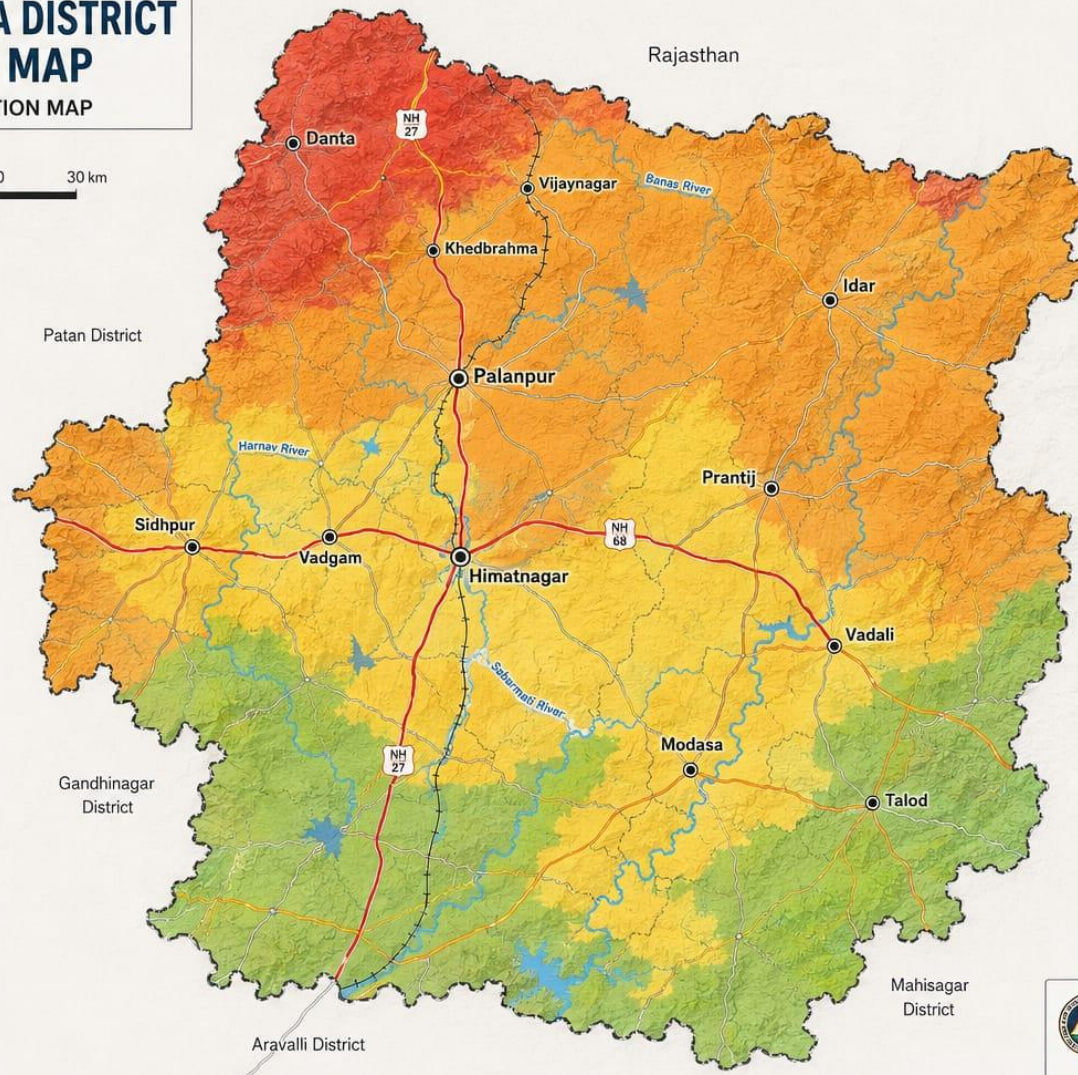
- **Very High Hazard Zone**
(Flood, Drought, Landslide, High Seismic Risk)
- **High Hazard Zone**
(Flood, Drought, Landslide, Moderate-High Seismic Risk)
- **Moderate Hazard Zone**
(Flood, Drought, Moderate Seismic Risk)
- **Low Hazard Zone**
(Low Flood, Low Drought, Low Seismic Risk)

Map Symbolology

- District Boundary
- Taluka Boundary
- National Highway
- State Highway
- Major Road
- + Railway Line
- River / Waterbody
- Major Town
- Other Town / Village

Hazard Considered

- ~ Flood
- ~ Drought
- ~ Landslide / Soil Erosion
- ~ Earthquake (Seismic)



Location Map



HAZARD ZONE DESCRIPTION

- **VERY HIGH HAZARD ZONE**
High flood potential along rivers, steep slopes / landslide prone areas, high drought vulnerability and high seismic risk (Zone IV).
- **HIGH HAZARD ZONE**
Moderate to high flood potential, drought prone areas and moderate-high seismic risk (Zone III-IV).
- **MODERATE HAZARD ZONE**
Moderate flood potential and drought risk, moderate seismic risk (Zone III).
- **LOW HAZARD ZONE**
Low flood and drought risk, low landslide potential, low seismic risk (Zone II).

DATA SOURCE

- GSDMA Hazard Zonation Map (2nd Edition)
- ISRO - NRSC (DEM, Rivers)
- Census of India 2011
- Soil & Water Conservation Dept.
- District Administration, Sabarkantha

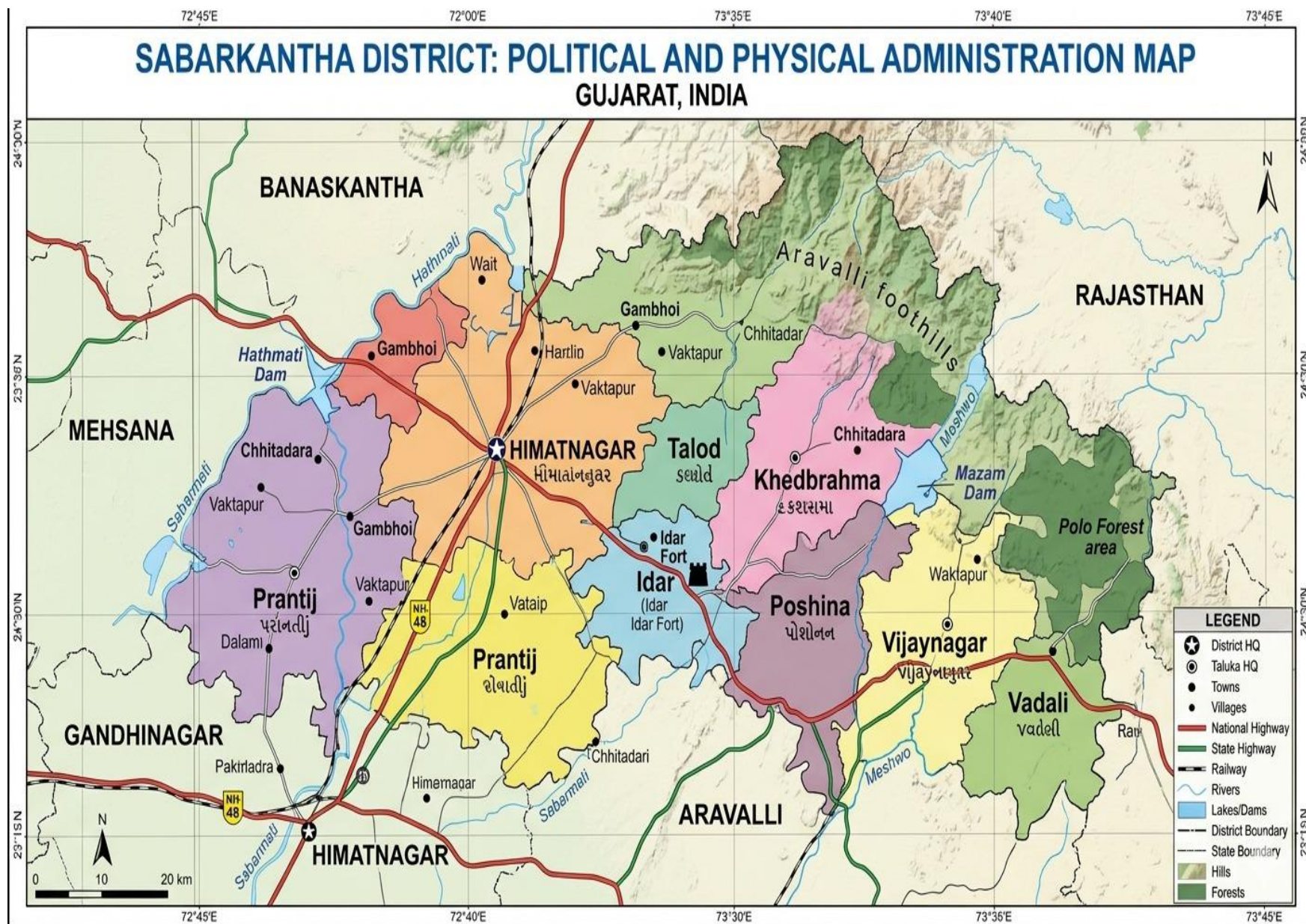
DISCLAIMER

This map is prepared for planning and awareness purpose only. Boundaries and features shown are not to be used for legal reference.



Prepared by:
District Disaster Management Authority
Sabarkantha, Gujarat

Date: May 2024



SABARKANTHA DISTRICT: CRITICAL INFRASTRUCTURE

A Mapping of Transport Networks, Power Generation, and Strategic Sites



LEGEND

- Very High Risk
- High Risk
- Moderate Risk
- Low Risk
- Very Low Risk

Transport Networks

- Major highways
- Rail line
- Air
- Railway station

Energy Generation

- Thermal
- Solar
- Nuclear grid

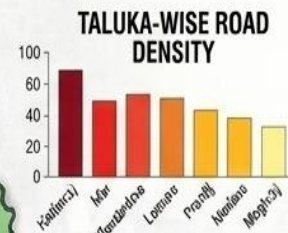
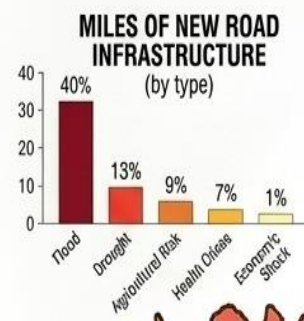
Power Distribution

- Grid lines
- Substations

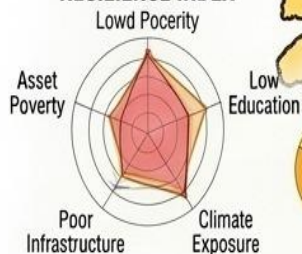
Strategic Sites

- District Court
- Hospital
- New Industrial zones

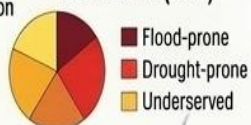
*A composite illustrative mapping of district infrastructure. Specific locations are representative and should be verified with official sources.



INFRASTRUCTURE RESILIENCE INDEX



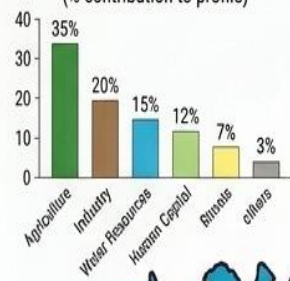
ENERGY MIX BY CAPACITY (MW)



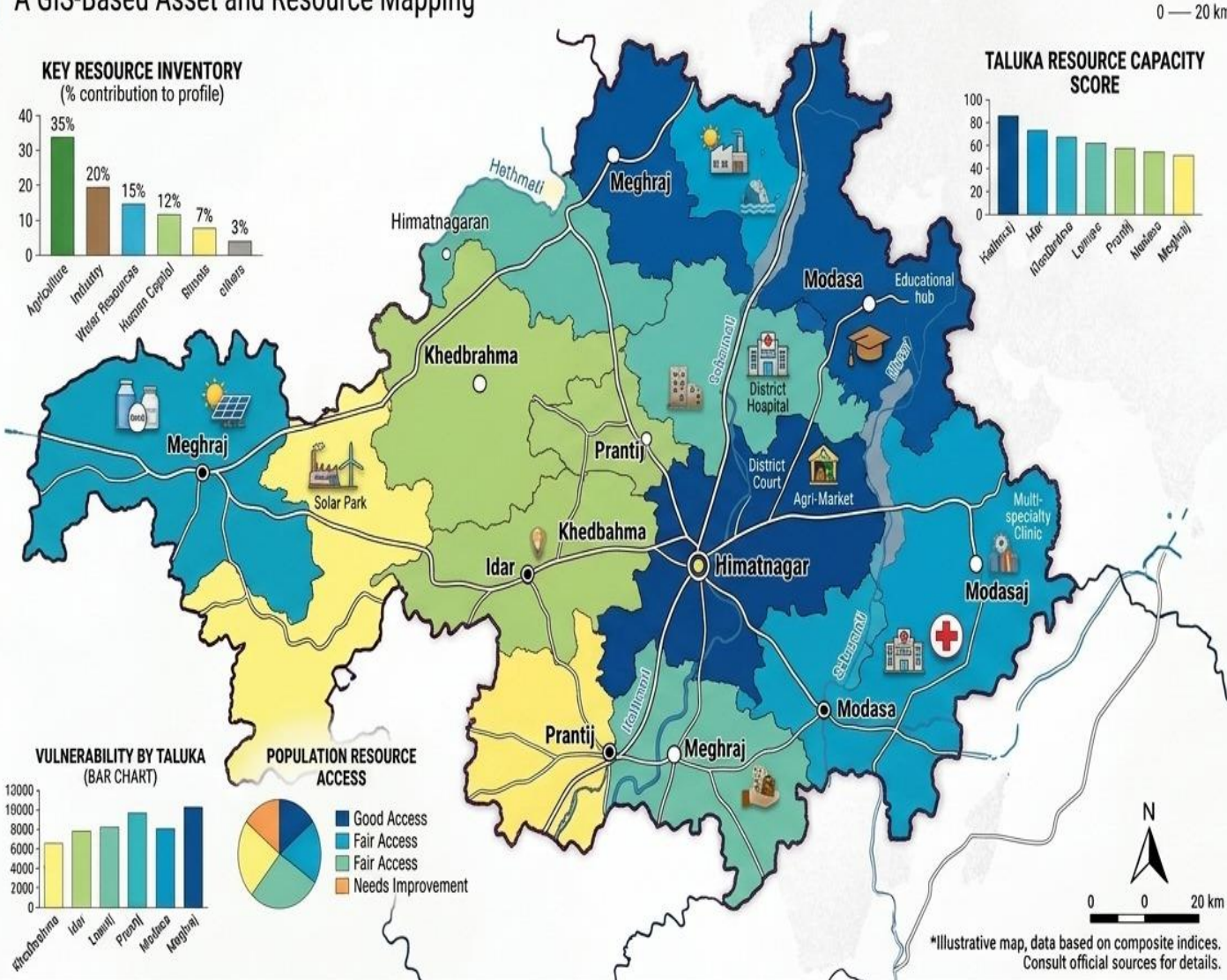
SABARKANTHA DISTRICT CAPACITY AND RESOURCE PROFILE

A GIS-Based Asset and Resource Mapping

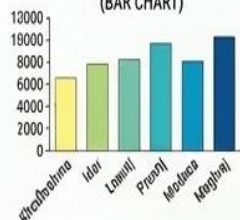
KEY RESOURCE INVENTORY (% contribution to profile)



TALUKA RESOURCE CAPACITY SCORE



VULNERABILITY BY TALUKA (BAR CHART)



POPULATION RESOURCE ACCESS



LEGEND

- Very High Capacity
- High Capacity
- Moderate Capacity
- Developing Capacity
- Low Capacity



WATER RESOURCE AVAILABILITY
Rivers, check dams, canal networks for irrigation and supply



AGRICULTURAL ASSETS
Major crop production, APMC markets, Cold storage facilities



EDUCATIONAL HUB
Universities, professional colleges, vocational training



HEALTHCARE INFRASTRUCTURE
Hospitals, Clinics, Primary Health Centers (PHCs)



INDUSTRIAL & RENEWABLE ENERGY
GIDC estates, Small-scale industries, Solar parks

*Illustrative map, data based on composite indices. Consult official sources for details.

