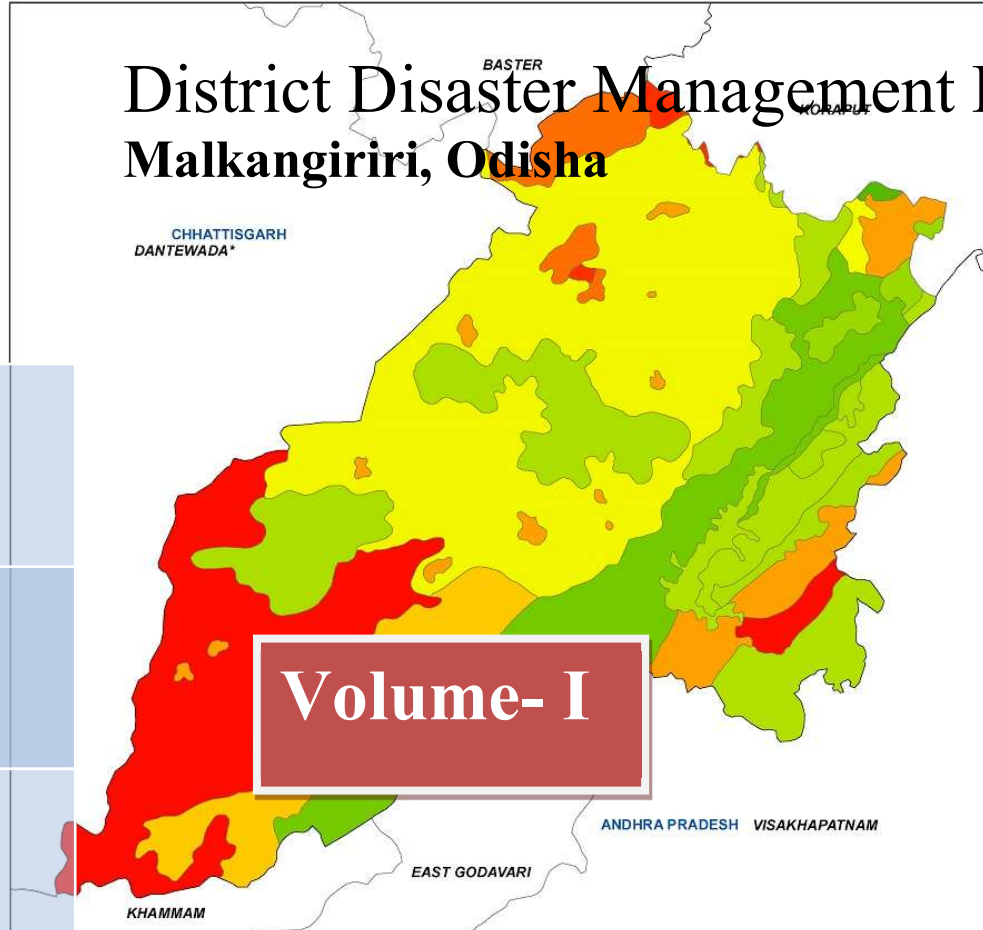


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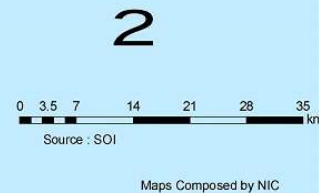
# District Disaster Management Plan Malkangiriri, Odisha



Volume- I

Volume II accessible from  
[Http://oridistportalcontent.nic.in/storedata/document/DDMP-II-2023.pdf](http://oridistportalcontent.nic.in/storedata/document/DDMP-II-2023.pdf)

Legend  
State Boundary  
District Boundary





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## **P R E F A C E**

The Disaster management Act, 2005 mandates for development of comprehensive and holistic District Disaster Management Plan (DDMP) to negate the impact of disasters on the communities, to facilitate timely and effective response to the disasters, and to facilitate holistic disaster management through integration of mitigation, preparedness and DRR measures into development. In the disaster concern, Malkangiri district is multihazard prone as per its geographic, socio-economic and climatic condition. Therefore, a systematic process of mainstreaming of DRR is required in our developmental agenda for developing the District Disaster management Plan for more flexible and holistic in nature.

The District Disaster Management Plan prepared with incorporating the developmental plan adopting the three landmarks of international agreement i.e. Sendai Framework for DRR-2015, Sustainable developmental goals 2015-2030 and Paris agreement on Climate change at 21<sup>st</sup> of parties under United National Framework Convention on Climate Change in December 2015. The Sendai Framework for DRR-2015 has a sharper focus on preventing the creation of new risk and improving the governance of disaster risk reduction.

The District has adopted a novel, concise and action oriented approach towards structuring of the document of District Disaster Management Plan (DDMP). The structure adopted has tried to minimise excessive narrative text and has focused sharply on the thematic area for planning and implementation with clearly defined roles and responsibilities. It has attempted to highlight who among the line department agencies are responsible for what and when. The document enjoins all the stakeholders to develop detailed plans in accordance with the responsibilities commensurate with their role to reduce disaster risk at local level and to respond when a disaster strikes in any part of the district if their involvement is required as per the assessment of the situation. The disaster management plan document includes the information which has been collected from various formal and informal sources with a view to meet the challenges during any Natural and manmade disaster. This plan has been prepared after intensive discussion and interactions with different stakeholders like Government Offices, Non-Government Organisations, Peoples' Representatives and Community-Based Organizations.

This Plan has included various short, medium- and long-term measures. Some of these will have to be implemented concurrently rather than sequentially. The scales of implementation as well as institutional

complexity involved in implementation vary depending on the specific measures. The Plan also lays out the coordination structures at varied levels along with defined level for responses as per the impact of the incident.

The Plan will work as guide and reference for all the functionaries involved in prevention and mitigation of disaster. With continuous degradation of Natural Resources and Environment, the frequency of disaster strike is increasing and is likely to increase further. The State Specific or the local disaster like drowning, snake bite, lightning is increasing in numbers. As per the district disaster event the snakebite and drowning case is most vulnerable to this district. Therefore, it is essential that full-proof measures and plans are put in place to mitigate the sufferings of the affected persons and reduce the impact of disaster. It requires a tremendous sense of commitment and sincerity on the part of Government officials and other stakeholders involved. With this in mind, the present Master Plan is aimed at providing necessary guidelines and help in tackling the disaster in a better way by the Government and other Non-Government functionaries.

I give my thanks to all the Officers for their sincere involvement and inputs for making this Disaster Management Plan. My sincere thanks also to the officer/staff of District Emergency Operation Centre, who have rendered their tireless efforts in preparation of this Document. All other district level officials of various line departments of Government & Non-Government Organisations who have put their utmost efforts in bringing out this operational plan on Disaster Management are also deserve praise for their contribution.

May these efforts help the actual persons for whom it is intended i.e. the victims of Disaster.

**Shri Vishal Singh, IAS  
Collector & District Magistrate  
Malkangiri.**

## Abbreviation

AAO : Assistant Agriculture Officer  
ACSO : Assistance Supply Officer  
ADB : Asian Development Bank  
ADMO : Additional District Medical Officer  
ADVO : Additional District Veterinary Officer  
APRS : Automatic Position Reporting System  
ARC : Administrative Reforms Commission  
ASHA : Accredited Social Health Activist  
ATC : Air Traffic Control  
ATI : Administrative Training Institute  
BEO : Block Education Officer  
BIS : Bureau of Indian Standard  
CADP : Community Awareness on Disaster Preparedness  
CBDM : Community Based Disaster Management  
CBDP : Community Based Disaster Preparedness  
CBO : Community Based Organization  
CBRN : Chemical Biological Radiological Nuclear  
CBSE : Central Board of Secondary Education  
CCF : Community Contingency Fund  
CCMNC : Cabinet Committee on Management of Natural Calamities  
CCS : Cabinet Committee on Security  
CDMO : Chief District Medical Officer  
CDVO : Chief District Veterinary Officer  
CDRN : Corporate Disaster Resource Network  
CFCs : Chlorofluorocarbons  
CGI : Corrugated Galvanized Integrated  
CMG : Crisis Management Group  
CRF : Calamity Relief Fund  
CS : Chief Secretary  
CSO : Civil Society Organization  
CSO : Civil Supply Officer  
CSR: Corporate Social Responsibility

DAO : District Agriculture Officer  
DDMP- District Disaster Management Plan  
DDMA- District Disaster Management Authority  
DDMA : District Disaster Management Authority/Delhi Disaster Management Authority  
DEO District Education Officer  
DEOC- District Emergency Operation Centre  
DFID : Department of International Development  
DIPECHO : Disaster Preparedness European Commission's Humanitarian Aid Department  
DLO: District Labour Officer  
DM : Disaster Management  
DMC : Disaster Management Committee  
DMD : Disaster Management Department  
DMF : Disaster Management Facility  
DPM : District Programme Manager  
DRM : Disaster Risk Management  
DRR : Disaster Risk Reduction  
DSWO : District Social Welfare Officer  
EIA : Environmental Impact Assessment  
EIC : Emergency Information Centre.  
ENSO : El Nino-Southern Oscillation  
EOC : Emergency Operation Centre  
FC : Finance Commission  
FFTP : Face-to-Face Training Programme  
GHG : Green House Gas  
GIS : Geographic Information System  
GO : Government Official  
GoI : Government of India  
GP : Gram Panchayat  
HCFCs : Hydrochloric Fluorocarbons  
HLC : High Level Committee  
HPC : High Powered Committee  
HRVA- Hazard Risk and Vulnerability Analysis  
HS : Home Secretary  
HUDCO : Housing and Urban Development Corporation  
IBRD : International Bank for Reconstruction and Development

ICDS : Integrated Child Development Services  
ICS : Incident Command System  
ICT : Information Communication Technology  
IDNDR : International Decade for Natural Disaster Reduction  
IDRN : India Disaster Resource Network  
IEC : Information Education Communication  
IFRC : International Federation of the Red Cross  
IGNOU : Indira Gandhi National Open University  
IIRS : Indian Institute of Remote Sensing  
ILO : International Labour Organization  
IMD : India Meteorological Department  
IMG : Inter-Ministerial Group  
IRS : Incident Response System  
KSA : Knowledge Skill Attitude  
LI : Life stock Inspector  
LI: Labour Inspector  
LOS : Law of the Sea  
LRRD : Linking Relief and Rehabilitation with Development  
MCE : Mass Casualty Event  
MFO : Micro-Finance Organization  
MHA : Ministry of Home Affairs  
MI : Marketing Inspector  
MO : Medical Officer  
MVI : Motor Vehicle Inspector  
NBC : Nuclear Biological Chemical  
NFSA: National Food Security Act.  
NCAP : National Contingency Action Plan  
NCCF : National Calamity Contingency Fund.  
NCCM : National Crisis Management Committee  
NCRMP : National Cyclone Risk Mitigation Project  
NDCNP : National Disaster Communication Network Project  
NDMA : National Disaster Management Authority  
NDMRC : National Disaster Mitigation Resource Centre  
NDRF : National Disaster Response Force/National Disaster Response Fund  
NEC : National Executive Committee

NERMP : National Earthquake Risk Mitigation Project  
NGO : Non-Governmental Organization  
NIAR : National Institute of Amateur Radio  
NIDM : National Institute of Disaster Management  
NSS : National Service Scheme  
NSSP : National School Safety Project  
PESA : Panchayat Extension to Scheduled Areas  
PGDDM : Post Graduate Diploma in Disaster Management  
PPP : Public-Private Partnership  
PRI : Panchayati Raj Institution  
RTO : Regional Transport Officer  
SAR : Search and Rescue  
SDMA : State Disaster Management Authority  
SDRF : State Disaster Relief Fund  
SDWO : Sub-divisional Welfare Officer  
SEC : State Executive Committee  
SHG : Self-Help Group  
SI : Supply Inspector  
SOP : Standard Operating Procedure  
SSA : Sarva Shiksha Abhiyan  
TNA : Training Needs Analysis  
ULB : Urban Local Body  
UNDP : United Nations Development Programme  
UNESCO : United Nations Educational, Scientific and Cultural Organization  
UNFCCC : United Nations Framework Convention on Climate Change  
UNISDR : United Nations International Strategy for Disaster Reduction  
USAID : United States Agency for International Aid  
V/CA : Vulnerability/Capacity Assessment  
VDMC : Village Disaster Management Committee  
VAW : Village Agriculture Worker  
WHO : World Health Organization.

# Chapter – 1:

## Introduction

Under the DM Act 2005, it is mandatory on the part of District Disaster Management Authority (DDMA) to adopt a continuous and integrated process of planning, organizing, coordinating and implementing measures which are necessary and expedient for prevention as well as mitigation of disasters. These processes are to be incorporated in the developmental plans of the different departments and preparedness to meet the disaster and relief, rescue and rehabilitation thereafter, so as to minimize the loss to be suffered by the communities and are to be documented so that it is handy and accessible to the general public.

**Section 31 of Disaster Management Act 2005 (DM Act) makes it mandatory** to have a disaster management plan for every district. DDMP shall include Hazard Vulnerability Capacity and Risk Assessment (HVCRA), prevention, mitigation, preparedness measures, response plan and procedures.

### 1.1 Aims and Objectives of the DDMP:

- To identify the areas vulnerable to major types of the hazards in the district.
- To adopt proactive measures at district level by all the govt. departments to prevent disaster and mitigate its effects.
- To define and assign the different tasks and responsibilities to stakeholders during the pre-disaster and post-disaster phases of the disaster.
- To enhance disaster resilience of the people in the district by way of capacity building.
- Reduce the loss of public and private property, especially critical facilities and infrastructure, through proper planning.
- Manage future development to mitigate the effect of natural hazards in the district.
- To develop the standardized mechanism to respond to disaster situation to manage the disaster efficiently.
- To prepare a response plan based upon the guidelines issued in the State Disaster Management Plan so as to provide prompt relief, rescue and search support in the disaster affected areas.
- To adopt disaster resilient construction mechanism in the district by way of using Information, Education and Communication for making the community aware of the need of disaster resilient future development.
- To make the use of media in disaster management.
- Rehabilitation plan of the affected people and reconstruction measures to be taken by different govt. departments at district level and local authority.

The District Disaster Management Plan (DDMP) is the guide for achieving the objective i.e. mitigation, preparedness, response and recovery. This Plan needs to be prepared to respond to disasters with sense of urgency in a planned way to minimize human, property and environmental loss.

## 1.2 Preparation and Approval of DDMP:

As defined in Section 30 of DM Act 2005, DDMA shall act as the district planning; coordinating and implementing body for disaster management and take all measures for the purpose of disaster management in the district in accordance with the guidelines laid down by the National Authority and the State Authority.

The district Collector will discuss the modalities and seek views for preparation of a holistic plan in the meeting of the DDMA held in the month of January and to prepare the plan by the end of February every year.

After finalisation the District Authority shall send a copy of the District DM plan to the State Disaster Management Authority for approval.

The District Disaster Management Plan should be reviewed and updated annually.

## 1.3 Evolution of DDMP in brief: Evolution, Procedure and Methodology to be followed for preparation of DDMP

Pursuing the provisions of the Disaster Management Act 2005, Malkangiri District Authority decided to prepare a Disaster Management Plan for the Malkangiri district and thus are exposed to various kinds of hazards, risks and vulnerabilities. For the purpose of reducing the effect, District Administration of Malkangiri has prepared the plan.

The silent Term of Reference of the project is stated in the section below:

### Scope of the Plan

As per the terms of reference of the project, the plan shall be comprehensive and holistic in nature and suggest measures pertaining to different cycles of disaster management such as disaster prevention and mitigation, disaster response including evacuation, temporary shelter and rehabilitation plan at time of emergency.

The terms of reference of the project specifically include the following:

This plan has been prepared on the basis of the following studies:

#### (a) Hazard Analysis

The study includes various types of hazards such as earthquake, flood, Cyclone, fire, chemical and industrial accidents, road accidents, etc., and potential hazards such as Communal riot, nuclear, biological or chemical threat, etc.

#### (b) Risk Analysis

The risk analysis of the Malkangiri District in terms of its physical, socio-economic and environmental features shall be carried out.

### (c) Vulnerability Analysis

The vulnerability analysis of the district in terms of physical, socio- economic and environmental aspects shall be undertaken.

### (d) Disaster Management Strategy

The disaster management strategy shall be developed on the basis of hazard and risk analysis as stated above and will include both structural and non-structural mitigation measures.

## 1.3.2 Contents of the Comprehensive Disaster Management Plan

The Disaster Management Plan (DMP) include the following:

- Preparation of a comprehensive disaster resistant building code which will include features like earthquake resistant construction technology for various types of buildings to regulate all future constructions.
- Assessment of existing high-rise buildings (seven stories and above) and recommendation of measures required for making these buildings safe for its residents and other users.
- Assessment of all existing lifeline buildings such as schools, colleges, hospitals, dispensaries, cinema halls, shopping malls, etc., and recommendation of measures required for making these buildings safe for its users.
- Preparation of detailed guidelines for retrofitting all other buildings which can be followed by owners and other users.
- Assessment of fire safety of various types of buildings and measures required for making these buildings safe.
- Preparation of a detailed rescue, evacuation, temporary shelter and rehabilitation plan in times of emergency;
- Preparation of a framework for involving the community level organizations such as residents' association, NGOs etc. in the preparation and implementation of the Disaster Management Plan;
- Assessment of existing institutional and other arrangements for dealing with situations of disaster in the neighbour district and recommendation of institutional arrangements required for implementation of DMP;
- Assessment of hazard and risks in the rural areas within the territorial jurisdiction Malkangiri and recommendation of special additional measures required for risk management in such areas;
- Studying the institutional and operational linkages of the governance of Malkangiri District Administration and recommending measures for further strengthening the linkages during emergency situations.

## 1.3.3 Objectives

The objectives for preparation of this Disaster Management Plan are:

- Highlight the salient physical, socio-economic and environmental characteristics of Malkangiri to understand the associated hazards, risks and vulnerabilities.
- Identify the strategies, programs and actions that would lead to risk reduction through settlement planning and environmental safeguards.
- Prepare a disaster management plan for the district to provide a framework for concerted and effective intervention by stakeholders to deal with the problems of risks and vulnerabilities in the area in respect of physical, socio- economic and environmental aspects.

#### 1.3.4 Methodology

Lessons from previous disasters show that the best way to mitigate disasters and reduce their impact is through advance preparation and timely action. In some situations, for instance, that are caused by fire; it may even be possible to prevent disaster. This district is at risk of natural and man-made disasters, for example, risk of floods and cyclone appears to be quite high. Two blocks of this district being situated adjacent to Bay of Bengal are vulnerable to Tsunami. It is therefore necessary to prepare a disaster management plan for ensuring environmental safety and competitive economic growth and safe living in these areas.

The general methodology to prepare the holistic plan and the steps involved therein are outlined below:

Step 1- Identification of natural and man-made hazards

Step 2 Appointment of a multi-disciplinary team of experts to analyze each hazard in detail, make quantitative and qualitative assessments of the risks involved, and suggest measures to reduce risk. The experts also suggested measures for preparedness and timely action in the event of a disaster and also actions to prevent disaster wherever possible. It is expected that suggested measures would address all stakeholders, such as the public sector, the private sector, the NGOs and CBOs, the community leaders and their political representatives.

Step 3: Initiation workshop to discuss expected inputs from each expert and evolve a common framework and methodology for preparation of an integrated comprehensive disaster management plan for Malkangiri district and decide the broad structure of DM Plan.

Step 4: To organize a meeting of DDMA for threadbare discussion to give final shape to the District Disaster Management Plan.

Step 5: Compilation of a Project Report incorporating the feedback from the validation workshop.

Previously Malkangiri district had prepared its District Contingency Plan in May 2002. After that this district prepared its District Disaster Management Plan annually. The District Emergency Operation Centre/ District Disaster Management Cell was established and made functional in Malkangiri District in 2nd April 2002. The District Disaster Management Plan is being reviewed and updated every year.

#### **1.4 Stakeholders and their responsibilities**

- At the District level, District Disaster Management Authority, with the District Collector designated as the Response Officer (RO), and other line departments at district HQ are responsible to deal with all phases of disaster management within district.
- Other technical institutions, community at large, local self-governments, NGOs etc. are also stakeholders of the District Disaster Management Plan.
- The role of the stakeholders is defined clearly with the sole objective of making the concerned organizations understand their duties and responsibilities regarding disaster management at all levels and accomplishing them.

#### **The District Collector has the following duties:**

- To facilitate and coordinate with local Government bodies to ensure that pre and post disaster management activities in the district are carried out.
- To assist community training, awareness programmes and the installation of emergency facilities with the support of local administration, non-governmental organizations and the private sector.
- To function as a leader of the team and take appropriate actions to smoothen the response and relief activities to minimize the adverse impact of disaster.
- To recommend the Special Relief Commissioner and State Government for declaration of disaster.

#### **Local Authorities have the following duties:**

- To provide assistance to the District Collector in disaster management activities.
- To ensure training of its officers and employees and maintenance of resources so as to be readily available for use, in the event of a disaster.
- To undertake capacity building measures and awareness and sensitization of the community
- To ensure that all construction projects under them conform to the standards and specifications laid down.
- Each Office of the Government in the district shall prepare a disaster management plan in respect of their office. The local authorities need to ensure that relief, rehabilitation and reconstruction activities in the affected area, within the district, are carried out.
- Trust / Organisations managing Places of Worships & Congregation
  - Each establishment / organisation identified as —critical infrastructure and key resource,
  - In the places of congregation in a district —on-site and —off-site plan shall be prepared
  - Disaster management plan is to carry out mitigation, response, relief, rehabilitation and Reconstruction activities.

#### **Private Sector:**

- The private sector should be encouraged to ensure their active participation in the pre-disaster activities in alignment with the overall plan developed by the DDMA or the Collector.

- They should adhere to the relevant rules regarding prevention of disasters, as may be stipulated by relevant local authorities.
- As a part of CSR, DRR projects is to be undertaken in consultation with district Collector for enhancing district's resilience.

**Community Groups and Volunteer Agencies:**

- Local community groups and voluntary agencies including NGOs normally help in prevention and mitigation activities under the overall direction and supervision of the DDMA or the Collector.
- They should be encouraged to participate in all training activities as may be organized and should familiarise themselves with their role in disaster management.

**Citizens:**

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

**1.5 Plan for review and updating: Periodicity**

Revise and Maintain - Planning teams should establish a process for reviewing and revising the plan. Reviews should be a recurring activity. Review on an annual basis is considered minimum. It should be mandatory to consider reviewing and updating the plan after the following events:

- A major incident.
- A change in operational resources (e.g., policy, personnel, organizational structures, Management processes, facilities, equipment).
- A formal update of planning guidance or standards.
- Major exercises.
- A change in the district 's demographics or hazard or threat profile.
- The enactment of new or amended laws or ordinances.

The responsibility for the coordination of the development and revision of the basic plan, annexes, appendices and implementing instructions must be assigned to the appropriate person(s). It is recommended that a DDMP be internally reviewed on a yearly basis and either be updated or reaffirmed. The updates or reaffirmed document may also be used to summarize the accomplishments of the past year and help the administration to prioritize mitigation goals for the next year.

\*\*\*\*

## Chapter-2 District Profile

### **History & Location:**

The history of Malkangiri seems to be in no way less thrilling and adventurous than any other place of India. The land of dense inaccessible forests, small but beautiful rivers, undulating plateaus and splendorous rich tribal culture, Malkangiri has its history of human civilization enrooted to as long as 2500 years back. Prior to the modern civilization, many mythological episodes took place in and around Malkangiri.

During the reign of Lord Ramachandra, Malkangiri occupied an important place in the entire 'Ramayana'. It was the holy river 'The Tamasa' and its environs which encouraged Saint Valmiki to express his internal feelings in the form of 'The Ramayana', the holiest book of the Hindus. This place was known as "Malyavantagiri" in the Ramayana. Tamasa, the river, flowing out of a cave has derived its name from a tribal word 'TANSA', which means cave. Banks of this river witnessed the creation of the largest mythology, the Ramayana. The scenic beauty of this Malyavantagiri has found an important place in the 'Dandi Ramayana' of Balaram Das. The belief of a visit of Lord Ramachandra is further strengthened by the existence of 'Sitakunda', the bath place of Goddess Sita near Mudulipada. Also during the period of the Mahabharata, this place became the point of attraction for the Pandavas. They spent their 'Angyatvasa' (exile) for a period of one year in the dense forests of Malkangiri. In the villages of Koyas, "PANDABOERU" (Pond) are found which are believed to be used by the Pandavas. During the month of January, 'PATAKHANDA PARVA' is celebrated by the Koyas, a primitive tribal community, in which a sword is worshiped. People believe that this sword belongs to the Pandavas. They also celebrate 'Bhimudu Parva' during January, in which 'Bhima', the middle Pandava is worshiped and the Koyas believe that this Bhima will save their families. Kanamraju (Lord Krishna), Balaraju (Arjuna) and Poturaju (Bhima) are the three famous Lords of this area, who are being worshiped by the people. On every alternative year, Badayatra, the festival of these Lords is celebrated throughout the district.

. During the period of Indus Valley civilization, a rich civilization flourished along the banks of the river 'Tamasa'. In the year 1995, some ancient monuments were discovered from the same place, signifying the above facts. Also a big 'Shiva Linga' was discovered from beneath the ground here, en lighting a linkage of this civilization with that of Indus Valley civilization. The ancient Kings of this place, during the early Vedic and later Vedic periods, worshiped Lord Mallikeshwar, after whom they named their kingdom as 'Mallika Nagari'. This Mallika Nagari gradually became Malkangiri in the modern times.

One ancient Shiva Temple now submerged in the Chitrakonda Reservoir was known as the second Lingaraj of Odisha. This famous Shiva Temple was visited by Sri Chaitanya Deva during his visit to Nandapur. Existence of a number of Shiva Temples in and around Malkangiri signifies the fact that the ancient Kings were Shaivists.

The founder ruler of Jeypore state, King Vinayaka Dev came from Kashmir and got married to Lilabati, the Princess of Nandapur. In the path of establishing the kingdom, he faced a lot of hardship and revolts. Singaraju, brother of Lilabati, sponsored his sincere efforts to King Vinayaka Dev in suppressing the rebel groups. King Vinayaka Dev established two new villages, namely 'Nilakamberu and Singarajukhunta' as a mark of respect and gratitude towards Lilabati and Singaraju. Some ancient monuments and idols of different Gods were discovered from Nilakamberu. Malkangiri was flourishing as a hilly kingdom during the reign of the 'Ganga Dynasty'. It was known as 'Kumbudiri', as mentioned by the first Collector of Koraput District, Mr. R.C.S.Bell in gazetteer, 1941. There is enough evidence that the wild forest country of Malkangiri is known as a former civilization. In 'Kondakamberu', there are two inscriptions recording a gift to the God Nilakantheswar by the Queen of Pandu Singh, in the year 1376 A.D. 'Kondakamberu' was formerly known as "Kambudiri".

During the period from 1400 A.D. to 1872 A.D., this princely state was ruled by as many as twenty six Kings. The entire state was divided into four Muthas, namely, 'Mout', 'Podia', 'Korukonda' and 'Padmagiri'. The head of each Mutha was called 'Muthadar'. Each Mutha was further divided into a number of villages, of which 'Peda' was the head. The post of 'Muthadar' and 'Peda' were hereditary and recognized by the King of Malkangiri. There was always a fear of foreign invasion for the kingdom for which there was no permanent place for the Kings. Temporary castles were built for the Kings in several places of the state. A ruin of such a castle still exists over 'Raja Rani Hill', just in front of Bhairavi Temple of Malkangiri. An annual meeting was held on the 'Vijaya Dashami' festival at 'Sardar Basani Ambatota' of Deva Dangar. The meeting was attended by all the 'Muthadar' and 'Pedas' of the state. The King used to preside over this meeting and all important decisions were taken in this meeting. The King gave power to the Muthadars in these meetings to execute his decisions.

The last Queen of Malkangiri, Bangaru Devi ruled over here from 1855 A.D. to 1872 A.D. She defeated King Ramachandra Deva III of Jeypore by her powerful and extra-ordinarily large Koya army. She along with her Koya army fought bravely against the mighty British army and finally deposed in 1872 A.D., resulting in a complete accession of Malkangiri state into Madras Presidency. Queen Bangaru Devi tried her best and fought for another 8 years unto 1800 A.D. to have power but failed. Finally she lost her life at the age of 70 in the year 1885, after a prolonged illness for 5 years. In the year 1880 A.D., Tama Dora, a brave Koya young man led the Koya troops, defeated the British Police of Malkangiri and declared himself as the ruler of Podia and Motu. In this incident, one Inspector and six policemen of Podia Police Station were killed. This incident is famous as 'Koya Revolution' and had its great impact throughout the country. Colonel Macquoid of Hyderabad contingent marched with 100 men to protect, but failed by the severe attack of the Koya Army, under the leadership of Tama Dora. However the efforts of this brave young man came to an end when he was brutally killed in the Rampa Forests near Mout on 28/07/1880 by the Military Police of Hyderabad and then the organized Koya Army was fragmented lacking a dynamic leadership.

After a long gap of 35 years (from 1880 to 1915), rebel groups again tried to fight against the British empire in and around Malkangiri. Unifying all the small rebel groups, Alluri Sitarama Raju established a big guerilla troop and fought against the British army. Chittrakonda and Kondakamberu were the headquarters of Sitarama Raju. He was initially a follower of non-violence and grasped a good deal of knowledge on Indian culture, mythology and religious activities of Hindus. Observing the exploitation of honest tribal by the British Police and their brutality, he became violent and declared direct war against them. He called the young Koya people to join his army by delivering eloquent speeches. He became popular in the area from Bhadrachalam in Andhra Pradesh to Bastar in Madhya Pradesh. Fearing at the growing popularity of A.Sitarama Raju, British Tahasildar Bastian along with a huge English Army arrested Raju but finally released him due to pressure from all corners. Raju, after being released from police custody made himself involved in direct battle against the British police. He along with his large Koya troop raided the Raja Bamangi jail and released a freedom fighter named Biraya Dora. In the month of September, 1922, two British Army Officers namely Wrighter and Cobbard were killed and another officer Themoy Heir was seriously injured by Alluri Sitaram Raju and his troops. In another incident, in September, 1923, Malkangiri police station and Treasury were looted by Raju and his group. During the beginning of 1924, Assam Rifles and Malabar Troops were sent to the forest of Malkangiri for suppressing the rebels. The troops cordoned Chittrakonda and attacked the Koya Army from all sides. A large number of Koya young fighters were killed and many tribal families were tortured brutally by the English Army. Finally A.Sitarama Raju was called for a discussion with the Collector. But it was a conspiracy. Raju was caught by the Malabar Troops and tied up to a tamarind tree. Finally by the orders of Major Guddal, Malabar Troops fired at Raju and killed him. The brave episode of Sitarama came to an end with the clear suppression of the Koyas.

Again Malkangiri came into national news when Laxman Naiko, the freedom fighter, had led the tribals for a non-cooperation movement against the British. He was a follower of non-violence principle of

Mahatma Gandhi. In 1942 he led a demonstration in Mathili on 21st of August, but police opened fire at the peaceful mob, killing demonstrators namely Nakula Pujari, Samara Nayak, Narasingha Bhumia and Linga Bhumia. In this incident, a forest guard namely G.Ramaya was also killed for which Laxman Naiko was accused and arrested. The trial continued for four months and on 13th November, 1942, the then Sessions Judge V.Ramanathan put forward his verdict : “Accused No.1, Sri Laxman Naiko is convicted under section 302 I.P.C. and sentenced to death subject to confirmation by the Hon’ble High Court”. Advocate Radha Charan Das of Berhampur and famous freedom fighter Uma Charan Pattnaik of Berhampur went to Patna High Court for an appeal, which was finally rejected. On 29th March, 1943, the file of Sri Laxman Naiko came to an end when he was hanged till death in Berhampur jail. It has been studied that the case against Laxman Naiko was weak and it was open to go for higher appeal in court of law. But no significant steps were taken in this regard by any of the famous personalities of that time. Even it is most unfortunate that the people involved in the entire process of Laxman Naiko’s arrest and death penalty were able to get all government facilities, employment and promotion during the post independence period.

Prior to 1936, Malkangiri was a part of Madras Presidency. In 1936, Koraput District from Madras Presidency merged into Odisha and Malkangiri Tahasil was included in Koraput District. The first English Collector of Koraput District, Mr.R.C.S.Bell, in the year 1941, prepared the Gazetteer of Koraput in which he described the physical condition, climatic condition and all about the tribal people of Malkangiri Tahasil. This Tahasil was a part of Nawarangpur Sub-Division of Koraput District. On 1st January, 1962, Malkangiri Sub-Division came into existence. In 1958, Dandakaranya Development Project was implemented to settle the refugees coming from East Pakistan. This project continued for 30 years until it was declared closed in the year 1988.

Finally on 2nd October, 1992, Malkangiri got its identity as a District as per Notification No. 49137/R dated 01.10.1992 of Odisha Government in Revenue and Excise Department, Odisha, Bhubaneswar, carving out of Koraput District.

### **Administrative Setup:**

The headquarters of the district is at Malkangiri. The Collector and The District Magistrate is the administrative head of the district. He is assisted by the Additional District Magistrate, one Sub-Collector, Deputy Collectors, seven Block Development Officers and seven Tahsildars for smooth functioning. There are also others District level Officers working under the general supervision of Collector. The district consists of only one sub-division namely Malkangiri, seven nos. of Tahasils namely Malkangiri, Chitrakonda, Motu, Mathili, Khairput, Kudumulugumma and Kalimela. In order to look after the developmental activities in rural areas, the district is divided into 7 nos. of C.D. Blocks. There were 3 Tahasils which subsequently became seven, 8 Police Stations, 1045 villages within the district during the decade 2001-2011. In addition to existing 8 police stations, 3 new police stations namely Paparmetla, Jodamba and Podia were created. Eleven new villages (4 each in Malkangiri and Motu P.S., one each in Orkel, Podia and Kalimela P.S.) were created during this decade. The detailed administrative set-up of the district is given as below:

District Headquarter	Malkangiri
Sub-Divisions(01)	Malkangiri
Tahasils(07)	01.Malkangiri,02.Chitrakonda,03.Motu,04.Kalimela, 05.Mathili,06.K.Gumma,07.Khairput
Blocks(07)	Malkangiri,02.Kalimela,03.Podia,04.Korukonda, 05.Kudumulugumma,06.Khairput,07.Mathili
Towns	01.Malkangiri,02.Balimela,03.Chitrakonda,04.Kalimela

Municipalities(01)	01.Malkangiri
NACs(01)	01.Balimela
Police stations(12)	01.Malkangiri,02.Podia,03.Kalimela,04.MV-79,
	05.Mathili,06.Motu,07.Energy PS( Malkangiri)
	08.Chitrakonda,09.Orkel,10.Mudulipada(Khairput)
	11.Judambo,12.Papermetla
Fire Stations(03)	01.Malkangiri,02.Kalimela and 03.Mathili
Gram Panchayats	111
Assembly Constituencies	02(146-Malkangiri and 147-Chitrakonda)
Parliamentary constituency	Nawarangpur Loksabha MP

### **Climate & Rain fall:**

The climate of the district is tropical with hot and dry summer and pleasant winter. The summer season extends from March to middle of June followed by the rainy season from June to September. The winter season extends from November till the end of February. Maximum temperature rising up to 44°C during May. The average annual rainfall varies from 994.05 mm to 1809.53 mm

### **Geography:**

Malkangiri District is named after its headquarters town, Malkangiri. During formation of Odisha Province in 1936, Malkangiri was a 'Taluk' of Nabrangpur sub-division of Koraput District of Odisha. In 1962 it was upgraded to a subdivision of Koraput District. The present Malkangiri got its identity as an independent district due to reorganization of districts of Odisha as per a notification on 1st October, 1992 and with effect from 2nd October 1992. Covering an area of 5,791 sq. kms, it lays between 17 degree 45'N to 18 degree 40'N latitudes and 81 degree 10' E to 82 degree E longitude. This District is sparsely populated with not much of a difference between the numbers of males and females. Almost the whole of the district is a vast dense jungle, with a very small percentage of the population residing in the urban areas. The district is divided into two distinct physical divisions. The eastern part is covered with steep ghats, plateaus and valleys, sparsely inhabited by primitive tribes, notable among who are Bondas, Koyas, Porajas and Didayis. The District is moderately literate, with the number of literate males far out numbering the number of literate females. The climate in the district is generally cold during winter and hot in summer with temperature ranging from 13 degree C to 47 degree C. The average annual rainfall is about 1700 mm. Relative humidity is generally high, especially in the monsoon and post-monsoon months. During the rainy season, most areas of the District become impassably swampy and heavy floods isolate it from the outer world. This district lies within the malaria prone belt.

### **Topography:**

The general topography of the area is of broken mountains intercepted by large riverbeds and watercourses. The altitude varies from 600 m near western side to 1200 m on the eastern side with mountain peaks and ridges. Sandy and clay type soil predominate the entire district.

### **River System:**

The general drainage pattern in the district is dendritic to sub-parallel. The Kolab river along with its tributaries, the Potteru and Sileru rivers is the most prominent river of the region. The Kolab river issues from the Sinkaram hills and follows a south westerly course after passing over Malkangiri district. The river joins the Godavari river in Khammam district of Andhra Pradesh.

The major surface water bodies are reservoirs, rivers, streams and ponds etc. The river Potteru which is a tributary of Kolab is generally perennial in nature with a sufficient flow during summer months. The Balimela reservoir is the major irrigation project and its canal command is around 61034-Ha. There are substantial numbers of tanks, ponds and water harvesting structures exist in the district, which hold considerable quantity of surface water as storage which serve the purpose for irrigation, bathing, drinking and industrial purposes.

### **Demography:**

As per Provisional population figures of 2011 Census, the total no of Mandals are 07.

Description	Number
Area	5,791.00 sq.km
No. of Sub-Disivions	1
No. of Tehsils	7
No. of Blocks	7
No. of Zilla Parishads	1
No. of Gram Panchayats	111
No. of Municipalities	1
No. of NAC	1
No. of Census	14
No. of Villages	1045

### **Households and its distribution:**

Sl. No	Name of the Block/ULB	Total Number of Families/ HH	Category		Category				Category	
			Rural	Urban	SC	ST	OBC	GEN	BPL	APL
1	Podia	13049	13049		3529	7634	1886		Nil	11672
2	Kalimela	26580	26580		9500	10905	6175		Nil	36517
3	Malkangiri	15112	15112		3120	10376	1616		Nil	26162
4	Mathili	21573	21573		2273	15731	3569		Nil	22766
5	Khairput	9752	9752		715	7074	1963		Nil	14632
6	K.Gumma	13900	13900		1233	10653	2014		Nil	16649
7	Korukonda	27757	27757		7644	15561	4552		Nil	18483
8	Balimela(NAC)	2758		2758	920	245	1593		Nil	2211
9	Malkangiri (Municipality)	7150		7150	2016	1386	3748		Nil	5175
	Total=	137631	127723	9908	30950	79565	<b>27116</b>			154267

[Details are at Table No. 1.2 of Volume II of the DDMP]

### **Population and its composition:**

Sl. No	Name of the Block/ ULB	Total			SC		ST		OBC	
		M	F	T	M	F	M	F	M	F
1	Podia	28517	28841	57358	7886	7629	16205	17355	4426	3857
2	Kalimela	59289	59463	118752	21646	20801	23495	25227	48	13435
3	Malkangiri	33922	35574	69496	7328	7021	22867	24850	3727	3703
4	Mathili	47514	48559	93073	4963	5161	34661	35398	7890	8000
5	Khairput	20208	21430	41638	1542	1512	14457	15751	4209	4167
6	K. Gumma	29764	31299	61063	2699	2718	22480	24319	4585	4262
7	Korukonda	62040	63969	126009	17583	17120	33982	36664	10475	10185
8	Balimela (NAC)	6023	5773	11796	1919	2020	531	521	3573	3232
9	Malkangiri (Municipality)	16358	14649	31007	4486	4261	3126	2887	8746	7501
	Total=	303635	309557	613192	70052	68243	171804	182972	61779	58342

- Population density of the district and decadal growth of population-

#### Religion wise distribution of Population:

Sl. No.	Total Population	Category				
		Hindu	Muslim	Christian	Sikh	Others
1	613192	600,219	1,871	10,039	213	850

[Details are at Table No. 1.4 of Volume II of the DDMP]

#### Age Group

Sl. No.	Total Population	0-5 years	6-14 years	15-59 years	60 years and above
1	613192	109,092	120130	335835	48135

[Details are at Table No. 1.6 of Volume II of the DDMP]

#### Sex Ratio:

1	Sex Ratio (Females per 1000 males):	1020
2	Sex Ratio (0-6 Years):	992

Details are at Table No. 1.7 of Volume II of the DDMP]

#### Literacy Rate:

	Total	Male	Female
Literacy Rate	48.54%	59.07%	38.28%

[Details are at Table No. 1.8 of Volume II of the DDMP]

#### Socio-Economic profile:

**Workforce** - The workforce of a country includes both the employed and the unemployed.

[Details are at Table No. 1.9 of Volume II of the DDMP]

**Workforce participation rate**- The labour force participation rate is the percentage of working-age persons in an economy who:

- Are employed
- Are unemployed but looking for a job

Persons	Total Worker	Non-worker	Main worker	Marginal worker	Cultivators	Agriculture labourer	Worker in Household industry	Other workers
613192	310666		179030	123496	151260	106353	7725	45328

[Details are at Table No. 1.9 of Volume II of the DDMP]

**Land Holding Pattern:** The land hold by different type of owner. The land holding pattern is as follows:

Total geographical area in Ha	Forest area in Ha	Misc trees & Grooves	Permanent pasture	Culturable waste	Land Put Non Agril Use	Barren & Unculturable Land	Current Fallow	Other Fallow	NET Area Sown
7591	335	1	21	4	23	38	7	15	135

[Details are at Table No. 1.10 of Volume II of the DDMP]

Land Holding Pattern: (No. of HH)

Marginal (<1.0 ha.) farmers	Small (1.2 ha.) Farmers	Semi-Medium (2-4 ha.)	Medium (4-10ha.)	Large (>10ha.)	Agricultural labourers	Landless
32540	41784	10611	5488	81	90504	

### Agriculture and Irrigation:

The district has a total cultivable area of 1, 50, 183 Ha (25.93% of TGA) out of which about 42.73% is irrigated (i.e. 64170 Ha) and 57.23% is unirrigated i.e. 86013 Ha. The district has four major rivers such as Saberi, Sileru, Potteru and Kolab. There is one major irrigation project, one medium irrigation project, 33 minor irrigation projects along with 293 nos. of Lift irrigation points in operation covering an area of 68,714 Ha under irrigation in the district. These are as under:

The Poteru Major Irrigation Project is the major source of irrigation for the district which irrigates an area of 49,540 Ha under Kalimela, Podia and Korkonda Blocks.

The Satiguda Medium Irrigation Project irrigates an area of 8,361 Ha under Korkonda and Malkangiri blocks.

33 nos. of Minor Irrigation Projects irrigate 3% of the total cultivable land in the district. Also, 3nos. of Minor Irrigation Projects have been completed recently and another 11nos. MIPs are in progress.

293 nos. of Lift Irrigation points (OAIC and OLIC) irrigates 12% of the total cultivable land in the district.

The potential utilized against the designed ayacut and potential created of Major and Medium irrigation projects in Malkangiri District are as follows:

Sl No	Major And Medium Projects	Design Ayavut (Ha)	Potential created (Ha)	Potential Utilized (Ha)

1	Poteru Major Irrigation Project	61,034	60,129	4,954
2	Satiguda Medium Irrigation Project	9,065	9,065	8,361
	Total	70,099	69,194	13315

Malkangiri District with its hilly areas and huge water resources is ideal for development of Irrigation. The MIPs, Lift irrigation points and other irrigation interventions i.e. check dams, small dams, dug wells etc are found to be more feasible in the district and contributes about 25% irrigation to the total cultivable land. The present status of irrigation on cultivable land for the district is 42.73%, whereas the irrigation coverage in Khairput, K.Gumma and Mathili Blocks are extremely low i.e. 4.41%, 4.67% and 7.39% of their total cultivable areas respectively. There is very less scope for Rabi crops in Mathili, Khairput and K.Gumma Block. The present cultivable areas under 89 irrigation in Korkonda and Malkangiri blocks are 39.27% and 31.96% respectively. The major portion of cultivable areas in the district depends on rainfed agriculture. The block wise irrigation potential is given in the table below.

Cultivable Area (Ha)	Irrigated Area	Irrigated Area In %
1,50,183	64,170	42.73%

[Details are at Table No. 1.12 & 1.13 of Volume II of the DDMP]

### **Employment and livelihood:**

The main source of occupation of people of this district is cultivation. They depend on agriculture sector for income and employment. Paddy being the predominate crop of the district accounts for 67% of the gross cropped area. Other major crops of the district are maize, ragi, sesamum, ground-nut, vegetables etc.

The ITDA is working as a nodal agency in terms of Plan formulation, implementation of programmes and to give effect to the Tribal sub-plan. The strategies for tribal development mainly include educational development, implementation of employment generating programmes, self-employment schemes, skill upgradation, checking land alienation, controlling money lending activities in rural areas, protecting tribals from exploitation, empowerment of women, implementation of Forest-Right Act, ensuring rural connectivity and special attention for development of primitive tribal groups living in the District.

Different infrastructural developments like interior road communication, organization of large size multi-purpose co-operative society (LAMPS), drinking water wells, social forestry are being implemented and employment opportunity are created.

[Details are at Table No. 1.24 of Volume II of the DDMP]

### **Industries and mining:.**

SL No	Category wise	Nos. of Units	Investment (Rs in Lakhs)	Employment (In nos.)
1	Food & Allied	133	1047.50	641
2	Electrical & electronics	2	2.32	4
3	Engg & Metal Based	38	163.6	178
4	Forest & Wood Based	1	2.3	3
5	Glass & ceramics	6	56.65	33
6	Paper & Paper Products	2	2.85	8
7	Textiles	52	110.2	311
8	Miscellaneous Manufacturing	28	57.71	96
9	Repairing & servicing	229	503.4	720

Total	491	1946.43	1894
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### Education:

Malkangiri is a district with the lowest literacy rate (i.e. 49.49% as per 2011 census) as against the state average of 73.45%. Efforts are being made in post independence period to increase the rate of literacy and level of education in the district.

For school management, there are one District Education Officer, one Addl. District Education Officer, One District Science Supervisor, Seven Block Education Officers, 21 Assistant Block Education Officers. Elementary Education and Secondary Education are coming under the Department of School and Mass Education. The Odisha Primary Education Programme Authority (OPEPA) is responsible for implementing the Sarva Shiksha Abhijan (SSA), Mid-Day meal Programme (MDM), National Programme for Education of Girls at Elementary Level (NPEGEL), Kasturava Gandhi Balika Vidyalaya (KGBV) and Rastriya Madhyamik Shiksha Abhijan (RMSA) programmes.

There are 866 Primary Schools (for co-education), 345 UP-Primary Schools (for co-education), and 77 High Schools (76 for co-education and 1 for Girls), in all 1288 Schools run by School and Mass Education Department. On the otherhand, SC and ST Department runs 70 Schools in the district. There are 29 Private Aided Schools and 32 Private un-Aided Schools in the district. There are 4 Education institutions managed by the Central Government. These are Kendriya Vidyalaya (KV), Malkangiri, Ekalabya Model English Medium School, Challanguda, JNV, Malkangiri-1 and JNV, Malkangiri-II. There are seven Degree Colleges in Malkangiri District affiliated to Berhampur University. Again there are 10 Junior Colleges (+2 Level Colleges) which are functioning under the control of the Council of Higher Secondary Education, Odisha.

There is one ITI and one DIET educational institution, which are meant for Technical Education and are functioning in the District. [Details are at Table No. 2.1 of Volume II of the DDMP]

### Health:

For providing health services and managing the health system, the district headquarters Hospital is situated at the heart of Malkangiri Town. The Chief District Medical Officer is the Chief Administrative Officer at district level. There are Asst. District Medical Officers like- ADMO- Family Welfare, ADMO, Public Health, ADMO, Medical District Tuberculosis Officer (D.T.O.), District Leprosy Officer (DLO), District Malaria Officer (DMO) and District Surveillance Officer (DSO), etc. to assist the CDMO in various fields of activities. In Malkangiri District in addition to the District headquarters Hospital, there are 8 Community Health Centres, 24 Primary Health Centres (New), 158 Sub-centres, 4 Area Hospitals and 10 Mobile Health Teams.

There are 16 Ambulances, six 108 Ambulances and eight 102 Ambulances available to serve the patients in emergency. Total numbers of hospital beds available are 326.

**Ayush:** It is an acronym for Ayurveda, Yoga, Unani, Siddha and Homeopathy-is a system of medicine that has been integrated into the Indian National Health Care delivery system to strengthen the public health in rural areas. In Malkangiri District 2 categories of treatment are provided under AYUSH system i.e. Homeopathic and Ayurvedic. There are 16 AYUSH doctors who are working against 32 sanction posts. The Mobile Health Team (MHT) under Rastriya Bal Swastya Karyakram (RBSK) is exclusively managed by the AYUSH doctors.

The National Rural Health Mission (NRHM) provides every village with a trained female community health activist called as ASHA (Accredited Social Health Activist), who is an interface between the community and the public health system. A total of 1089 ASHA workers are working in the district..

[Details are at Table No. 2.2 of Volume II of the DDMP]

**Housing:**

There are 31435 Pucca houses 67,183 semi pucca and 39,013 kutchha houses in kendapara as per 2011 census.

[Details are at Table No. 1.11 of Volume II of the DDMP]

**Electrification:**

17.9 % of the district is electrified as per Census 2011.  
[Details are at Table No. 1.29 of Volume II of the DDMP]

**Drinking water and sanitation:**

93,188 Nos HH depends on Handpump, 15,899 Nos HH depends on Tubewell/borehole, 9,717 Nos HH depends on Springs 1,826 Nos HH depends on River and canal 913 Nos HH depends on tanks and ponds and 488 Nos HH depends on other source.

[Details are at Table No. 1.30 of Volume II of the DDMP]

**Migration:**

Migrants from other states' of the country constitute 16.32 percent of which 10.88 per cent are males and 20.76 per cent are females. International migration to the district is confined within 5.12 to 4.87 per cent.

**Food security:**

The Civil Supplies Section is a part of the Collectorate, Malkangiri, which is being managed by F.S. & C.W. Department. The mission of Organization is to provide food security to the consumers through BPL/AAY/APL Schemes.

The primary policy objective of the department of Food and Public Distribution System (PDS) is to ensure food security for the vulnerable people through timely and efficient procurement and distribution of food grains. This is jointly managed by the Ministry of Consumer Affairs and Public Distribution System of Govt. of India with the State Govts. Measure commodities distributed include staple food grains such as Wheat, Rice, Sugar and Kerosene Oil through a network of Public Distribution Shops called Fair Price Shops (FPS). The PDS involves the entire work of procurement of various food grains, building of and maintenance of stocks, their storage, movement and delivery to the beneficiaries. The focus is on incentivizing farmers through fair value of their produce i.e paddy by way of payment of minimum support price.

Now ration cards distributed as per National Food Security Act 2013 (NFSA) provides for food & nutritional security in human life cycle approach by ensuring access to adequate quantity and quality of food at affordable prices to people to live a life with dignity.

RURAL				URBAN				AY Card
BPL Cards	AAY Cards	APL Cards	TOTAL	BPL Cards	AAY Cards	APL Cards	TOTAL	
74018	23394	32942	130354	2404	733	8640	11777	864

[Details are at Table No. 1.37 of Volume II of the DDMP]

**Social Security:**

Women and Child Development Department has been working for the overall development of children and women through a host of specially designed schemes and programmes for Social security. It also deals with schemes for the Senior Citizens and Persons with Disability. The year witnessed launch of some new schemes like MAMATA systemic changes like strengthening of the Decentralized Feeding Programme of ICDS. The focus of activities continues to be on the empowerment and entitlements of children, women, and persons with disabilities and senior citizens. The Department has an elaborate field formation with the District Social Welfare Officer (DSWO) to assist the Collector in each District and a Sub-divisional Social Welfare Officer (SSWO) in every sub-division. Besides this, there are Social Educational Organizers (SEOs) and Lady Social Educational Organizers (LSEOs) at the Block level who assist the Block Administration in implementing the social welfare programmes. In the district, each ICDS project is headed by a Child Development Project Officer (CDPO), the project is further divided into 5-6 Sectors. Each sector is headed by a Supervisor, who oversees the work of 20-25 Anganwadi Centres (AWC) functioning at the village level.

The Department has five statutory bodies, viz. (a) State Commission for Women (SCW) (b) State Council for Child Welfare (SCCW), (c) State Social Welfare Board (SSWB), (d) Social Security and Empowerment of Persons with Disabilities (SSEPD) and (e) State Commissioner for Protection of Child Rights (SCPCR).

[Details are at Table No. 22 of Volume I of the DDMP]

### **Critical infrastructure**

#### **Anganwadi centers:**

Anganwadi centre provides basic health care in villages. It is a part of the public health care system. Basic health care activities include contraceptive counselling and supply, nutrition education and supplementation, as well as pre-school activities. The centres may be used as depots for ORS, basic medicines and contraceptives.

[Details are at Table No. 1.32 of Volume II of the DDMP]

#### **Schools and other Educational Institutions:**

It is an institution where instructions are given in a particular skill or field to develop a human in their society.

[Details are at Table No. 2.1 of Volume II of the DDMP]

#### **Hospitals and Health Centres:**

A hospital and health centres are health care institutions for providing patient treatment with specialized medical professionals and nursing staff and medical equipment.

[Details are at Table No. 2.2 & 2.3 of Volume II of the DDMP]

#### **Veterinary Hospitals:**

A Veterinary hospital is a health care institution for animals providing treatment with specialized medical professionals and nursing staff and medical equipment. [Details are at Table No. 2.4 of Volume II of the DDMP]

#### **Police and Fire Stations:**

To control discipline in the society police personnel are posted in Police stations and Fire personnel are posted fire stations. [Details are at Table No. 2.7 of Volume II of the DDMP]

**Cooperative Societies:**

A co-operative society is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.

**Banks and Post offices:**

A bank is a financial institution that accepts deposits from the public and creates credit and A post office is a customer service facility forming part of a national postal system.

[Details are at Table No. 2.6 of Volume II of the DDMP]

**Road and Railway network:**

Road and railway network is a communicating platform from one place to another.

[Details are at Table No. 1.41 of Volume II of the DDMP]

**Cyclone and Flood Shelters:**

A cyclone shelter is a place where you can take shelter during cyclone, flood and other natural disasters to save the lives.

[Details are at Table No. 4.17&4.18 of Volume I of the DDMP]

**Rain gauge and Automatic Weather Stations:**

The rain gauge/ automatic weather station are established to measure the amount of liquid precipitation, humidity and rainfall over a set period of time. The manually measured rain gauges are installed at each block head quarters of this district.



## Chapter- 3

### Hazard, Vulnerability and Risk Assessment

#### A. Major Disasters/ Incidents during 2007-2021

A brief profile of major disasters/ incidents occurred in the district during last 10 years (2007 to 2021)

**Table-3.1**

Sl. No.	Disaster/ Incident	No. of incidents during (2007-2020)	No. of Deaths	Affected Population	Livestock Loss	Houses Damaged	Damage to Infrastructure				Damage and loss of Crop Area (in Hectares)
							School/ AWC Buildings	Hospitals	Road in Km	Other Critical Infrastructure	
Disasters as approved under SDRF/ NDRF Guidelines.											
1.	Flood	2015 to 2020									
2.	Drought	2011									
3.	Fire	2018									
4.	Hail Storm										
5.	Cyclone	2021									
6.	Earth Quake	2020									
7.	Tsunami										
8.	Landslide	2021									
9.	Avalanche										
10.	Cloud Burst										
11.	Pest Attack										
12.	Cold Wave/ Frost										
State Specific Disasters as per Notification No.1936 Dt. 01.06.2015											

13.	Lightning	2011-2021											
14.	Heat wave	2010-2021											
15.	Whirlwind	2011-2021											
16.	Tornado												
17.	Heavy Rain	2018-2021											
18.	Boat Accidents (Other than during Flood)	2001-2021											
19.	Drowning (Other than during Flood)	2001-2021											
20.	Snake Bite (Other than during Flood)	2001-2021											
<b>Other Disasters</b>													
21.	Animal Menace	2016-2020											
22.	Building Collapse												
23.	Stampede												
24.	Epidemics	2016											
25.	Industrial/ Chemical Accidents	Nil											
26.	Road Accidents												
27.	Railway Accidents	Nil											
28.	Hooch Incidents	Nil											
29.	Communal Riot	Nil											
30.	Dam Break/ Spill Way related flood.	Nil											

31.	Soil/ Coastal erosion	Nil										
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*(Year wise details of each disaster occurred during the last 10 years is at Table No. 3.1 of Volume II of DDMP)*

Table-3.2-Hazard Seasonality of the District

Sl. No.	Hazard	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Remarks
	Flood													
	Cyclone													
	Fire													
	Earthquake													
	Pandemic													
	Industrial													
	Roa Accident													

Table-3.3-Major Disasters/ Incidents in the District during 2021-22

Sl. No.	Name of the Block/ ULB	No. of susceptible Gram Panchayats	No. of susceptible Villages/	Vulnerable Population in Nos.	Milch and Draught animals	Houses	Vulnerable Infrastructure			
							School/ AWC Buildings	Hospitals	Roads (in Km)	Other Critical Infrastructure
1	7 Block	81	663	1,27,537	46	3945	242	0	150.63	Bridge- 4 Culverts -55- SSD Hostel - 55 Li Point-75 Shouthco- 33 kv -5 11 kv-20 LT line-30 km DTR -107

## B. Vulnerability and Risk Assessment related to disasters

Table-3.4-Cyclone vulnerable areas of the District

Sl. No	Name of the Block/ ULB	No. of susceptible Gram Panchayats	No. of susceptible Villages/ Wards	Vulnerable Population in	Milch and Draught animals	Houses			Vulnerable Infrastructure			
						Kucha	Semi Pucca	Pucca	School/ AWC Buildings	Hospitals	Roads (in Km)	Other Critical Infrastructure
1	Khairput	2	2	456	Nil	5	Nil	10	Nil	Nil	Nil	Nil
2	Malkangiri	7	4	876	Nil	12	Nil	3	Nil	Nil	Nil	Nil
3	Mathili	8	6	565	Nil	7	Nil	Nil	Nil	Nil	Nil	Nil
4	K,Gumma	4	4	435	Nil	3	Nil	Nil	Nil	Nil	Nil	Nil
5	Chitrakonda	3	7	547	Nil	19	Nil	Nil	Nil	Nil	Nil	Nil
6	Kalimela	9	5	897	Nil	14	Nil	Nil	Nil	Nil	Nil	Nil
7	Motu	3	4	567	Nil	5	Nil	Nil	Nil	Nil	Nil	Nil

(Detailed list of vulnerable Villages/Wards is at table No. 3.2 of Volume II of the DDMP)

**Table- 3.5 -Electrical Infrastructure Vulnerable to Disaster****Electrical Infrastructure and cyclone Vulnerability:**

Sl. No.	Name of the Block/ ULB	No. of Grid Stations	No. of 33/11 KV Substations	No. of Distributing Transformers			Conductor/ Electrical lines-11 KV or less (length in Kms.)	No. of Poles	No. of High Tension Towers	High Tension lines above 11 KV (length in Kms.)
				11 KV or Less	11 KV < and <60KV	60 KV and above				
1	Malkangiri Municipality		0	0	0	0	0	0	0	0
2	Balimela NAC		0	0	0	0	0	0	0	0
3	Chittrakonda		0	10	0	0	10	120	0	1
4	Kalimela		0	20	0	0	15	180	0	2
5	Khariput		0	20	0	0	15	180	0	2
6	Korukonda		0	20	0	0	15	180	0	1
7	Malkangiri		0	15	0	0	15	180	0	1
8	Mathili		0	20	0	0	20	240	0	2
9	Podia		0	15	0	0	10	120	0	1
Total			0	120	0	0	100	1200	0	10

**Table-3.6-Drinking water facility in the Hazard Prone areas:**

Sl. No.	Name of the Block/ ULB	Total No. of Tube Wells	No. of Wells	PWS Schemes				Other Drinking Water Sources If any
				Total No.	Length in Mtrs.	No. of Over Head tanks	No. of Stand Points	
1	CHITRUKONDA	956	452	52	71042	7	295	119
2	KALIMELA	2658	34	74	220907	50	650	65
3	KHAIRPUT	1103	197	77	207679	28	620	65
4	KORUKONDA	1376	42	42	125996	27	397	128
5	MALKANGIRI	2256	3	54	185735	41	585	95
6	MATHILI	1971	197	45	224736	37	390	86
7	PODIA	1040	0	18	48815	18	92	31
Total		11360	925	362	1084910	208	3029	589

**1. Earthquake**

As per Earthquake Hazard Zoning Atlas-2016 issued by the National Disaster Management Authority (NDMA) and Building Materials and Technology Promotion Council (BMTPC).....

- The Malkangiri District is coming under Zone-II (low damage risk zone)
- The total District is under Zone- III (Moderate damage risk zone)/
- 4.5 % of the District is coming under Zone- III (Moderate damage risk zone)/

- Malkangiri Block or parts of Malkangiri of the district is coming under Zone- III (Moderate damage risk zone) and the other are under Zone-II (low damage risk zone)/ etc. N.B. Earthquake Vulnerability Map is in Volume II

(Brief description on the Earthquake vulnerability of the district and past incidents if any)

**Table-3.8-Earthquake vulnerable (Zone-III Moderate Seismic zone) areas of the district**

Sl. No	Name of the Block/ ULB	No. of susceptible Gram Panchayats	No. of susceptible Villages/ Wards	Vulnerable Population in Nos.	Animals	Houses	Vulnerable Infrastructure			
							School Buildings/ Anganwadi	Hospitals	Roads (in Km)	Other critical Infrastructure
	Malkangiri Municipality	Malkangiri Municipality	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

be filled up. Only concerned blocks to be mentioned)

## 2.Flood

**Table-3.9- Flood Vulnerable areas of the district in general**

Sl. No.	Name of the Block/ ULB	No. of susceptible Gram	No. of susceptible villages/ Wards	Population in Nos.	Milch and Draught animals	Houses	Vulnerable Infrastructure			
							School/ AWC Building	Hospitals	Roads (in Km)	Other Critical Infrastructure
1	Khairput	2	22	456	Nil	15	Nil	Nil	Nil	Nil
	Malkangiri	7	14	876	Nil	15	Nil	Nil	Nil	Nil
	Mathili	8	16	565	Nil	11	Nil	Nil	Nil	Nil
	K.Gumma	4	4	435	Nil	3	Nil	Nil	Nil	Nil
	Chittrakonda	3	17	547	Nil	19	Nil	Nil	Nil	Nil
	Kalimela	8	45	567	Nil	15	Nil	Nil	Nil	Nil
	podia	5	14	43	Nil	7	Nil	Nil	Nil	Nil

**Table-3.10- Causing agent wise flood vulnerable areas of the District**

Sl. No	Causing agent- Rivers/ Water bodies/Tidal Wave/ Others	No. of Susceptible Blocks/ ULB	No. of Susceptible GPs	No. of Susceptible Villages/ Wards	Vulnerable Population	Milch and Draught animals	Houses	Vulnerable Infrastructure			
								School/ AWC Building	Hospitals	Roads (in Km)	Other Critical Infra.
	River-1	5	67	87	1098						
	River-2										
	Tidal Wave										
	Flash Flood	5	45	56	876						
	Others										

**Table- 3.11 - Agriculture and Flood Vulnerability**

Sl. No.	Name of the District	Cultivable Area (Hectares)		Area susceptible to Flood (Hectares)	
		Paddy	Non-Paddy	Paddy	Non-Paddy
1	MALKANGIRI	72710hc	69290hc	138hc	252 hc

**Table-3.12-Electrical Infrastructure in the Flood Prone Area**

Sl. No.	Name of the Block/ ULB	No. of 33/11 KV Substations	No. of Distributing Transformers			Conductor/ Electrical lines-11 KV or less (length in Kms.)	No. of Poles	No. of High Tension Towers	High Tension lines above 11 KV (length in Kms.)
			11 KV or Less	11 KV < and <60KV	60 KV and above				
1	Malkangiri Municipality	0	0	0	0	0	0	0	0
2	Balimela NAC	0	0	0	0	0	0	0	0
4	Chitrakonda Block	0	10	0	0	10	120	0	1
5	Kalimela Block	0	20	0	0	15	180	0	2
6	Khairput Block	0	20	0	0	15	180	0	2
7	Korukonda Block	0	20	0	0	15	180	0	1
8	Malkangiri Block	0	15	0	0	15	180	0	1
9	Mathili Block	0	20	0	0	20	240	0	2
10	Podia Block	0	15	0	0	10	120	0	1
	Total	0	120	0	0	100	1200	0	10

**Table-3.13- Drinking water and Flood Vulnerability**

Sl. No.	Name of the Block/ ULB	Total No. of Tube Wells	No. of Tube Wells with raised platforms	No. Sanitary Wells	PWS Schemes				Other Drinking Water Sources If any
					Total No.	Length in Mtrs.	No. of Over Head tanks	No. of Stand Points	
	Malkangiri	388	Nil	Nil	1	20850	Nil	Nil	Nil
	Balimela	134	Nil	Nil	1	1000	Nil	Nil	Nil

**2. Events/ Festivals/ Functions organized in the district where mass gathering occurs:****Table-3.14**

Sl. No.	Name of the Event/ Festival/ Function	Place (Block & Gram Panchayat)	Duration of the event (in No. of days)	Month (as per English Calendar)	Strength of population gathering (Approx) Per day	Remarks (other vulnerabilities associated with the place/ event, if any to the mentioned)
1	Bada yatra	Kalimela, Podia, Malkangiri, Korukonda,	07	March, April	5000	In Malkangiri Block population gathering (Approx) Per day 6000
2	Naktima Yatra	Malkangiri	3	March	3000	
3	Ratha Yatra	Malkangiri, Kalimela, Motu, Mathili, Chittrakonda	1	July	2000	

## 3. Boat Operation points

Table-3.15- Details of Boat Operation Points

Sl. No.	Name of the Block	Name of the ghat/ boat operation point	Name of the water body	No. of Panchayats/ villages connected	Daily to and fro movement of people in Nos. (Approx.)	Type of boats operating in Nos.	
						Mechanised	Non-Mechanised
1	Kaliemla	Dokenkodna	Selaru	2	50	Yes	no
2	Kaliemla	Nilakota	Selaru	2	100	Yes	no
3	Kaliemla	Manyomkonda	Polleru	5	150	Yes	No
4	Kaliemla	Tandbai	Saberi	4	30	Yes	No
5	Podia	Mpv-69	Potteru	2	70	Contri boat	No
6	Podia	Putumpalli	Potteru	15	200	Yes	No
7	Podia	Kurti	Saberi	4	60	Yes	No
8	Podia	Matteru	jhiiguda	4	80	Yes	No
9	Podia	Kamarguda	Saberi	7	60	Yes	No
10	Podia	Niliguda	Saberi	3	20	Yes	No
11	Podia	Jhiliguda	Saberi	4	20	Yes	No
12	Podia	Uskaguda	Potteru	5	50	Yes	No
13	Podia	Murbanpalli	Potteru	6	67	Yes	No
14	Podia	Girkanpally	Potteru	5	34	Yes	No
15	KORUKONDA	MV 26-RAKHALGUDA	POTERU RIVER	1	50	NIL	1
16	KORUKONDA	MARIWADA TO MV 18 B	POTERU RIVER	1	50	NIL	1
17	NAKAMAMUDI	DYKE 3 TO AMBLIBEDA	CHITRAKONDA RESIRVIOR	7	100	4	NA

## 4.Land Slide Vulnerability

4.

Table-3.16- Details of Land Slide Vulnerability

Sl. No.	Land Slide Zone/ Area/ Location	Area in Sq. Km	No. of susceptible Villages/ Wards	Vulnerable Population in Nos.	Houses	Vulnerable Infrastructure			
						School / AWC Buildings	Hospitals	Roads (in Km)	Other Critical Infrastructu Re
	Khairput		6	76				15	

(Note: Detailed list of villages, School, Hospitals and Roads are given in the Volume II of the DDMP)

## 5. Lightning

Table-3.17- Details Lighting Incidents

Sl. No.	Name of the Block/ ULB	Identifiable incidents of lightning hit in last 5 years		No. of Lightning events	No. fatality/ Deaths	Injured Persons
		No. GPs	No. of Villages/ Wards			
1	Khairput	3	3	4	4	Nil
2	Malkangiri	7	7	7	6	1

(List of villages is at Table No.3.2 of Volume II of the DDMP)

## 6. Major Industrial Establishments/ Chemical &amp; Other hazardous material storage points Table-3.18

Sl. No.	Name & location of the Industry/ Storage point	Department/ Ownersh ip	Name of hazardous materials stored	Quantity	Total no. of workers in the establishment	No. of adjacent Villages/ Habitati ons within 2 Kms. radius	Suscept ible Popula tion	Hou se	Vulnerable Infrastructure		
									School Buildi ngs & AWC	Hospit als	Other Critic al Infra.
Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

(Detailed vulnerable habitations list and other critical infrastructure is at Table No. 3.2 of Volume II of the DDMP)

## 7. DroughtTable- 3.19 -Table to be filled based on data available at the district level. Information for all the blocks of the district to be given

Sl. No.	Name of the Block	Average Annual Rain Fall	Ground Water Level	Cultivated Area (In Hectares)			
				Paddy		Non- Paddy	
				Rain fed Area	Irrigated area	Rain fed Area	Irrigated area
Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

**Table-3.20- Drought Vulnerability**

Sl. No.	Name of the Block	Year-				Year –				Year-				Year-			
		No. of GPs experienced drought	No. of Villages	Agricultural Crop Area lost (in Hectares)		No. of GPs experienced drought	No. of Villages	Agricultural Crop Area lost (in Hectares)		No. of GPs experienced drought	No. of Villages	Agricultural Crop Area lost (in Hectares)		No. of GPs experienced drought	No. of Villages	Agricultural Crop Area lost (in Hectares)	
				Paddy	Non-Paddy			Paddy	Non-Paddy			Paddy	Non-Paddy			Paddy	Non-Paddy
Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

*(Information to be given for previous 4 drought years and the relevant blocks are to be mentioned in the table. The detailed list of drought prone Villages is at Table No.3.3 of Volume II of the DDMP)*

## 8. Drinking Water Crisis

**Table -3.21 - Details of Drinking Water Crisis**

Sl. No	Name of the Bloc/ULB	Villages/ Wards without proper source of drinking water		Villages/ Wards having crisis of drinking water during summer season		Fluoride Contamination		Others Arsenic/ Saline / Iron If any
		No. of Villages/ Wards	Population	No. of Villages/ Wards	Population	No. of Villages/ Wards	Population	
1	Malkangiri	Nil	Nil	Nil	Nil	3	162	51
2	Mathili	Nil	Nil	Nil	Nil	Nil	Nil	85
3	Khairput	Nil	Nil	Nil	Nil	Nil	Nil	50
4	Chitrakonda	Nil	Nil	Nil	Nil	Nil	Nil	35
5	Korukonda	Nil	Nil	Nil	Nil	Nil	Nil	36
6	Kalimela	Nil	Nil	Nil	Nil	2	60	22
7	Podia	Nil	Nil	Nil	Nil	Nil	Nil	15
	Total					5	222	294

(Block wise village list is at Table No.3.2 of Volume II of the DDMP)

## 9. Railway Line Exposed to Different Hazards

**Table -3.22- Details of Railway line exposed to different hazards**

Sl. No.	Hazard	Length of Railway line exposed (in Km.)	Location
1	Flood	Nil	Nil
2	Land Slide	Nil	Nil
3	Storm Surge	Nil	Nil

## 10. Road Accidents

**Table-3.23- Details of Road Accidents**

Sl. No.	Stretch of Road (From - to)	Length in Kms.	No. of Traffic Congestion Areas	No. of Accident-Prone Areas	No. of villages/ habitations adjacent to accident prone areas
1	Nil	Nil	Nil	Nil	Nil

## 11. Population Requiring Special Care

**Table-3.24- Details of Population Requiring Special Care**

Sl.No.	Block/ ULB	No. of HHs headed by Women	No. of HHs headed by PWD	No. of Persons with Disability		No. of Widow	No. of Children		No. of Orphans		No. of Aged Persons (60 and above)		No. of Pregnant and lactating mothers
				M	F		0-5 Years	6-14 Years	M	F	M	F	
1	Balimela		91	180	132	334					400	489	
2	Chitrakonda		403	660	456	1964					3755	3455	
3	Kalimela		1900	2252	1511	4837					6210	5669	
4	Khairput		498	758	565	1521					3333	3108	
5	Korukonda		882	1095	647	2455					3272	3072	

6	Malkangiri		869	1030	625	3341				3859	3650	
7	Malkangiri ULB		155	242	149	1045				887	890	
	Mathili		544	922	525	2405				5403	4789	
	Podia		449	544	362	1447				1600	1844	

(The table is the block wise abstract of population requiring special care. Village wise details are at Table No. 3.16 of Volume II of the DDMP)

## 12. Identified old and depilated Buildings in the District (if any)

Table-3.25- Details of depilated buildings

Sl. No.	Block/ ULB	No. of Vulnerable Buildings	Population at Risk (inhabitants and the neighbouring)	Remarks
	Nil	Nil	Nil	Nil

## 16. Forest Fire

Table-3.26-Details of Forest Fire Incidents in the District (upto 17.04.2022)

Sl.No	Name of the Division	Range	Year	No.of Fire Incidents Reported during last 5years	Area Affected in Ha.	Loss of life/property if any
1	Malkangiri	Balimela	2017	140	80.661	Nil
			2018	313	141	
			2019	451	39.5	
			2020	293	39.8	
			2021	409	227.9	
			2022	453	197.59	
2	Malkangiri	Chitrakonda	2017	491	249.7	Nil
			2018	510	156	
			2019	923	133.1	
			2020	390	28.645	
			2021	793	49.131	
			2022	494	51.916	
3	Malkangiri	Kalimela	2017	131	78.299	Nil
			2018	175	75.3	
			2019	213	53.4	
			2020	213	18.38	
			2021	353	73.42	
			2022	250	36.05	
4	Malkangiri	Malkangiri	2017	113	84.43	Nil
			2018	117	26	
			2019	116	16.5	
			2020	52	10.9	
			2021	168	56.23	
			2022	129	47.01	
5	Mathili	Mathili	2017	153	203.2	Nil
			2018	227	102.23	
			2019	415	112.8	
			2020	153	49.02	

6	Motu	2021	363	94.6	Nil
		2022	272	38.052	
		2017	15	16	
		2018	31	23	
		2019	34	6.1	
		2020	59	8.8	
		2021	72	23.081	
		2022	33	1.98	

**Table-3.27-Forest Fire Vulnerability:**

Sl.No	Name of the Range	Area (In Sq.Km)	Total Notified Forest Area(In Sq.Km)	High Risk Zone (In Sq. Km)	No.of Villages/ habitations inside/adjacent to the High Risk Zone	Medium Risk Zone (In Sq. Km)	No.of Villages/habitations inside/adjacent to the Medium Risk	Low Risk Zone (In Sq. Km)	No.of Villages/habitations inside/adjacent to the Low Risk Zone	
1	2	3	4	5	6	7	8	9	10	11
1	Malkangiri	Balimela	810	136.3412	59.1563	105	18.59	33	58.59	104
2		Chitrakonda	1053	244.4453	154.15	210	36.7	50	53.58	73
3		Kalimela	1294	306.1593	35.95	31	21.76	105	148.44	128
4		Malkangiri	1062	148.2658	14.29	27	47.12	89	83.13	157
5		Mathili	1166	104.3865	38.51	138	17.58	63	53.3	191
6		Motu	506	160.8879	69.21	37	26.19	14	65.47	35

(N.B. The name of the vulnerable villages along with population details under different risk zones is in Volume II)

**13. Fire and Life Safety of High-Rise Buildings (buildings having a height of more than 15 meter)**

**Table-3.28- Details of High-Rise Buildings**

Sl. No.	Name of the ULB/ Block	No. of High-Rise Buildings	No. of High-Rise Buildings where Fire & Life Safety Audit has been carried out in last 2 years.	Remarks
	Nil	Nil	Nil	Nil

**Table-3.29- Details of High-Rise Buildings**

Sl. No.	Name of the High-Rise Building	Location/ Area	Name, Address, Contact Details of the Owner	Whether Fire & Life Safety Audit Under Taken (Yes/ No.)	If Yes then the Year and the Name of the Agency	Vulnerable Population
	Nil	Nil	Nil	Nil	Nil	Nil

(As per National Building Code -2016 Para E-7 of Annexure E)

**14. Embankments:****Table- 3.30-Irrigation Division Wise Embankments in the District:**

Sl. No.	Division	Name of the Embankment	Type (Capital Embankment/ Other Agricultural/ Test Relief/ Saline)	Length (in Km.)

**Table-3.31-Division wise list of Vulnerable Points:**

Sl. No.	Name of the Division	Name of the Embankment/ River	Location of the Vulnerable Point	Affected Length (in Mtr.)	Name of the Block	Name of the Villages to be affected
1	Malkangiri	Breach closing of dam embankment of Patraput MIP		10.68 lakh	Malkangiri	
2	Malkangiri	Breach closing & out flankhing of 15 nos. of check dam		80 lakh	Malkangiri	

**15. Dam- Burst Scenario: (For large Dams)****A. Table-3.32**

Sl. No	Name of the Dam	Location & Water body	Type (Major/ Medium)	Storage Capacity	Full Reservoir Level (FRL)	Maximum Water Level (MWL)	Dam Break Model / Risk Map for Dam break developed? (Yes/No)	Pre and Post Monsoon Inspection of Structural Measures done? (Yes/ No)	No. of Villages to be affected/ needs to be evacuated in case of a possible scenario	Remarks

**16. Contingency Planning for Dam Bursts Scenario:****1. For Dam – A**  
**Table-3.33**

Sl. No.	District	Block	Name of the Village	Evacuation Route for the village/s	No. of HHs	Population	Safe Shelter Identified	Remarks
1	Malkangiri	Large Dam – Nil						

**2. For Dam - B****Table-3.34**

Sl. No.	District	Block	Name of the Village	Evacuation Route for the village/s	No. of HHs	Population	Safe Shelter Identified	Remarks
1	Malkangiri	Mathili	Mathili	Malkangiri to Mathili 49 Km towards Jeypore Highway)	3000	5000	Dhungiaput MPFS	
2	Malkangiri	Korukonda	MV-37	Malkangiri to MV-37 22 km towards Balimela	200	1280	School Building (UGME)	

**3. Formation and Subsequent Bursting of Landslide Dams:****Table-3.35**

Sl. No.	Land Slide Area/ Location Vulnerable for formation of land slide Dams	No. of Villages likely to be affected	Population to be affected
	Nil	Nil	Nil

**19. Cultural Heritage Sites and Precincts:****Table-3.36- Details of Cultural Heritage Sites and Precincts in the District**

Sl. No.	Cultural Heritage site/precinct	Address/Location	Category (Centrally Protected Monument/ State Protected/ UNESCO World Heritage Site/ Unprotected Monument)	Name & Contact details of the Controlling / Supervising Authority at the district level	Hazards & Vulnerability of the Place	Remarks (if Any) (Average Foot Fall and Days/ Period during which the place receives highest Foot Fall)
	Malkangiri	Malkangiri	State Protected	DIPRO	Nil	3 days

**19. Museums:****Table-3.37- Details of Museums in the District**

Sl. No.	Name of the Museum	Location and Address	Type	Category/ Controlling Body(ASI/ Central Government / State Government / Private/ Public Trust/ Privately Managed/	Name & Contact details of the Controlling Authority/ Owner	Hazard & Vulnerability	Average Foot Fall and Days/ Period during which highest Foot Fall is received)	Remarks (if any)
	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

**20. Human Animal Conflict:****i. Loss of Human Lives and Property due to Animal Attack-  
Table-3.38**

Sl. No.	Vulnerable Place (Village/ Panchayat etc.)	Causing Agent/Animal (Elephant, Bear, Crocodile etc.)	Number of Human Lives lost during last 5 years	Damage to House and Property during last 5 years	Crops Damaged
Nil					

**i. Loss of Animal Lives due to Man-Made Causes Table -  
3.39**

Sl. No.	Vulnerable Place/ Location	Causing Agent (Railway line/ Electric transmission lines etc.)	No. of Incidents	Number of Animal Lives lost
Nil				



Mugi Point at motu during flood situation in the month of August 2021.

## **Chapter – 4**

### **Institutional Arrangement: -**

#### **National Disaster Management Authority (NDMA)**

The National Disaster Management Authority (NDMA) was constituted under the Sub-section (1) of Section (3) of National Disaster Management Act 2005. NDMA is the apex body for Disaster Management in the country headed by the Hon'ble Prime Minister of India to lay down policies, plans and guidelines to manage disaster and coordinating their enforcement and implementation for ensuring timely and effective response to disaster.

The Chairperson of the NDMA is the Hon'ble Prime Minister of India (*ex-officio*) and others members not exceeding than nine may be nominated by him. The Chairperson may designate one of the members to be the Vice-Chairperson.

#### **National Executive Committee (NEC)**

The central government has constituted a National Executive Committee (NEC) under sub-section (1) of Section (8) of DM Act-2005 to assist the National Disaster Management Authority in the discharge of its function and also ensure compliance of the directions issued by the central government.

The Union Home Secretary is the Chairpersons (*ex-officio*) of NEC. The Secretaries to the Government of India in the ministries/departments having administrative control of the agriculture, defense, drinking water supply, environment and forests, finance (expenditure), health, power, rural development, science and technology, space, telecommunication, urban development, water resources and chief of the integrated defence staff of the chief of staffs are other members of NEC.

***(Please refer Figure of Volume –II (Page no. ) for Central Government Notification on constitution of NEC)***

#### **State Disaster Management Authority (SDMA)**

The State Disaster Management Authorities (SDMA) has to be constituted by every state government under the subsection (1) & (2) of section 14 of Disaster Management Act 2005. The Hon'ble Chief Ministers of the state are the Chairpersons (*ex-officio*) of SDMA and other members not exceeding than eight may be nominated by the Chairpersons. The Chairman of the State Executive Committee (SEC), Chief Secretary of the State is a member and Chief Executive Officer (*ex-officio*) of SDMA.

The State Disaster Management Authority shall:-

- a) Lays down policies and plans for disaster management in the State.
- b) Approves the State Plan in accordance with the guidelines laid down by the NDMA,
- c) Coordinates the implementation of the State Plan, recommend provision of funds for mitigation and preparedness measures.
- d) Review the developmental plans of different departments of the State to ensure the integration of prevention, preparedness and mitigation measures.
- e) Lay down guidelines to be followed by the departments of the State Government for the purpose of integration of measures for prevention of disasters and mitigation in their development plans and projects and provide necessary technical assistance there for.

- f) Review the measures being taken for mitigation, capacity building and preparedness by the departments of the Government & issue such guidelines as may be necessary.
- g) Lay down detailed guidelines for providing standards of relief (Not less than the minimum standard of relief in the guidelines of NDMA) to persons affected by disaster in the State.

***(Please refer Figure \_\_\_ of Volume –II (Page no. \_) for Odisha Government Notification on reconstitution of SDMA)***

#### **State Executive Committee (SEC)**

The State Executive Committee (SEC) has been constituted by the State Governments under sub-section (1) & (2) of section (20) to assist the State Disaster Management Authority (SDMA) in the performance of its function and to coordinate action in accordance with the guidelines laid down by the SDMA and ensure the compliances of directions issued by the State Government under the DM act. The Chief Secretaries of the States are the Chairman of SEC (ex-officio). Four Secretaries of State Government are the other member's ex-officio. The Chairperson of SEC use powers delegated by SDMAs and state Governments.

The State Executive Committee shall:-

- a) Coordinate and monitor the implementation of the National Policy, National Plan and State Plan.
- b) Examine the vulnerability of different parts of the State to different forms of disaster and specify measures to be taken for their prevention and mitigation.
- c) Lay down guidelines for preparation of disaster management plans by the departments of the Government of the State and the District authorities and monitor the implementation of the plans.
- d) Evaluate preparedness at all government and non-government levels to respond to any threatening disaster situation or disaster and give all directions where necessary for enhancing such preparedness.

***(Please refer Figure \_\_\_ of Volume –II (Page no. \_) for Odisha Government Notification on constitution of SEC)***

#### **Revenue and Disaster Management Department:**

The Revenue and Disaster Management Department is responsible for providing immediate relief to the people affected by various calamities like floods, droughts, cyclones, hailstorms, earthquakes, fire accidents, etc. It also takes initiatives for relief, rescue, rehabilitation and restoration work. The Department is headed by the Principal Secretary/Addl. Chief Secretary, Revenue and Disaster Management Department who exercises all administrative and financial powers.

#### **Special Relief Organization:**

The Special Relief Organisation was established under the Board of Revenue in 1965-66 for carrying out relief and rescue operation during and after various disasters. Since its inception, the scope of Relief Organisation has been diversified. Now it deals with disaster management i.e. response, relief and rehabilitation. It coordinates with districts/departments for quick relief and rescue operation, reconstruction and rehabilitation work. It also promotes disaster preparedness at all levels in the State with the assistance of Odisha State Disaster Management

Authority (OSDMA). Quick response in the natural calamities is the hall-mark of Special Relief Organisation.

**Odisha State Disaster Management Authority (OSDMA):**

Odisha State Disaster Mitigation Authority (OSDMA) was established by the Government of Odisha as an autonomous organization vide Finance Department Resolution No. IFC- 74/9951779/F dated the 28<sup>th</sup> December 1999 (in the intermediate aftermath of the Super-cyclone in 1999). It was registered under the Societies Registration Act, 1860 on 29.12.1999 as a non-profit making & charitable institution for the interest of the people of Odisha, with its headquarters at Bhubaneswar and jurisdiction over the whole State.

The Authority has the mandate not only to take up the mitigation activities but also the relief, restoration, reconstruction and other measures. These activities cover the entire gamut of disaster management including preparedness activities and also include:

- Coordination with the line departments involved in reconstruction,
- Coordination with bilateral and multi-lateral aid agencies,
- Coordination with UN Agencies, International, National and State-level NGOs,
- Networking with similar and relevant organizations for disaster management.
- Preparation of Disaster Management Plans at various levels
- Formulation of Guidelines, SoP pertaining to various hazards and disasters
- Capacity Building of various stakeholders with respect to Disaster Management

**State Level Committee on Natural Calamity (SLCNC)**

A State Level Committee on Natural Calamity (SLCNC) has been constituted under the Chairmanship of the Hon'ble Chief Minister to oversee disaster preparedness and response activities.

The Function of the SLCNC is -:

- a) To advise the State Government regarding precautionary measures to be taken in respect of flood, drought and other natural calamities.
- b) To assess the situations arising out of the calamities.
- c) To recommend to Government the nature and quantum of relief; and
- d) To recommend to Government the Policy to be adopted in giving such relief in areas affected by such calamities.

**(Please refer Figure\_\_ of Volume –II (Page no.) for Odisha Government Notification on reconstitution of SLCNC)**

**District Disaster Management Authority (DDMA)**

Under the sub-section (1) of section 14 of DM act 2005. District Disaster Management Authority has been constituted by the State Government. The District Disaster Management Authority (DDMA) consists of the Chairperson and such number of the other members, not exceeding seven, as may be prescribed by the State Government, and unless the rules otherwise provide, it shall consist of the following namely: -

- a) The Collector or District Magistrate or Deputy Commissioner of the District is the Chairperson (*ex-officio*) of DDMA.
- b) The elected representative of local authority is the Co-chairperson (*ex-officio*) of DDMA.

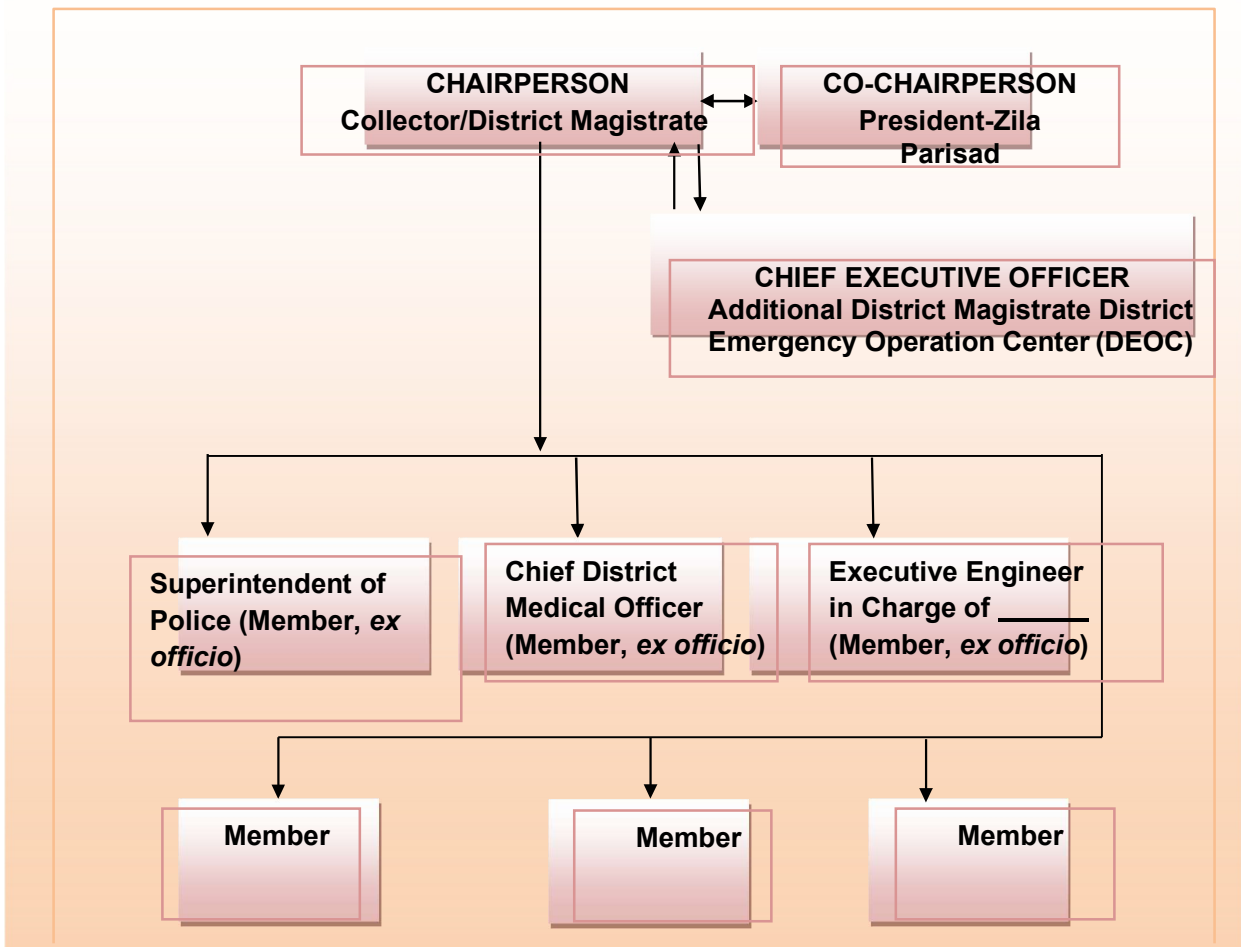
Provided that in the Tribal Areas, as referred to in the Sixth Schedule to the Constitutions, the Chief Executive Member of the district council of autonomous district, shall be the co-Chairperson, *ex officio*

- a) The Chief Executive of the District Authority, *ex officio*;
- b) The Superintendent of Police, *ex officio*;
- c) The Chief Medical Officer of the district, *ex officio*;
- d) Not exceeding two other district level officers, to be appointed by the State Government

The State Government appoints an officer not below the rank of Additional Collector or Additional District Magistrate or Additional Deputy Commissioner, as the case may be of the District to be Chief Executive Officer of DDM

**(Note: The above table should be District Specific)**

**Figure-4.1-Organogram of District Disaster Management Authority**



**(Please refer Figure \_\_\_\_\_ of Volume –II (Page no. ) for Odisha Government Notification on constitution of DDMA)**

**Table-4.1-Structure of District Disaster Management Authority**

Sl No.	Name of the Officer	Designation	Position in DDMA	Contact No.
1	Sri Vishal Singh, IAS	Collector & District Magistrate, Malkangiri	(Chairperson & ex-Officio, DDMA)	9437030223
2	Smt. Samari Tangulu	President Zilla parishad, Malkangiri	(Co-Chairperson ex-Officio, DDMA)	9937934657
3	Sri Nitesh Wadhvani (IPS)	Superintendent of Police, Malkangiri	(Member -ex- officio )	9438916820
4	Sri Prafulla Kumar Nanda	CDM & PHO	(Member -ex- officio )	9439983250
5	Abhiram Behera	Executive Engineer PIP, Balimela	(Member -ex- officio )	8658787224
6	Er. Dusi Sudhakar Kumar	Executive Engineer MIP, Malkangiri	(Member -ex- officio )	9437361589
7	Sri Maheeswar Chandra Naik , OAS, (SAG)	Addl. District Magistrate, Malkangiri	(Executive Officer )	9437643166
8	Asish Das	Executive Engineer -RD-I	(Member)	9438103295
9	Prabhakar Behera	Executive Engineer -RD-II	(Member)	9040504234
10	Sri Ratnakara Sahoo	Project Director, DRDA, Malkangiri	(Member)	9439933355
11	Sri N.R Hayagreeva .	Chief Dist. Agriculture Officer, Malkangiri (Member)	(Member -ex- officio )	7008620245

**(Note: The above organogram of DDMA is an example; the organogram may be district specific, the District specific organogram may be incorporated)**

The DDMA acts as the district planning; coordinating and implementing body for disaster management and take all measures for the purpose of disaster management in the district in accordance with the guidelines laid down by the NDMA and SDMA.

The District Disaster Management Authority (DDMA) shall:-

- a) Prepare Disaster Management Plan including District Response Plan of the District.
- b) Coordinate and Monitor the implementation of the National DM Policy, State DM Policy, State DM Plan and District DM Plan.
- c) Ensure that vulnerable areas of the districts are identified and prevention and mitigation measures are being undertaken by the departments of the Government both at district level and at local level.
- d) Ensure that guidelines for Prevention and Mitigation measures, Preparedness and Response as lay down by NDMA and SDMA are being followed by all departments of Government both at district and local level.
- e) Monitor the implementation of Disaster Management Plans prepared by the departments of the Government at the district levels.
- f) Lay down guidelines to be followed by different Government departments both at district level and local level for integrating disaster prevention and mitigation measures in their development plans and projects and provides necessary technical assistance

- therefor;
- g) Review the state of capability for responding to any disaster or threatening disaster like situation in the district and give directions to the relevant departments or authorities at the district level for their up gradation.
  - h) Review the preparedness measures and give directions to the concerned departments at the district level for bringing the preparedness measures to the levels required for responding effectively to any disaster.
  - i) Organize, coordinate and facilitate specialized training programmes and awareness programmes for different level of officers, employees, voluntary rescue workers and community members for prevention and mitigation of disaster with support of governmental and non-governmental organization and local authorities.
  - j) Set up, maintain, review and upgrade mechanism for early warning and dissemination of proper information to public.
  - k) Review development plans prepared by the departments of the government at the district level, statutory authorities with a view to make necessary provisions therein for prevention of disaster or mitigation.
  - l) Examine construction in any area in the district and ensure standards for prevention of disaster or mitigation laid down for such construction to be followed by the concerned departments and authorities.
  - m) Identify buildings and places which could be used as relief centers or camps in the event of any disaster or disaster like situation and make arrangements for water supply and sanitation in such buildings and places.
  - n) Establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at short notice;
  - o) Encourage the involvement of Non-Government Organization and Voluntary social – welfare institutions working at the grass root level in the district for disaster management.
  - p) Ensure communication systems are in order and disaster management drills are carried out periodically.
  - q) Perform such other functions as the State Government or State Authority may assign to.

**Specific Task Assigned to members of DDMA by the Chairperson Member 1:**

**Member 2:**

**Member 3:**

**Member 4:**

**Member 5:**

**Member 6:**

**District Level Committee on Natural Calamity (DLCNC)**

The Codal provision of Odisha Relief Code envisages the constitutions of District Level Committee on Natural Calamity (DLCNC) which is the apex committee at the district to monitor preparedness and suggests improvement in the response mechanism and finalizes the district disaster management plans. The members of DLCNC are as follows:

**Table-4.2-Structure of District Level Committee on Natural Calamity**

Sl No.	Name of the Member	Designation	Contact No.
1	Sri Vishal Singh	Chairperson ex –officio ,DDMA	9437030223
2	Smt. Samari Tangulu	Co.Chairperson ex –officio ,DDMA	9668723458
3	Sri Nitesh Wadhvani	Member ex-officio	9438916820
4	Sri Paffula kumar Nanda	Member ex-officio	9439983250
5	Sri Maheswar Chandra Naik	Chief Executive officer, ex –officio ,DDMA	9437643166
6	Prabhakar Behera	Member	9040504234
7	Sri Balamukunda Bhuyan	Member ,DDMA	9439933355
8	Sri N.R Hayagreeva	Member ,DDMA	9438081615

**(Note: Structure and roles and responsibilities of District Level Committee on Natural Calamities (DLCNC) of the respective districts to be elaborated.)**

**(Any other existing committees for Disaster Management at District/ Block/Panchayat and Village level may be incorporated in tables.)**

#### **National Disaster Response Force (NDRF)**

The Disaster Management Act 2005 has made the statutory provisions for the constitution of the National Disaster Response Force (NDRF) for the purpose of specialized response to natural and man-made disasters. The NDRF comprises of 12 units of Central Paramilitary Forces (CPMF) that includes 3 units each from Central Reserve Police Forces (CRPF) and Boarder Security Forces (BSF) and 2 Unit each from Central Industrial Security Forces (CISF), Indian Tibbet Boarder Police (ITBP) and Sahastra Seema Bal (SSB). Each battalion has 18 self-contained specialists Search and Rescue teams of 45 personnel. The NDRF team includes Chemical, Biological and Radiological Disaster (CBRN) emergency responders, S&A element, engineers, technicians, electricians, dog squads and paramedics. The NDRF battalions are strategically located at 8 different locations in the country based on the vulnerability profile to cut down response time for their deployment. During the threatening proactive deployment of NDRF is being carried out by NDMA in consultation with the State Governments.

**Table-4.3-Location of National Disaster Response Forces**

Sl No.	Battalion, Location	State	Man power drawn from	Contact Person	Contact No.
1	01 Bn, NDRF, Guwahati	Assam	BSF	Sh. Hitender Pal Singh Kandari	09435117246
2	02 Bn, NDRF, Kolkata	West Bengal	BSF	Sh. Nitish Upadhyay	09434742836
3	03 Bn, NDRF, Munduli	Odisha	CISF	Sh. Jacob Kispotta	09470587743 09437964571
4	04 Bn, NDRF, Arakkonam	Tamil Nadu	CISF	Ms. Rekha Nambiyar	09442105169
5	05 Bn, NDRF, Pune	Maharashtra	CRPF	Sh. Anupam Srivastava	09423506765
6	06 Bn, NDRF, Gandhinagar	Gujrat	CRPF	Sh. A. K. Tiwari	09723632166

7	07 Bn, NDRF, Ghaziabad	Uttar Pradesh	ITBP	Sh. Ravi Kumar Pandita	09417802032
8	08 Bn, NDRF, Bhatinda	Punjab	Sh. P.K.Tiwari	09412221035	
9	09, Bn, NDRF, Patna	Bihar	BSF	Shri Vijay Sinha	07762884444
10	10 Bn, NDRF, Vijayawada	Andhra Pradesh	CRPF	Mr. Zahid Khan	08333068559
11	11Bn, NDRF, Varanasi	Uttar Pradesh	Sh. A.K.Singh	09455511107	
12	12 Bn, NDRF, Itanagar	Arunachal Pradesh	SSB	Sh. Rajesh Thakur	09485235464

#### **Odisha Disaster Rapid Action Force (ODRAF)**

The Government of Odisha formed Odisha Disaster Rapid Action Force (ODRAF) vide notification no.939/CD dated 07.06.2001. ODRAF is a multi-disciplinary, multi-skilled, high- tech force for all types of disasters. ODRAF aims at reducing casualties, clearance of communication channels, quick deployment of personnel and equipments and minimize expenditure and time lag and support institutional arrangement. In 3 phases, ten units of ODRAF have been set up. The ODRAF units are strategically located throughout Orissa. Locations of these units are identified on the basis of vulnerability profile to cut down theresponse time for their deployment. The ODRAF Units do not have any geographical /territorial restrictions in terms of area of operation.

10 new units of ODRAF have been set up at different locations like Sambalur, Boudh, Kalahandi, Nawarangpur, Gajapati, Berhampur, Puri, Khorda, Kendrapada and Jajpur

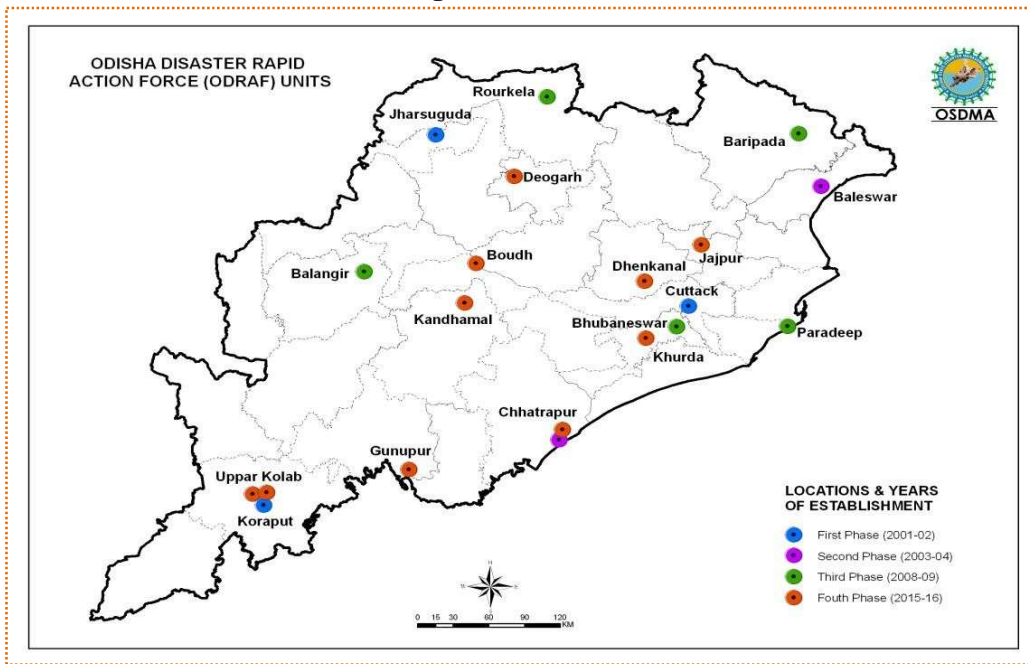
**Table-4.4-Location of Odisha Disaster Rapid Action Force with contact details**

Sl. No.	ODRAF Bn.	Raised in the Year	Location (District)	No. of Persons in each BN.	Contact Details (Commandant)
1	OSAP 6th Battalion, Cuttack	2001-2002	Cuttack	49	Phone:0671-2442148 (O), 2442442 (R) Fax: 0671- 2442148 comdt6thbn.odpol@nic.in
2	OSAP 2nd Battalion, Jharsuguda	2001-2002	Jharsuguda	48	Phone: 06645-270096 (O),270038 (R) Fax: 06654 -220370 comdt2ndbn.odpol@nic.in
3	OSAP 3rd Bn. Koraput	2001-2002	Koraput	38	Phone: 06852-251344 (O), 151335(R) Fax: 06852- 251344 comdt3rdbn.odpol@nic.in
4	APR Balasore District	2003-2004	Balasore	41	Phone: 06782-262004 (O), 262005 (R) Fax: 06782 -262584 spbls.odpol@nic.in
5	OSAP 8th Battalion, Chhatrapur	2003-2004	Ganjam	40	Phone: 06811-260375 (O) Fax: 06811 - 254011 comdt8thbn.odpol@nic.in
6	APR Jagatsinghpur District	2008-2009	Jagatsinghpur	48	Phone: 06724-220115 (O),220015 (R),Fax: 06724-220370,spjisp.odpol@nic.in
7	OSAP 7th Battalion, Bhubaneswar	2008-2009	Khurdha	44	Phone: 0674-2301055 (O),2303426 (R),Fax: 0674 - 2301055 comdt7thbn.odpol@nic.in

8	OSAP 5th Battalion, Baripada	2008- 2009	Mayurbhanj	40	Phone: 06792- 278232 (O),254402 (R) Fax: 06792- 278232 comdt5thbn.odpol@ nic.in
9	APR Bolangir District	2008- 2009	Balangir	43	Phone: 06652- 232020 (O) -133063 (R) Fax: 06652- 232375 spbgr.odpol@nic.in
10	OSAP 4th Battalion, Rourkela	2008- 2009	Sundergarh	46	Pho : 0661 - 2600980 (O),- 2600434 (R) Fax: 0661 - 2600980 comdt4thbn.odpol@ nic.in
11	IR Battalion, Boudh	2015- 2016	Boudh	47	Phone: 06841- 222238 7684872156 (M) 9437232275 (M) comdt5thirbn.odpol @nic.in
12	4th IR Battalion, Deogarh	2015- 2016	Deogarh	52	Phone: 0664- 3242130 (O),comdt4thirbn.od pol@nic.in
13	OSAP 1st Battalion, Dhenkanal	2015- 2016	Dhenkanal	46	Phone: 06762- 226229 (O) 06762- 226291 (CR) Fax: 06762-226291 comdt1stbn.odpol@ nic.in
14	OSAP 8th Battalion, Chhatrapur	2015- 2016	Ganjam	48	Phone: 06811- 260375 (O) Fax: 06811- 254011 comdt8thbn.odpol@ nic.in
15	3rd IR Battalion, Kalinganagar	2015- 2016	Jajpur	49	Phone: 0672- 6244602 (O)0672- 6244610 (CR) Fax: 0672- 6244610 comdt3rdirbn.odpol @nic.in
16	8th Special IR Battalion, Kandhamal	2015- 2016	Kandhamal	43	Phone: 06842- 2533017 (O),8763616282 (M) comdt8thsplirbn.odp

					ol@nic.in
17	6th IR Battalion, Khurda	2015-2016	Khurdha	50	8895856633 (M) comdt6thirbn.odpol@nic.in
18	1st IR Battalion, Upper Kolab, Koraput	2015-2016	Koraput	43	Phone: 06852-252167 (O) 06852-211320 (CR) comdt1stirbn.odpol@nic.in
19	7th Special IR Battalion, Upper Kolab, Koraput	2015-2016	Koraput	44	Phone: 06852-251067(O): 06852-229007 (CR) comdt7thsplirbn.odpol@nic.in
20	2nd IR Battalion, Rayagada, Gunupur	2015-2016	Rayagada	48	Phone: 0658-725110 (O),Fax: 0685- 725110 (CR),comdt2ndirbn.odpol@nic.in

Figure 4.2-Location of ODRAF Units



**Other Disaster Response Teams in the district****5 Table-4.5-List of other Disaster Response Teams in the Distri**

Sl. No.	Name of the Institutions	Name of the Chief Coordinator of the Organization	Designation	Contact Number	Alternate Contact Number	Number of Volunteers
1	Civil Defense	Kamal Ku Gouda	Sh. Ravi Kumar Pandita	9938987790		--
2	Home Guards	SP	Sri Nitesh Wadhvani,IPS	9438916820		
3	National Service Scheme (NSS)	Namita Dandasena	Shri Vijay Sinha	07762884444	nil	1250
4	National Cadet Corps (NCC)	Susanta Majhi	Mr. Zahid Khan	08333068559	Nil	400
5	Nehru Yuva Kendra (NYK)	Harish Rupal	Sh. A.K.Singh	09455511107	nil	14
6	Indian Red Cross	Ranjan Kumar Swain	Sh. Rajesh Thakur	09485235464		50
7	NGOs	Nityananda Pradhan	Secretary	9437037005	9777519905	30
8	VOs	Nil	Nil	Nil	Nil	Nil
9.	Aapda Mitra		Nil	Nil	Nil	200

**Emergency Communication System****State Emergency Operation Center (SEOC)**

The State Emergency Operation Centre has been made operational at Rajiv Bhawan, Bhubaneswar with state of art communication net-work. The State EOC functions round the clock throughout the year. The Organisation is headed by the Special Relief Commissioner (SRC) who exercises all administrative and financial powers. He is assisted by a group of experienced officers and staff. During any natural disaster, the office functions round the clock in an emergency mode. The SEOC is opened throughout the year and round the clock 24x7.

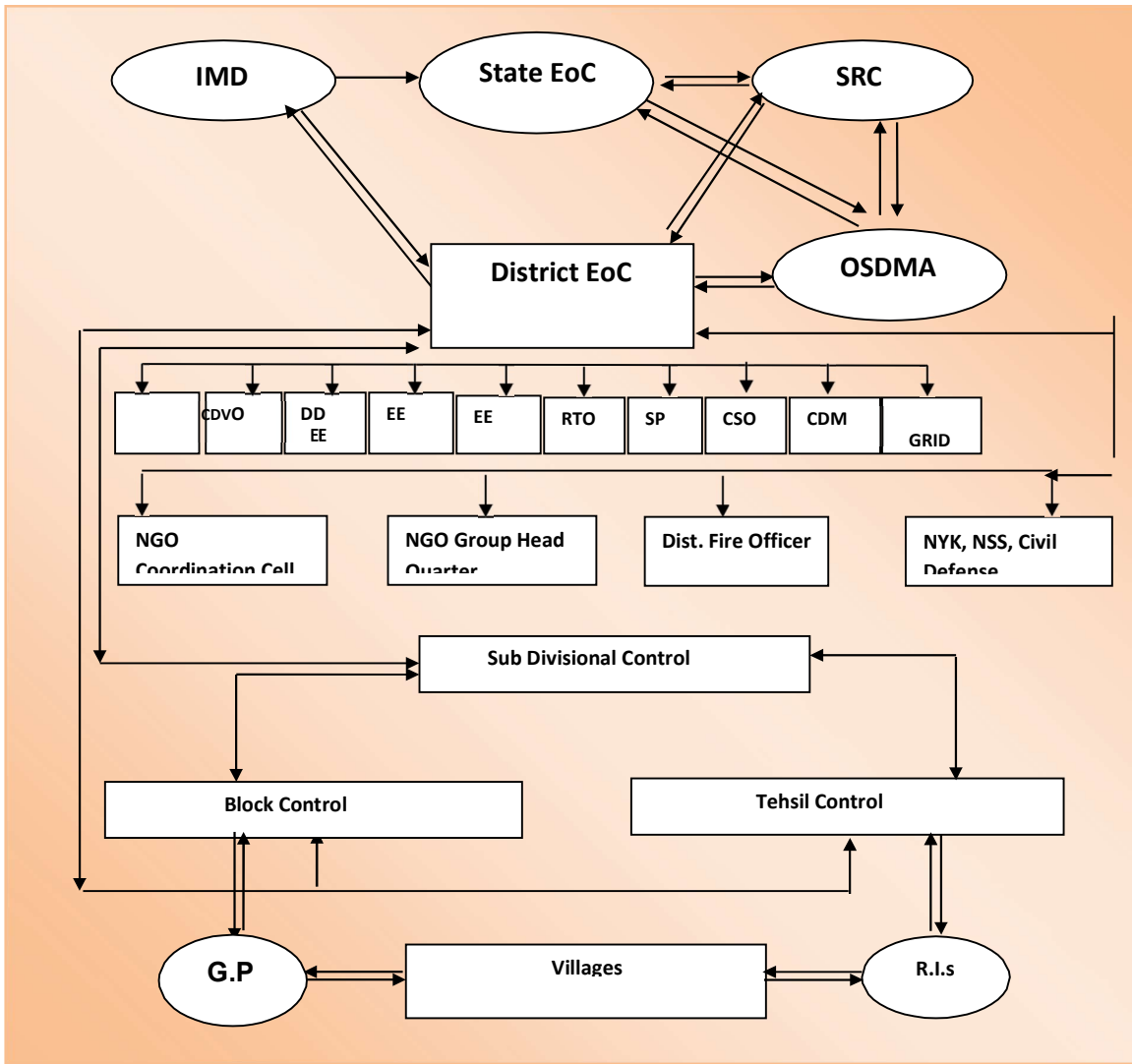
**Figure-4.3-Information flow chart from SEOC to Districts****District Emergency Operation Centers (DEOC), of the District to be elaborated)**

- **Structure and Function**

**Table-4.6-Equipment provided to DEOC and their operational status**

Sl No.	Equipments	Unit	Status		Remarks
			Operational	Non-Operational	
1	Desktop Computer	2	1	1	
2	Laser Printer	1	1	0	
3	UPS				
4	Scanner	1	1	0	
5	Fax				
6	Ink Jet Printer				
7	Multi Utility Machine (Printer, Scanner, Fax, copy)				
8	Laptop	1	1		
10	LCD Projector				
11	Photocopier				
12	GPS Unit				
13	Satellite Phone	1		1	
14	VHF Sets				
15	VHF Mobile Station				
16	Walkie-Talkie (VHF hand Set)				
17	Portable Diesel Generator				
18	Inverter with Battery				
19	Inflatable Tower Light				
20	Power Saw	4		4	
21	Life Jacket	101			
22	Life Buoy				
23	Aluminum Ladder				
24	Fire Extinguisher				
25	Siren				
26	Megaphone				
27	Colour TV/Stand	1	1		
28	Mobile Phone				
29	Display Board				
30	White Broad				
31	Computer Table/Chair				
32	Rack	2	2		
33	Book Case				
34	GI Trunk				
35	Commando Search Light				
36	Steel Almira	5		1	

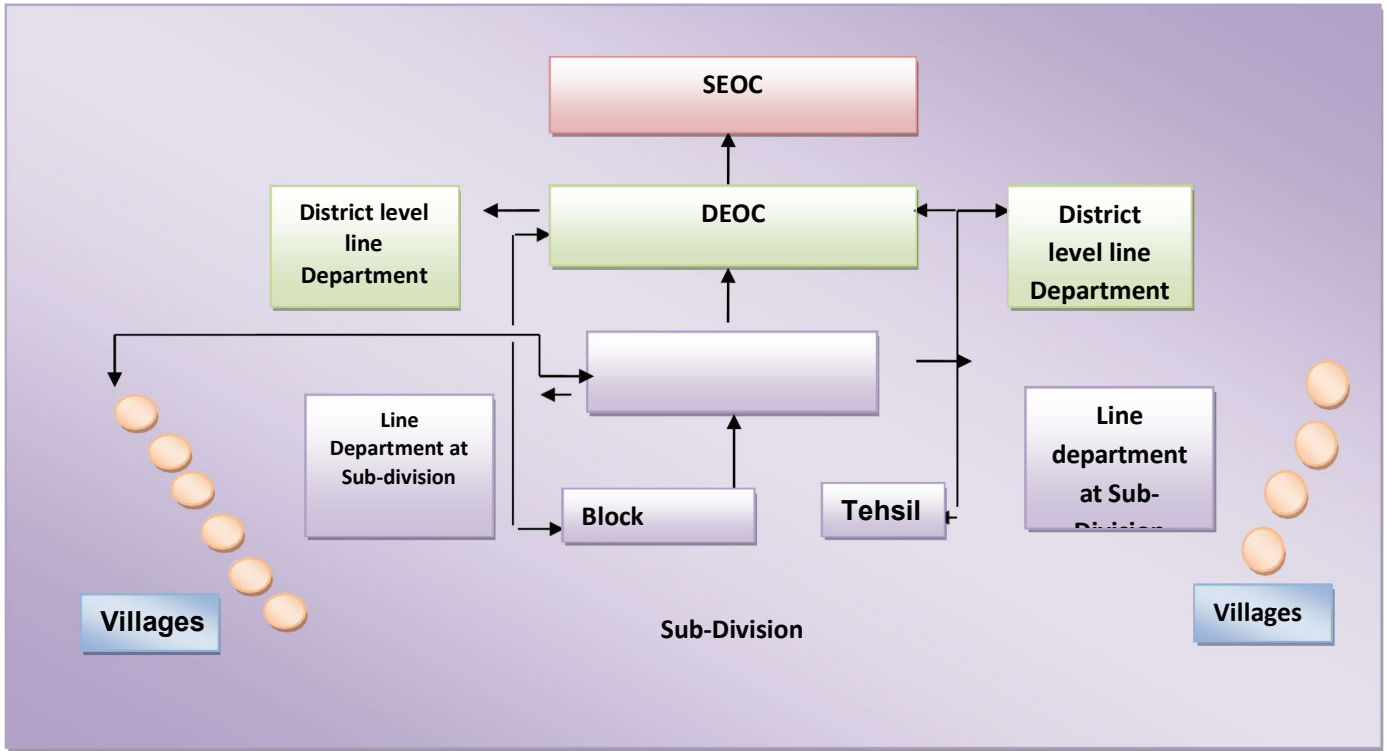
**Figure-4.4-Information flow chart from District Emergency Operation Center (DEOC) to Villages with early warning**



**Table-4.7-Important Line Departments at the District.**

Sl No.	Department	Head of the Department at District	Name of the Nodal Officer	Contact No.
1.	Health	CDM&PHO	Dr. Prafulla Ku Nanda	9439983250
2.	Police	SP	Sri Nitesh Wadhvani,IPS	9438916820
3	Fire	District Fire Officer	Saroj Kumar Behera	9438359594
4	Electri	EE, Southco	Pratap keshori Nayak	9437959846
5	Agriculture	CDAO	N.R Hayagreeva	9438081615
6	Horticulture	Dy. Director Horticulture	Madhusudan Dalei	9439543259S
7	RD	EE, RD- I & II	Prabhakar Behera	9040504234
8	R & B	EE,RWSS	Subash Ch Patra	9437345259
9	RWSS	EE,RWSS	Ritush Sahu	8280408053
10	Irrigation	EE, Earthdam Division	Kabi Prasad Nath	9437200758
11	Revenue	Addl. District Magistrate	Sri Trinath Majhi	9439703379

**Figure-4.5-Information flow chart from Villages to District Emergency Operation Center (DEoC) without early warning**



**Block Emergency Operation Center (BEoC)**

*(Note: BEOC of the District to be elaborated Structure and Function)*

**Table-4.8-Important Line Departments at the Block**

Sl No.	Department	Head of the Department at Block	Name of the Nodal Officer	Contact No.
	Health	MO, CHC		

### Any other Alternative Emergency Operation Center in the district

**(Note: Structure and function to be elaborated)**

#### State Crisis Group (SCG)

The State Government has constituted a State Crisis Group for management of chemical accidents as per provision of the chemical accidents (emergency planning, preparedness, and response) rules, 1996 on 1st August 1996.

- a) The State Crisis Group shall meet at least once in three months and follow such procedure for transaction of business as it deems fit.
- b) Notwithstanding anything contained in sub-rule (2), the State Crisis Group may co-opt any person whose assistance or advice is considered useful in performing any of its functions, to participate in the deliberation of any of its meetings.

#### Composition of the State Crisis Group

The State Crisis Group comprising of the following members in pursuance of the Rule-6 of the chemical accident (Emergency Planning, Preparedness and Response) Rules, 1996.

**Table -4.9-Composition of State Crisis Group**

Sl No.	Members	Designation
1.	Chief Secretary, Odisha	Chairman
2.	D,C-cum-A.C.S & Chairman, SPCB	Member
3..	Secretary to Government, Labour & ESI Department	Member Secretary
4.	Secretary to Government, Home Department	Member
5.	Secretary to Government, Forest & Environment Department	Member
6.	Secretary to Government, Health & FW Department	Member
7.	Secretary to Government, Industries Department	Member
8.	Secretary to Government, H&UD Department (PH Engineering)	Member
9.	Special Relief Commissioner, Odisha	Member
10.	Secretary to Government, Transport Department	Member
11.	Labour Commissioner	Member
12.	D.G.Police, Odisha	Member
13.	D.G. of Police, Fire Services	Member
14.	Director of Factories and Boilers	Member
15.	Head, NDRF, Odisha, Bhubaneswar	Member
16.	Head, Tata Steel Ltd. Kalinga Nagar	Member
17.	Head (safety), IOCL, Paradeep	Member
18.	Prof. G.K.Roy, Ex-Director and HOD (Chemical Engg.), NIT, Rourkela	Member
19.	Director, RLI, (Directorate General of Factory Advice, Kolkata, GoI	Member
20.	Regional Director, Mines Safety (DGMS, Bhubaneswar, GoI	Member

#### Functions of the State Crisis Group

The State Crisis Group is the apex body in the State to deal with major chemical accidents and to provide expert guidance for handling major chemical accidents. Without prejudice to the functions specified under sub-rule (1), the State Crisis Group shall,

1. Assist the State Government in managing chemical accidents at a site;
2. Review all district off-site emergency plans in the State with a view to examine its adequacy in accordance with the Manufacture, Storage and Import of Hazardous Chemicals, Rules and forward a report to the Central Crisis Group once in three months;
3. Assist the State Government in the planning, preparedness and mitigation of major chemical accidents at a site in the State;
4. Continuously monitor the post-accident situation arising out of a major chemical accident in the State and forward a report to the Central Crisis group
5. Review the progress report submitted by the District Crisis groups;
6. Respond to queries addressed to it by the District Crisis groups;
7. Publish a list of experts and officials in the State who are concerned with the management of chemical accidents.

#### **District Crisis Group**

As prescribed in the chemical accidents (emergency planning, preparedness, and response) rules, 1996, the District Crisis Group has to be constituted.

The District Crisis Group is the apex body in the district to deal with major chemical accidents and to provide expert guidance for handling chemical accidents. Without prejudice to the functions specified under sub-rule (1). the District Crisis Group shall, -

1. Assist in the preparation of the district off-site emergency plan;
2. Assist the district administration in the management of chemical;
3. Continuously monitor every chemical accident;
4. Review all the on-site emergency plans prepared by the occupier of Major Accident Hazards installation for the preparation of the district off-site emergency plan;
5. Ensure continuous information flow from the district to the Central and State Crisis Group regarding accident situation and mitigation efforts;
6. Forward a report of the chemical accident within fifteen days to the State Crisis Group;
7. Conduct at least one full-scale mock-drill of a chemical accident at a site each year and forward a report of the strength and the weakness of the plan to the State Crisis Group.

#### **4.17.1 Composition of the District Crisis Group**

**Table-4.10-Composition of District Crisis Group**

Sl No.	Member	Designation
1	Collector-cum-District Magistrate, Malkangiri	Chairmen
2	Asst. Director of Factories and Boilers.	Member Secretary
3	Superintend of Police, Malkangiri	Member
4	Sub-Collector, Malkangiri	Member
5	District Emergency Officer, Malkangiri	Member
6	District Fire Officer, Malkangiri	Member
7	District Information and Public Relation Officer, Malkangiri	Member
8	Civil Defence Officer, Malkangiri	Member
9	Chief District Medical Officer, Malkangiri	Member
10	Chairman Municipality, Malkangiri.	Member
11	Executive Engineer, Electrical, Malkangiri	Member

12	Superintending Engineer P.H Circle, Malkangiri	Member
13	Regional Officer, Pollution Control board ,Rayagada	Member
14	Chief District Agriculture Officer, Malkangiri	Member
15	RTO, Malkangiri	Member
16	General Manager DIC, Malkangiri	Member
17	Divisional Manager, OFDC, Malkangiri	Member
18	Controller of Explosive, Rourkella	Member
19	District labour officer, Malkangiri	Member
20	DPO, DDMA, OSDMA, Malkangiri	Member
21	Director (Operation), O.H.P.C. & occupier of Balimela Hydro Electric Project	Member
22	Senior G.M (Electrical) Balimela Hydro Electric Project	Member

### Local Crisis Group

The Local Crisis Group shall be the body in the industrial pocket to deal with chemical accidents and coordinate efforts in planning, preparedness and mitigation of a chemical accident. Without prejudice to the functions specified under sub-rule (1), the Local Crisis Group shall,

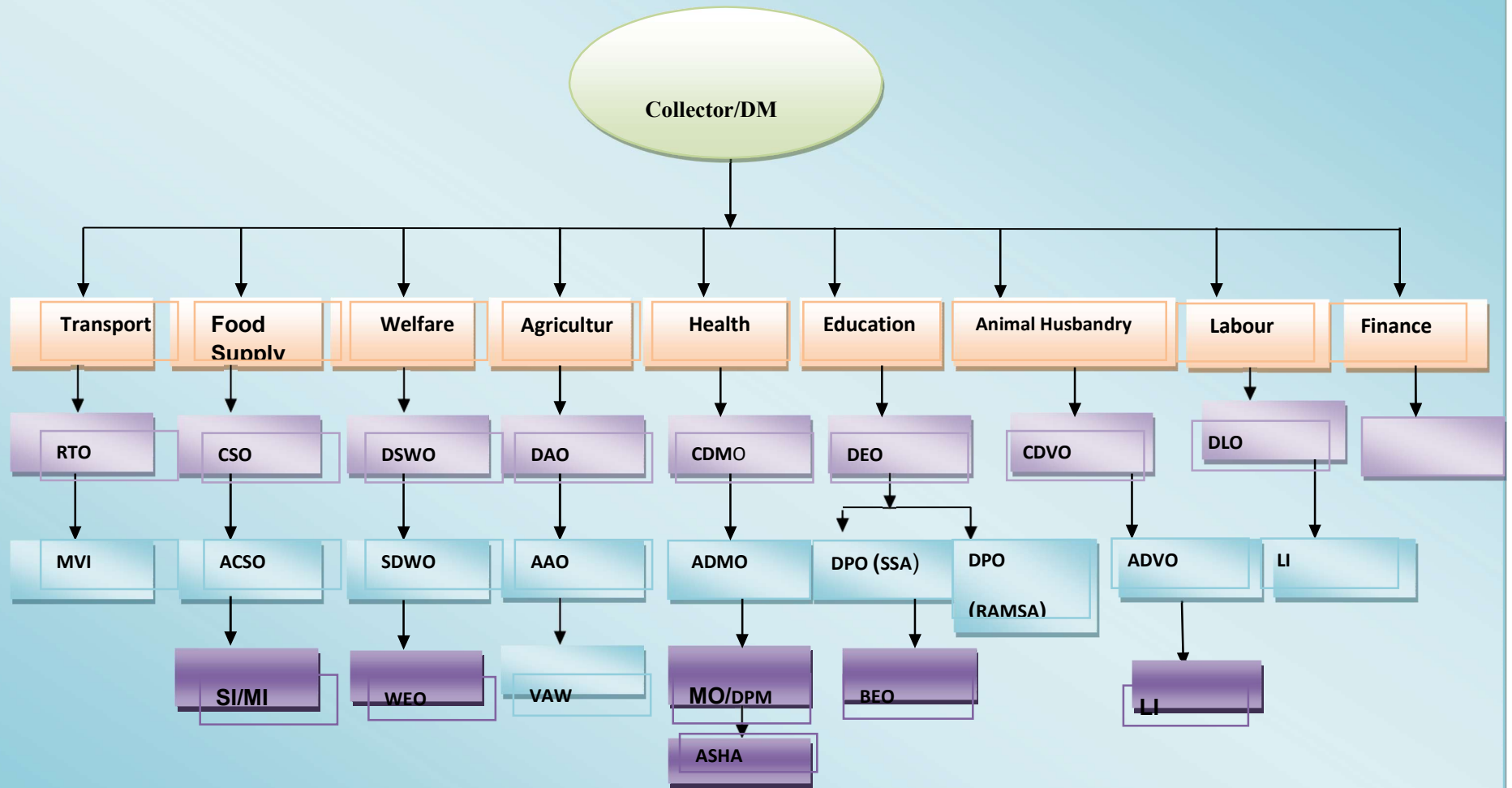
1. Prepare local emergency plan for the industrial pocket;
2. Train personnel involved in chemical accident management;
3. Ensure dovetailing of the local emergency plan with the district off-site emergency plan;
4. Educate the population likely to be affected in a chemical accident about the remedies and existing preparedness in the area;
5. Conduct at least one full scale mock-drill of a chemical accident at a site every six months forward a report to the District Crisis Group;
6. Respond to all public inquiries on the subject.

### Composition of the Local Crisis Group

**Table-4.11-Composition of Local Crisis Group**

Sl No.	Member	Designation
	Nil	

4.16-Figure 4.6-Coordination structure at the District level and down the line



**Abbreviations: (To be placed after content)**

- RTO: Regional Transport Officer
- MVI: Motor Vehicle Inspector
- CSO: Civil Supply Officer
- ACSO: Assistance Supply Officer
- SI: Supply Inspector
- MI: Marketing Inspector
- DSWO: District Social Welfare Officer
- SDWO: Sub-divisional Welfare Officer
- DAO: District Agriculture Officer
- AAO: Assistant Agriculture Officer
- VAW: Village Agriculture Worker
- CDMO: Chief District Medical Officer
- ADMO: Additional District Medical Officer
- MO: Medical Officer
- DPM: District Programme Manager
- ASHA: Accredited Social Health Activist
- DEO: District Education Officer
- DPO (SSA): District Programme Officer, Sarva Shiksha Abhiyan
- DPO (RMSA); District Programme Officer, Rashtriya Madhyamik Shiksha Abhiyan
- BEO: Block Education Officer
- CDVO: Chief District Veterinary Officer
- ADVO: Additional District Veterinary Officer
- LI : Life stock Inspector
- DLO: District Labour Officer
- LI: Labour Inspector
- DAO / TO: District Accounts Officer / Treasury Officer

**(Note: Elaborate on GO-NGO coordination cell in the district, if any) (1 page)**

**Role of Corporate Sector in the district relating to Disaster Management (1 page)**

**Public Private Partnership: Public & Private Emergency service facilities available in the district. (1/2 Page)**

***(Note: Brief description on Public and Private emergency service facilities in the district may be given)***

**Table-4.12 Multi Purpose Cyclone Shelters (MCS) in the district**

- a) ***(GIS Maps for location of MCS may be incorporated)***
- b) ***(Details of Cyclone Shelter Management and Maintenance Committee (CSMMC) may be incorporated)***

**Flood Shelters (FS) in the District**  
**Table-4.15-Details of FSMMC**

Sl No	Name of the MFS	Location	Name of President	Contact No.	Name of Secretary	Contact No.
1	MFS, Dhungiaput	Dhungiaput, Mathili	Sri Madhu Sudan Nayak	8260294781	Tulsiram Majhi	9348016010
2	MFS, Badili	Badili, Kalimela	Sri Dinabandhu Madhi	9178412499	Sri Saroj Sardar	7852959631
3	MFS, Girkanpalli	Girkanpalli, Podia	Smt. Menaka Kobasi	8260050397	Nakul Tejabat	9439238587
4	MFS, Motu	Motu	Miss Katam Ruchi	8480502419	A.D Devdanam	9439171713

a) **(Equipments provided to the FS)**

**Table-4.16-Details of equipment provided to FS**

Sl No.	Name of the MFS	Location	Equipment Provided	Status		Remarks
				Operational	Non-Operational	
1	MFS, Dhungiaput	Dhungiaput, Mathili	Power Saw Cuttaer(2) Aska light-1 Generator-1 Lifebouy-5 Stretcher-1 Ladder-1 Wheel Chair-2	No No No Yes Yes Yes yes		
2	MFS, Badili	Badili, Kalimela	Power Saw Cuttaer(2) Aska light-1 Generator-1 Lifebouy-5 Stretcher-1 Ladder-1 Wheel Chair-2	No No No Yes Yes Yes yes		
3	MFS, Girkanpalli	Girkanpalli, Podia	Power Saw Cuttaer(2) Aska light-1 Generator-1 Lifebouy-5 Stretcher-1 Ladder-1 Wheel Chair-2	No No No Yes Yes Yes yes		
4	MFS, Motu	Motu	Power Saw Cuttaer(2) Aska light-1 Generator-1 Lifebouy-5 Stretcher-1 Ladder-1 Wheel Chair-2	No No No Yes Yes Yes yes		

**Other identified Safe temporary shelters in the district Table-****4.17-Identified Safe temporary shelters**

SI No	Village	GP	Block	Name of the Institutions/Buildings	Type of Roof	No. of Rooms (Size)	No. of Toilets (M/F)	Availability of Kitchen	Total useable area
1	Motu	Motu	Kalimela	(Shri Jagannath temple), G.P.Building Tahasil, Building & Cluster House Motu				Yes	
2	Kaliaguda	Mecca	Mathili	Boys High School, Potteru				Yes	
3	Potteru	Potteru	Kalimela	U.P.School,.Potteru				Yes	
4	Podia	Podia	Kalimela	High School, podia				Yes	
5	Kiango	Kiango	Mathili	U.P.School, Kiango				Yes	
6	Chittrakonda	Chittrakonda	Chittrakonda	Govt. H/S, Chittrakonda				Yes	
7	Andrapalli	Andrapalli		H & TW School, Andrapalli				Yes	
8	Mahupadar	Salimi	Mathili	H & TW H/S , Mahupadar				Yes	
	Kalimela	Kalimela		High School, Kalimela				Yes	
9	MV.07,	Tamasa	Malkangiri	High School, MV.07				Yes	
	MV.50,	Kamawada	Korukonda	High School, MV.29				Yes	
	Dangaguda	Dudameta	Korukonda					Yes	
	Kamarguda	Kamarguda	Mathili	M.E.School,Kamarguda				Yes	
	Kurty	Kurty	Mathili	U.P.School,Kurty				Yes	

**4.23. Other Safe Sites for temporary shelter for Flood/ Tsunami etc.****Table-4.18-Other safe sites for temporary shelter**

<b>Sl. No.</b>	<b>Block Name</b>	<b>GP Name</b>	<b>No. of Mounts</b>	<b>No. of High Bridges</b>
	Nil	Nil	Nil	Nil

## Chapter – 5

### Prevention & Mitigation Measures: -

Ways & Means to prevent or reduce the impact of various disasters

Structural Measures:

Table-5.1

Sl. No.	Name of the Department/ Office	Activity/ Project	Starting Date	Date of Completion	Cost	Funding Sources
1	Water Resource	Embankment Strengthening	Nil	Nil	Nil	SDRF

Non-structural Measures

Table-5.2

Sl. No.	Name of the Department/ Office	Activity/ Project	Starting date	Date of completion	Cost	Funding source
1	I & PR	Awareness				OSDMA

Scope for integrating different schemes for Disaster Risk Reduction (DRR) Activities Table-5.3

Sl. No.	Schemes	Possible activities for DRR
	Nil	Nil

*[Activities/ Projects for 5.3 and 5.4 (Indicative Only):*

- *Construction of multipurpose cyclone and flood shelters.*
- *Removal of hoardings before specified cyclone period*
- *Trimming of trees and shrubs and removal of damaged and decayed parts of trees close to localities and critical infrastructure*
- *Public safety norms and constructions in places of worship and mass gathering*
- *Soil erosion control and riverbank stabilization*
- *Road and Highway Stabilization*
- *Bridge abutment stabilization*
- *Protection of Roads, Culverts and Bridges against flood- grass plantation*
- *Repair and Maintenance of Embankments against flooding and erosion. Retrofitting of vulnerable spots to prevent embankment breaches*

- *Cross Drainage Works: - Construction of causeways and culverts sufficient for carrying water more than historical records to prevent flash floods in downstream villages*
- *Drinking Water:*

- *Habitations to be covered under pipe water supply scheme*
- *Water supply in scarcity areas in during summer season*
- *Raising of hand pumps in flood prone areas*
- *Repair/ Replacement of non-functional hand pumps*
- *Sanitation:*
  - *Community Mobilization*
  - *Construction of Toilets*
  - *Municipal Waste Management*
  - *Sewerage System in ULBs*
- *Plantation: River bank plantation, AR, ANR, Hill Slope Plantation, Fodder Plantation, Agro forestry etc.*
- *Soil conservation works.*
- *Water harvesting*
- *Prevention of Road Accidents:*
  - *Putting up of signage in accident prone zones*
  - *Light reflectors*
  - *Diversion boards for roads and bridges*
  - *Repair of potholes & construction of Speed breakers*
- *Immunization*
- *Preventive measures against vector borne diseases*
- *Risk Transfer: Crop insurance/ livestock insurance*
- *Measures against animal depredation- Trenching/ Fencing*
- *Awareness generation programmes on disaster prevention and mitigation*
- *Mainstreaming Disaster Risk Reduction (DRR) in development activities*

## Chapter – 6

### Climate Change Adaptation: -

#### Climate Change Adaptation & Mitigation

Weather and climate are the results of complex interactions Between anthropogenic and natural factors. Evidence of global climate change include higher average temperatures, changes in precipitation, ocean warming, ocean acidification, sea level rise, decreasing sea ice, and changes in physical and biological systems. Observed climate change can be linked with the increase of green house gas concentrations in the atmosphere since the industrial revolution. Global surface temperature change for the end of the 21st century is likely to reach 4°C if no drastic mitigation actions are taken. Various sources of climate data exist that can support planning for climate change.

Greenhouse gases (GHGs) are trace gases in the atmosphere that absorb and emit long wave radiation. They naturally blanket the earth and keep it at about 33° C warmer than it would be without these gases in the atmosphere. The table features the seven most important greenhouse gases as regulated under the Kyoto Protocol. The seven gases each have a different capacity to trap heat in the atmosphere, or a so-called “*global warming potential*” (GWP). They all belong to the group of long-lived greenhouse gases (LLGHGs), because they are chemically stable and persist in the atmosphere over time scales of a decade to centuries or longer, so that their emission has a long-term influence on climate. Some of the GHGs occur naturally (e.g. CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O) but increases in their atmospheric concentrations over the last 250 years are due largely to human activities. Other greenhouse gases are entirely the result of human activities (e.g. HFCs, PFCs, SF<sub>6</sub> and NF<sub>3</sub>).

**Table: 6.1**

Greenhouse Gas	Global Warming Potential (GWP) (over 100 years)	% of Total Anthropogenic GHG Emissions (2010)
Carbon dioxide (CO <sub>2</sub> )	1	76%
Methane (CH <sub>4</sub> )	25	16%
Nitrous oxide (N <sub>2</sub> O)	298	6%
Hydrofluorocarbons (HFCs)	124-14,800	< 2%
Perfluorocarbons (PFCs)	7,390-12,200	< 2%
Sulphur hexafluoride (SF <sub>6</sub> )	22,800	< 2%
Nitrogen trifluoride (NF <sub>3</sub> )	17,200	< 2%

#### Important Greenhouse Gases : Carbon Dioxide (Co<sub>2</sub>)

Most important greenhouse gas (contributes ~64% to total radiative forcing by long- lived GHGs). Half of CO<sub>2</sub> emitted by human activities is being absorbed in the biosphere and in the oceans. Rest remains in the atmosphere for hundreds to thousands of years

The most important anthropogenic GHG is carbon dioxide (CO<sub>2</sub>). It accounts for around 64% of total radiative forcing due to LLGHGs. Carbon dioxide does not have a specific lifetime because it is continuously cycled between the atmosphere, oceans and land biosphere and its net removal from the atmosphere involves a range of processes with different time scales. CO<sub>2</sub> is primarily emitted as a result of burning of fossil fuels, deforestation and forest degradation and iron and steel production. Oceans and forests are the main sequestrers of carbon i.e. sinks that can absorb CO<sub>2</sub> from the atmosphere. Carbon dioxide is the gas to which all other gases are compared when speaking of Global Warming Potential. Emissions of other greenhouse gases can be converted into *CO<sub>2</sub> equivalent emissions*.

**Table: 6.2**

Sl No	Name of the Industry/Plant/Firm	Location	Quantity of Co2 emission (PPM)	Ranking as per CO2 Emission (in the district)	Other major pollutants emitted (PPM)	Action taken for cutting down émission
Nil						

#### Important Greenhouse Gases : Methane (CH<sub>4</sub>)

Second most significant greenhouse gas (contributes ~18% to total radiative forcing by long-lived GHGs). Approximately 40% of methane is emitted into the atmosphere by natural sources. About 60% comes from human activities & Stays in the atmosphere for approximately 12 years.

The second most significant anthropogenic GHG is methane (CH<sub>4</sub>) which contributes to approximately 18% of total radiative forcing due to LLGHGs. Approximately 40% of methane is emitted into the atmosphere by natural sources (e.g. wetlands and termites). About 60% comes from human activities (e.g. cattle breeding, rice agriculture, fossil fuel exploitation, landfills and biomass burning). Methane is mostly removed from the atmosphere by chemical reactions, persisting for about 12 years. Thus, although methane is an important greenhouse gas, its effect is relatively short-lived.

**Table: 6.3**

Sl No	Name of the Block	Major Sources	Annual emission (In PPM)	Ranking as per CH4 Emission (PPM)	Action taken for cutting down émission
Nil					

### Important Greenhouse Gases : Nitrous Oxide(N<sub>2</sub>O)

The third most significant greenhouse gas (contributes ~6% to total radiative forcing by long-lived GHGs). Stays in the atmosphere for approximately 114 years. Nitrous oxide is emitted into the atmosphere from both natural (about 60%) and anthropogenic sources (approximately 40%).

Nitrous oxide is the third most significant GHG, contributing to about 6% of radiative forcing due to LLGHGs. The primary human sources of N<sub>2</sub>O are fertilizer production and use in agriculture and various industrial processes. It is estimated that N<sub>2</sub>O stays in the atmosphere for an estimated 114 years. Its impact on climate, over a 100-year period, is 298 times greater than equal emissions of carbon dioxide. It also plays an important role in the destruction of the stratospheric ozone layer which protects us from the harmful ultraviolet rays of the sun.

**Table: 6.4**

Sl No	Name of the Block	Fertiliser /Industrial processes	Annual Usage (In tonnes)	Ranking as per Emission (PPM)	Other major pollutants emitted (PPM)	Action taken for cutting down émission
Nil						

### Important Greenhouse Gases : Fluorinated Gases

Global warming effect up to 23,000 times greater than carbon dioxide. Stay in the atmosphere up to 50,000 years. Three main groups: hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). Mainly developed as substitutes for ozone-depleting substances

Fluorinated gases are a family of man-made gases used in a range of industrial applications. Sources include refrigerants, air-conditioning, solvents, aluminium and magnesium production, etc. Many fluorinated gases have very high global warming potentials (GWPs) relative to other greenhouse gases. That means small atmospheric concentrations can have large effects on global temperatures. They can also have long atmospheric lifetimes, in some cases, lasting thousands of years. Fluorinated gases are removed from the atmosphere only when they are destroyed by sunlight in the far upper atmosphere. In general, fluorinated gases are the most potent and longest lasting type of greenhouse gases emitted by human activities. There are three main categories of fluorinated gases: hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>).

- Hydrofluorocarbons (HFCs) are the most common group of *F-gases*. They are used in various sectors and applications, such as refrigerants in refrigeration, air-conditioning and heat pump equipment; as blowing agents for foams; as solvents; and in fire extinguishers and aerosol sprays.
- Perfluorocarbons (PFCs) are typically used in the electronics sector (for example for plasma cleaning of silicon wafers) as well as in the cosmetic and pharmaceutical industry. In the past PFCs were also used in fire extinguishers and can still be found in older fire protection systems.
- Sulphur hexafluoride (SF<sub>6</sub>) is used mainly as an insulating gas, in high voltage switchgear and in the production of magnesium and aluminium.

**Table: 6.5**

Sl No	Name of the Industry/ Firm/Plant	Location	Annual émission (In PPM)	Ranking as per flourinated gas Emission (PPM)
Nil				

#### Important Green House Gases : Chlorofluoro Carbons (CFCs)

Chlorofluorocarbons (CFCs) an important Green House Gas contribute about 12% to radiative forcing by long-lived GHGs has not been included in the Kyoto Protocol because they are already regulated under the Montreal Protocol on Substances that Deplete the Ozone Layer which entered into force in 1989. The Montreal Protocol includes, for example, chlorofluorocarbons (CFCs) which contribute about 12% to total radiative forcing by LLGHGs. CFCs can stay in the atmosphere for more than 1,000 years. CFCs have a global warming potential (GWP) that ranges between 4,750 and 14,400 (over 100 years' time span). CFCs are used in the manufacture of aerosol sprays, blowing agents for foams and packing materials, as solvents, and as refrigerants.

**Table: 6.6**

Sl No	Name of the Industry/ Firm/Plant	Location	Annual émission (In PPM)	Ranking as per flourinated gas Emission (PPM)	Action taken for cutting down émission
Nil					

*Source: UNFCCC (2009). Fact Sheet: The Need for Mitigation*

## Green House Gas Sequestration

In order to prevent dangerous anthropogenic interference with the climate system, actions need to be taken to stabilize greenhouse gas concentrations in the atmosphere. Such actions are referred to as “climate change mitigation”. More specifically, climate Change mitigation involves:

- reducing GHG emissions, e.g. by making older equipment more energy efficient;
- preventing new GHG emissions to be released in the atmosphere, e.g. by avoiding the construction of new emission-intensive factories;
- preserving and enhancing sinks and reservoirs of GHGs, e.g. by protecting natural carbon sinks like forests and oceans, or creating new sinks (“carbon sequestration”).

### Major Greenhouse Gases Contributors (Anthropogenic) to Climate Change

**Table: 6.7**

Greenhouse Gas	Human Source (Examples)	% of Total Global GHG Emissions (2010)
Carbon dioxide (CO <sub>2</sub> )	Fossil fuel combustion, land use changes, cement production, etc	76%
Methane (CH <sub>4</sub> )	Fossil fuel mining/distribution, livestock, rice agriculture, landfills, etc	16%
Nitrous oxide (N <sub>2</sub> O)	Agriculture (fertilisers) and associated land use change, etc	6%
Hydrofluorocarbons (e.g. HFCs)	Liquid coolants, etc	< 2%
Perfluorocarbons (e.g. PFCs)	Refrigerant, electronics industry and aluminium industry, etc	< 2%
Sulphur hexafluoride (SF <sub>6</sub> )	Insulator in electronics and magnesium industry, etc	< 2%
Nitrogen trifluoride (NF <sub>3</sub> )	Electronics and photovoltaic industries, etc	< 2%

Source: Reproduced from IPCC 2007, UNEP 2012, and FERN

The global community has committed itself to hold warming below 2°C (compared to pre-industrial temperatures) to prevent dangerous climate change. The 2013 IPCC report on the physical science basis of climate change provides a “budget approach” to this goal, looking at total allowable CO<sub>2</sub> emissions level to meet the 2°C target. The report states that in order to have a greater than two in three chance of keeping *global warming* below 2°C, cumulative emissions of CO<sub>2</sub> cannot exceed 1,000 Gigatonnes of carbon (GtC). As of 2011, more than half this amount, or over 500 GtC, has already been emitted since 1861-1880. When the effects of other greenhouse gases are included, even less CO<sub>2</sub> could be emitted to keep below a 2°C warming.

Current annual emission levels are at 9.5 GtC and are likely to grow every year due to population growth and economic development patterns. If annual emissions continue to grow as in past years (“business as usual” scenario) the carbon budget will be exhausted in the next three decades.

Source: IPCC (2013). *Climate Change 2013 – The Physical Science Basis, Summary for Policymakers*

#### Details of forest as a major Carbon sink (District) Table:

##### 6.8

Reserved Forest / Protected Forest (in Sq. KM)	Revenue / Village Forest (in Sq. KM)	Private owned Forests (in Sq. KM)	Others (If any) (in Sq. KM)	Total (in Sq. KM)
Nil	Nil	Nil	Nil	Nil

#### Sectors with High Mitigation Potential Table :

##### 6.9

Sl No	Sectors	Mitigation Options
1	Energy	<ul style="list-style-type: none"> <li>• Use of renewable heat and power (hydropower, solar, wind, geothermal and bio-energy)</li> <li>• Improved supply and distribution efficiency</li> <li>• Carbon capture storage (CCS)</li> <li>• Combined heat and power</li> </ul>
2	Transport	<ul style="list-style-type: none"> <li>• More fuel-efficient vehicles</li> <li>• Use of alternative energy sources (biofuels, cleaner diesel, etc.)</li> <li>• Better land-use and transport planning</li> <li>• Shift from individual transport to public transport systems</li> <li>• More efficient driving practices</li> <li>• Non-motorized transport (cycling, walking)</li> </ul>
3	Industry	<ul style="list-style-type: none"> <li>• Process-specific technologies that improve efficiency and reduce emissions</li> <li>• Material recycling and substitution</li> <li>• Heat and power recovery/cogeneration</li> <li>• Control of greenhouse gas emissions</li> </ul>
4	Agriculture	<ul style="list-style-type: none"> <li>• Manure and livestock management to reduce CH<sub>4</sub> emissions</li> <li>• Improved fertilizer application techniques to reduce N<sub>2</sub>O emissions</li> <li>• Improved crop and grazing land management to increase soil carbon storage</li> <li>• Restoration of cultivated peaty soils and degraded lands</li> <li>• Agro-forestry practices</li> </ul>
5	Forestry	<ul style="list-style-type: none"> <li>• Reduced deforestation</li> </ul>

		<ul style="list-style-type: none"> <li>• Afforestation/reforestation</li> <li>• Forest management</li> <li>• Tree species improvement to increase biomass productivity and carbon sequestration</li> </ul>
6	Waste	<ul style="list-style-type: none"> <li>• Landfill methane recovery</li> <li>• Waste incineration with energy recovery</li> <li>• Composting of organic waste</li> <li>• Controlled wastewater treatment</li> <li>• Recycling and waste minimization</li> <li>• Bio covers and biofilters to optimize CH<sub>4</sub> oxidation</li> </ul>

### Sector Specific Climate Change mitigation Projects :

**Table : 6.10**

SI No	Sector	Project Title	Period		Mitigation Targets
			From	To	
NIL					

*(N.B.: Please fill in the above table with Project undertaken exclusively for Climate Change Mitigation)*

## **Chapter 7**

### **Inclusive Disaster Risk Reduction: -**

#### **Background: A need to include Persons with Disabilities**

Different populations may face similar risks of exposure to the negative effects of environmental and man-made disasters, but their actual vulnerability is dependent on their socio-economic conditions, civic and social empowerment, and access to mitigation and relief resources. Individuals with disabilities are disproportionately affected in disaster, emergency, and conflict situations due to inaccessible evacuation, response (including shelters, camps, and food distribution), and recovery efforts.

Besides psychological impact of disasters, this population does not have adequate access to food, water, shelter and health services. There has been inadequate access to their specific needs including assistive devices, rehabilitation and interpreters. Disabled populations face discrimination and exclusion and therefore are confronted with considerable challenges in accessing the same opportunities as the rest of the population in disaster situations.

Common experience reveals that persons with disabilities are more likely to be left behind or abandoned during evacuation in disasters and conflicts due to a lack of preparation and planning, as well as inaccessible facilities and services and transportation systems. Most shelters and refugee camps are not accessible and people with disabilities are many times even turned away from shelters and refugees camps due to a perception that they need “complex medical” services.

Furthermore, the needs of persons with disabilities continue to be excluded over the more long-term recovery and reconstruction efforts, thus missing another opportunity to ensure that cities are accessible and inclusively resilient to future disasters. Thus it is important that the Indian Disaster management system includes the needs of persons with disability faced in disaster risk management.

#### **Legal framework to support the inclusion of persons with disabilities**

The United Nations Convention on the Rights of Persons with Disabilities was adopted in December 2006. The Convention marks a “paradigm shift” in attitudes and approaches to persons with disabilities. Article 11 on Situations of risk and humanitarian emergencies, pays particular attention to the obligation of States parties to undertake “all necessary measures to ensure the protection and safety of persons with disabilities in situations of risk, including situations of armed conflict, humanitarian emergencies and the occurrence of natural disasters.” Furthermore, Article 4.1, states that “States Parties undertake to ensure and promote the full realization of all human rights and fundamental freedoms for all persons with disabilities without discrimination of any kind on the basis of disability” and Article 32, recognizes the importance of international cooperation to address the limited capacities of some States to respond to situations of risk and humanitarian crises.

The Millennium Development Goals have the potential to make life better for billions of people in the world’s poorest countries. However, disability is currently not included in indicators and targets to help evaluate and monitor the achievement of the MDGs. Furthermore, persons with disabilities are often excluded from international and national poverty reduction strategies. Environmental dangers and natural disasters can lead to the onset of many types of disabilities, and inaccessible environments prevent persons with

disabilities from taking part in economic and social activities. Human and environmental recovery is vital for the achievement of MDG Goal 7, “Ensure Environmental Sustainability”. The MDGs cannot be achieved without the inclusion of all persons in society, including persons with disabilities.

The Rights of persons with Disabilities act (RPWDA) 2016 of India and UNCPRD form the overarching legal framework which identify and protect disability rights in India. The RPWDA mandates the participation of persons with disabilities in the disaster risk management process. In the Act DRM is articulated in the article 8 which stipulates that persons with disabilities shall have equal protection and safety in situations of risk, armed conflict, humanitarian emergencies and natural disasters. The Act refers to the Disaster Management Act 2005 Clause (e) Section 2 for the safety and prevention of persons with disabilities

The District Disaster Management Authorities (DDMA) under Section 25 are specially mentioned to maintain the record of details of persons with disabilities in the district and inform such persons of any such situations of risk so as to enhance disaster preparedness. The authorities are to consult the state Commissioners in accordance with the accessibility requirements of Persons with Disabilities. The rights of Persons with Disabilities Act 2017 elaborate an implementable strategy specifically in accessibility of infrastructure, transport & communication technology which are important aspects in the context of disaster risk reduction

The Government of India approach to disaster management is that development cannot be sustainable unless disaster mitigation is built in to the development process. Built on this approach, the National Disaster Framework covering institutional mechanisms at the national, state & district exist where the disability related structures are also available which could be used to implement inclusive policies

#### **Responding to the needs of persons with disabilities**

Several studies show us that including the needs and voices of persons with disabilities at all stages of the disaster management process, and especially during planning and preparedness, can significantly reduce their vulnerability and increase the effectiveness of Government response and recovery efforts. However, despite an increasing worldwide focus on disaster risk reduction as opposed to mere disaster response, most city and related Government agencies fail to adequately plan for – or include – persons with disabilities in their disaster management activities. This causes severe inequities in access to immediate response, as well as long-term recovery resources for people who have disabilities prior to the disaster and those who acquire a disability as a result of the disaster.

Rehabilitation and reconstruction efforts must not only be inclusive and responsive to the needs of all people, including persons with disabilities, but should include the participation of persons with disabilities, to ensure that their needs and rights are respected. Women with disabilities are a particularly vulnerable group whose needs should be included at all stages of recovery and reconstruction efforts.

Actors involved in Disability inclusive Disaster Risk Reduction (DiDRR) include Government at the different levels, national to local including cities and communities at local level, the UN System, Academic Institutions, Disabled People’s Organizations Private actors, Armed Forces, Civil Society, Media, local community’s Local emergency response organisations.

### Data Collection

Data is essential to understanding the risks that people face during disasters and climate change situations. It is important to give effect to policies and establish norms. The Census in 2011 identifies 2.68 Crore persons with disabilities constituting 2.21% of the country's population.

### Policy, Institutional Mechanisms and Inclusive Standards

Policies and their implementation need to be inclusive. Odisha State Disaster Management Plans has already laid the foundation of an inclusive strategy. OSDMA has set up a cell for persons with disabilities headed by a person with disability. The cell will look into inclusion in EWS, SER, rehabilitation and resettlement. Impart training for response forces ODRAF, Red Cross, Civil Defense and community level task force volunteers. Monitoring accessibility in shelters will also be work of the cell.

The Odisha State Disaster Management Plan 2017 takes note of the vulnerability of disabled persons and the specific provision provided is related to inclusive education of children with disabilities during disasters. It also makes special mention of children with disabilities and specifically 'mentally retarded' (Intellectual Disability).

For preparation of the inclusive DDMP the following data at district level are to be collected

**Table-7.1-Information on PWD**

Information on Population Requiring Special Care										
Sl. No.	Block	Gram Panchayat	Village	Total No. of HHs	Total Population	No. of HHs Having by PWD	No. of Persons with Physical Disability (PWD) per village		No of persons with Mental disability	
							M	F	M	F
	Balimela NAC			91			400	489		
	Chitrakonda			403			3755	3455		
	Kaliemla			1900			6210	5669		
	Khairput			498			3333	3108		
	Korukonda			882			3272	3072		
	Malkangiri			869			3859	3650		
	Malkangiri ULB			155			887	890		
	Mathili			544			5403	4789		
	Podia			449			1600	1844		

**Table-7.2-Information on vulnerable women and children**

No. of HHs headed by Women	Child Population per village		No. of Widow per village	Name of the Block	No. of Orphans per village	
	0-5 Years	6-14 Years			M	F
				Malkangiri	91	88
				Mathili	111	99
				Khairput	126	123
				Chittrakonda	75	63
				Korukonda	101	91
				Kalimela	151	128
				Podia	67	40

**Table-7.3-Information on people needing special care (Aged and Pregnant Women)**

Information on Population Requiring Special Care								
Sl. No.	Block	Gram Panchayat	Village	Total No. of HHs	Total Population	No. of Aged Persons (60 and above) per village		No. of Pregnant and lactating mothers per village during the information collection
						M	F	

After compiling the database of the people who need special attention in the wake of a disaster and to make the district disaster management plan more inclusive, the following may be considered during District Disaster Management Plan preparation.

- **Pre-Disaster:** Identification of special needs of physically challenged and mentally challenged persons. Make necessary Planning for evacuation of people with special needs with special care and compassion. The DDMP should outline adequate training and orientation of field level functionaries who are normally engaged as frontline worriers of disaster management at grass roots. Special responsibility may be entrusted with the appropriate officials at block level to ensure the execution of the plan. The district must ensure that the committees and groups created in the district for the disaster management pursuits **has adequate representation from the vulnerable section of the society** as outlined above.
- **During Disaster:** Appropriate Relocation of the people in the shelter with special care, priority in meeting the needs of such population, organizing medical attention if needed.
- **Post disaster:** Ensuring careful & safe return of such people to home, prioritisation during relief distribution, prioritisation of rehabilitation & reconstruction efforts

## Chapter – 8

### **Safety of Schools and Child Care Institutio**

**Implementation of School Safety Policy Guidelines 2016 (SSP-2016 Guidelines)**

**Order on WP(C) 483/2004 of Hon’ble Supreme Court**

The Hon’ble Supreme Court vide orders of dated 14.08.2017 in WP (C) 483/2004, directs vide letter no 2437/2004/SC/PIL/(WRIT) dt. 23.08.2017 that the School Safety Policy (SSP) 2016 guidelines issued by NDMA are statutory in nature and shall be implemented in letter and spirit by all concerned authorities for all schools. The direction of the Supreme Court in Implementation of the School Safety Policy Guidelines Inter- alia postulates as follow:

- Time bound implementation of the Guidelines
- District Disaster Management Authority to ensure and monitor compliance of the said Guidelines
- District Education Officer of each District to be a "Nodal officer" with responsibility, liability and obligation as well as powers and functions to ensure strict compliance with the Guidelines within the district of his jurisdiction.
- Joint Monitoring Committee consisting of representations of both Department of School Education & Literacy, Ministry of HRD and NDMA
- Quarterly compliance reports from the Chief Secretary to MHRD and NDMA on the actions taken.

Hon’ble Supreme Court has also defined few actions at different levels to ensure school safety

<b><u>State &amp; District Level</u></b>	<b><u>School Level</u></b>
<ul style="list-style-type: none"> <li>• Policy for safety audits in all schools</li> <li>• ‘Stability certificate’ by Government-certified engineer.</li> <li>• Manual for fire safety procedures and other safety precautions</li> <li>• The National Building Code of India, 2005, to construct fire-safe buildings. (Revised 2016)</li> </ul>	<ul style="list-style-type: none"> <li>• Schools must take appropriate safety measures and an emergency response plan that delineates staff responsibilities, communication modes, and training and updating procedures for all members of the faculty, staff and students.</li> <li>• Fire insurance coverage should be made mandatory for all schools.</li> <li>• Ensuring that the kitchen in the precincts of the school has adequate safety mechanisms.</li> </ul>

**Guidelines on School Safety Policy, 2016- NDMA**

The School Safety encompasses “the creation of safe environments for children starting from their homes to their schools and back.” This as well includes safety from large- scale natural hazards, human made risks, pandemics, violence as well as more frequent and smaller-scale fires, transportation and other related emergencies and environmental threats that can adversely affect the lives of children.

**Ref.:** *Fire Safety Measures in Schools (Section 3.1 p-23) / Training of School Teachers & Other Staff (Section 3.1 p-25) /School Building Specifications (Section 3.1 p-27) Clearance & Certificates (Section 3.1 p-29) SC. Judgement on WP(C) 483/2004*

**Vision:**

- The Guidelines stand for a vision of India where all children and their teachers, and other stakeholders in the school community are safe from any kind of preventable risks that may threaten their wellbeing during the pursuit of education.
- Educational continuity is maintained/ resumed even in the immediate aftermath of a disaster so that Children are physically, mentally and emotionally secure within their schools.

**Approach and Objectives**

- All hazard approaches.
- All schools; all stakeholders 2. Strengthening existing policy provisions to make schools safer
- School Safety as an indicator of quality for continued planning, execution and monitoring
- Primary objective is to ensure the creation of safe learning environment for children.
- Also seek to highlight specific actions towards school safety that can be undertaken by different stakeholders within the existing framework of delivery of education.

**Applicability**

- The National School Safety Policy Guidelines apply to all schools in the country- whether government, aided or private, irrespective of their location in rural or urban areas.
- They apply to all stakeholders involved in delivery of education to Children in India

**All hazard approaches**

- School Safety efforts needs to take cognizance of all kinds of hazards that may affect the wellbeing of children.
- Hazards include structural and non-structural factors.
- Structural factors include dilapidated buildings, poorly designed structures, faulty construction, poorly maintained infrastructure, loose building elements, etc.
- Non-Structural factors include loosely placed heavy objects such as almirahs, infestation of the campus by snakes and any other pests, broken or no boundary walls, uneven flooring, blocked evacuation routes, poorly designed and placed furniture that may cause accidents and injury, inadequate sanitation facilities, etc.

**Right to Education Act 2009**

- The Act sets minimum norms and standards with regard to location and quality of schools and in Clause 19, lays down that no school shall be established, or recognized unless it fulfills the norms and standards specified in the schedule.
- One of the key standards is in relation to access to “all weather buildings”; in “areas with difficult terrain, risk of landslides, floods, lack of roads and in general, danger for young children in the approach...”
- the State Government / Local Authority shall locate the school in such a manner as to avoid such dangers”.
- The Act lays down the formation of the School Management Committee for planning of infrastructure and other requirements with respect to operational functioning of schools.
- The School Development Plan, as laid out by the Act, spells out the physical requirements of additional infrastructure and equipment to meet the norms spelt out in the schedule (in relation to all weather buildings).

**Key Action Areas****1. Institutional strengthening at the State & District levels**

- Co-opting senior officials of the Department of Education in SDMA and DDMA.
- Nomination of School Safety Focal Point Teacher & Sensitization of School Management Committee on DM.

**2. Planning for Safety**

- Structural Measures (including siting, design and detailing for structural safety).
- Nonstructural Measures.
- Preparation & implementation of School Disaster Management Plan.
- Leveraging existing flagship programmes to make school campus safer.

**3. Capacity building for safe schools**

- Training for students and school staff
- Specialized training and skill building of Education officers, representatives of SCERT and DIET, SDMA, DDMA, etc on school safety
- Mock Drills

**4. Disaster Management in Core Curriculum****5. Regular monitoring of risk and revision of School Safety Plans (including Safety Audits & Availability of Emergency Equipment).****Category & type of schools****Table-8.1**

Name of the Block	Government Schools				Government Aided schools		Private Schools	
	Elementary		Secondary		Elementary	Secondary	Elementary	Secondary
	Rural	Urban	Rural	Urban				

**School Safety Advisory Committee (District)**

1. Date of Formation
2. Institutional Architecture

**Table-8.2**

Sl No	Name & Designation	Contact No.	Email ID	Remarks

**Details of School Safety in the district Table-**

8.3

Sl No	Activity	Total School	Achieved				
			Block 1	Block2	Block 3	Block 4	Total
1.	Schools having School Safety Advisory Committee ( <b>Number</b> )						
2.	Schools having Scholl Disaster management Plan ( <b>Number</b> )						

3.	Schools having conducted Safety Audits (Structural) <b>(Number)</b>						
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B.	Safety Audits (Non-Structural) <b>(Number)</b>						
4.	Schools having conducted Annual Mock Drills <b>(Number)</b>						
5.	Schools Having Fire Extinguisher <b>(Number)</b>						
6.	Schools Adhering to safety norms in storing inflammable & Toxic Material <b>(Number)</b>						
7.	Schools confirming safety standards as per local building bye-laws (Latest) <b>(Number)</b>						
8.	Schools having issued Recognition certificate under sub-Rule (4)-Rule 15 of RTE rules 2010 (only to schools that comply with Structural safety norms) <b>(Number)</b>						
9.	Schools where students & teachers undergo regular training on School Safety & Disaster Preparedness <b>(Number)</b>						
10.	Schools where disaster management is being taught as part of the curriculum <b>(Number)</b>						

**Disaster management Education (School Safety and School Disaster Preparedness):**

*[Disaster management education should include organizing awareness generation programmes in schools and colleges and conducting basic mock drills for fire and other disasters. For the purpose, in the first phase district level high schools and colleges (both govt. and private) may be taken into consideration.]*

**Table-8.4**

Sl. No.	Name of the Programme	No. of Schools, Colleges and Other Educational institutions to be covered during the year	Time Line	Remarks
1.	Awareness generation and mock drills for fire/earth quake etc.			
2.	Preparation of School disaster management plan			

**Details of Child Care Institutions****Table-8.5**

S I N o	Block /ULB	Name and Address of the Organization	Boys	Girls	Total No of Children	Name and Contact no. of the Shift-in-Charge	Fire Safety Equipment (Fire Extinguisher, Alarm)	Staff Training on Fire Safety Equipment	Nearby open space for evacuation	Alternative Shelter/s Identified
1	Korukonda	Neelachala Adivasi Sevashrama At-Teach Guda ,MV-37,Malknagiri	17	0	17	Ranjeet Child Welfare Officer, (Ph.No-7656003095)	Yes, Available	Yes	Yes, Available	Yes
2	Malkangiri	Parivarttan Shishu Gruha,Hi-Tech Colony, Malkangiri	23	28	51	Sunita Sahoo, Superintendent (Ph no-775207670)	Yes, Available	Yes	Yes, Available	Yes
3	Khairput	Joy Childrens Home, Mundiguda , Po-Khairput	18	0	18	Dilip Paricha , Superident , (Ph.No-6371052639)	Yes, Available	Yes	Yes, Available	Yes

## Chapter- 9

### **Chemical (Industrial), Nuclear and Radiological Disaster: -**

#### **A. Chemical (Industrial) Disaster:**

The growth of chemical industries has led to an increase in the risk of occurrence of incidents associated with hazardous chemicals (HAZCHEM). A chemical industry that incorporates the best principles of safety, can largely prevent such incidents. Common causes for chemical accidents are deficiencies in safety management systems and human errors, or they may occur as a consequence of natural calamities or sabotage activities. Chemical accidents result in fire, explosion and/or toxic release. The nature of chemical agents and their concentration during exposure ultimately decides the toxicity and damaging effects on living organisms in the form of symptoms and signs like irreversible pain, suffering, and death. Meteorological conditions such as wind speed, wind direction, height of inversion layer, stability class, etc., also play an important role by affecting the dispersion pattern of toxic gas clouds. The Bhopal Gas tragedy of 1984—the worst chemical disaster in history, where over 2000 people died due to the accidental release of the toxic gas Methyl Isocyanate, is still fresh in our memories. Such accidents are significant in terms of injuries, pain, suffering, loss of lives, damage to property and environment. A small accident occurring at the local level may be a prior warning signal for an impending disaster. Chemical disasters, though low in frequency, have the potential to cause significant immediate or long-term damage.

A critical analysis of the lessons learnt from major chemical accidents exhibited various deficiencies. Laxity towards safety measures, no conformation to techno-legal regimes and a low level of public consultation are a few such shortcomings. The scenario called for concerted and sustained efforts for effective risk reduction strategies and capacity development under a national authority to decrease the occurrence of such incidents and lessen their impact. Although tremendous efforts have been made to minimise such accidents and to improve emergency preparedness at all levels, substantial efforts are still required to predict the occurrence of disasters, assess the damage potential, issue warnings, and to take other precautionary measures to mitigate their effects. Another pressing need is to properly assess the potential of chemical emergencies and develop tools for emergency planning and response to minimise the damage in case of any eventuality.

Odisha is also an Industrial State and many Large, Medium and Small-Scale Industries are operating in the state. Many large industries are operating in the districts like Jagatsinghpur, Angul, Jharsuguda, Sambalpur and Rayagada and many medium and small industries are operating in other districts of the State. The District administration of the industrial district must be prepared to face any kind of Chemical (Industrial) disasters and always be prepared with the Off-site Emergency Plan of the District. The Off-site emergency plan needs to be updated on regular frequency.

Thus, it is highly essential to take all the preparedness measures and minimize the risk of any Chemical (Industrial) disasters in the industrial districts of the State. The following information are required to be fulfilled and be updated every year in the District Disaster Management Plan of the District.

**Factories or Storage Unit Details of the District Table-9.1**

Organisation Name	Type (Large/ Medium /Small/ Micro)	Manufacturing Process & Capacity	Address	Lat/ Long	Site Operator Head Name	Site Operator Head Designation	Site Operator Head Email	Site Operator Head Mobile Number
Sabitri Cold Storage	Medium		At- Malkangiri		J.Srinivas Rao			9437095844

**9. 2 Hazardous Chemical Storage Details Table-9.2**

Hazardous Chemical Storage Points Details											
Organisation Name	Hazardous Chemicals/ Substances Name	Hazardous Chemicals Type (Flammable/ Reactive/ Explosive/ Toxic)	Hazardous Chemicals Quantity (Volumetric Capacity/ Max Qty can be Stored/ Inventory)	Type of Storage (Under Ground/ Submerged/ On the Ground/ Above Ground)	Type of Container (Spherical /Box Type/Cylindrical)	Type of Alignment (Horizontal/ Vertical)	Hazard Anticipated (Fire/Explosion/ Toxic release)	MSDS (Material Safety Data Sheet) of the Chemicals	Vulnerable Zone in case of Emergency (Radius in Km/Meter)	Down wind Distance	Total Number of People in the Vulnerability Zone
								YES / NO			
Nil											

**Critical Facilities/Infrastructure situated within close proximity of the Factories/Industries or Chemical Storage Points****Table-9.3**

Factories/ Industries Name	Critical Facilities (with in Close Proximity) Name	Facility Type (School, AWC Hospitals etc)	Location Address	Lat- Long	Facility in-charge Name	Facility in charge email	Facility in charge mobile number	Total Population in the Close Proximity
Nil								

**Statutory Compliance of the Factories/Industries****Table-9.4**

Statutory Compliance			
Organisation Name	Status of licence under different Acts/Rules	Status of Safety & Health Policy	Safety Management System
	Factories Act, 1948 & Orissa Factories Rules		Status of Stability Certificate wrt plant & buildings
	Consent under Air Act & Water Act from SPCB, Odisha		Constitution of Safety Committee and regular meetings
	NOC from Fire Department		Deployment of Safety & Welfare Officers
	Notification of Site (Rule 8 of Orissa Factories (C of MAH) Rules, 2001		Safety Report
			Safety Audit
			On Site Emergency Plan
			Risk Assessment Study
			Mock Drills
			Periodical Inspection
			Training & Awareness

**Nearest Hospital Details of the Factories/Industrial Units Table-9.5**

Hospital Details										
Organisation Name	Nearest Hospitals (Govt/Private) Name	Hospital Address	District Name	City	Pin Code	Lat-long	Chief Medical Officer / Hospital Superintendent Name	Chief Medical Officer / Hospital Superintendent Mobile Number	Chief Medical Officer / Hospital Superintendent Email	Infrastructural Facilities
Nil										

**Nearest Fire Station of the Factories/Industries Table-9.6**

Fire Stations Details											
Organisation Name	Area fire station name	Hospital address	District Name	City	Pin code	Lat-long	Fire Officer Name	Fire Officer Designation	Fire Officer Email-id	Fire Officer Mobile Number	Facilities Available
Nil											

**Stakeholders to be informed in case of an Industrial Accident Table-9.7**

Designation	Organisation/ Department name	Name	Mobile Number	Office Phone	Email
Nodal Officer, Controlling Officer, Supervising Officer	SRC	Sri Pradeep Kumar Jena	9437445000	06742534177	srcodishagov@gmail.com
	OSDMA	Dr. Gyana Ranjan Das	9437348573	06742395531	osdma@osdma.org
	District Administration (Collector, Emergency Officer, ADM)	Sri Lalit Mandal Dy. Collector (Emg.)			
	Home department				
	State pollution control board				
	RTO				
	Department of Factories and Boiler				
	CSO				
	NDRF				
	ODRAF				
	NGO	Parivarttan, Malkangiri	9437037005		Parivarttan1994@gmail.com
	FIRE	Saroj Kumar Behera	9438359594		firestationmalkangiri@gmail.com
	OIL INDUSTRIES (HPCL, BPCL, IOCL)				

**B. Nuclear & Radiological Disaster:**

India has traditionally been vulnerable to natural disasters on account of its unique geoclimatic conditions and it has, of late, like all other countries in the world, become equally vulnerable to various man-made disasters. Nuclear and Radiological Emergencies as one such facet of man-made disasters is of relevance and concern to us. Any radiation incident resulting in or having a potential to result in exposure and/or contamination of the workers or the public in excess of the respective permissible limits can lead to a Nuclear/Radiological Emergency

For improving the quality of life in society, India has embarked upon a large programme of using nuclear energy for generation of electricity. As on date, India has 17 power reactors and five research reactors in operation along with six power reactors under construction. It is also planned to explore setting up Thorium based reactors to meet its ever-increasing energy needs. Further, the country utilises radioisotopes in a variety of applications in the non-power sector, viz., in the field of industry, agriculture, medicine, research, etc. Due to the inherent safety culture, the best safety practices and standards followed in these applications and effective regulation by the Atomic Energy Regulatory Board, the radiation dose to which the persons working in nuclear/radiation facilities are exposed to, is well within the permissible limits and the risk of its impact on the public domain is very low.

However, nuclear emergencies can still arise due to factors beyond the control of the operating agencies; e.g., human error, system failure, sabotage, earthquake, cyclone, flood, etc. Such failures, even though of very low probability, may lead to an on-site or off-site emergency. To combat this, proper emergency preparedness plans must be in place so that there is minimum avoidable loss of life, livelihood, property and impact on the environment.

Although, the State of Odisha does not have any major Nuclear/Radiological set up or power plants, still the Districts need to be prepared in case of any Emergencies especially Medical Preparedness and Capacity Building of the Response Forces. Mock Exercises on Nuclear and Radiological Disasters or Emergencies at regular intervals is also highly essential. Districts are required to keep and updated the following information given in the table ever year for minimizing the risk of Nuclear/Radiological Disaster.

**Hospital Preparedness****Table-9.7**

SI No.	Name of the Hospital	No. of Decontamination Room	Radioactive Bio-Waste Disposal Facilities	No. of Medical Staffs Trained on Radiation Injury Management	Stocks of essential medicines	Data base of the Trained Medical Staffs being maintained	Name, Designation and Contact Details of the Nodal Officer

**Specialized Response Forces****Table-9.8**

SI No.	Name of the Response Forces	No. of Personnel trained on CBRN	No. of Personnel trained on MFR	Name and Designation of the Command in Charge	Contact No. of the Command in Charge

**Mock Exercises on Nuclear/Radiological Disaster Table-9.9**

SI No.	During	Stakeholders to be Involved	Process to be followed	Details of the Nodal Officers for the ME

## Chapter-10

### **Biological Disaster and Public Health in Emergencies**

#### **Biological Disaster Management & Medical Preparedness**

Biological disasters, be they natural or man-made, can be prevented or mitigated by proper planning and preparedness. The primary responsibility of managing biological disasters vests with the state government. The central government would support the state in terms of guidance, technical expertise, and with human and material logistic support to develop the policies, plans and guidelines for managing biological disasters in accordance with the national guidelines and those laid down by SDMAs.

The H&FW would be the nodal Department for managing biological disasters in the State. Further, Home department will be the nodal for Bio-terrorism, Bio War, F&ARD Department will be the nodal department for animal health and Agriculture & Farmers Empowerment Department will be the nodal department for agro-terrorism. Besides, the community, medical care, public health and veterinary professionals, etc., must also remain in complete preparedness for such eventualities.

**Table 10.1 Nodal Departments for Managing Biological Disaster**

Sl No.	Bio Disaster	Nodal Department	Contact person	Contact details (Office/Mobile)
1	Biological Disaster	H&FW Department	CDMO (District)	9439983250
2	Bio Terrorism/ War	Home Department	SP	9438916820
3	Animal Health Disaster	F&ARD Department	CDVO (District)	7978105694
4	Agro - Terrorism	A&FE Department	CDAO	9438081615

#### **Legal Framework**

Stringent Legal frameworks must be drawn & enforced in order to:

- Prevention, mitigation and control of the spread of biological disaster at all level.
- Managing the prevailing and foreseeable public health concerns, threat of biological weapons by adversaries and cross-border issues.
- Notify the affected area, restrict movements or quarantine the affected area, enter any premises to take samples of suspected materials and seal them.
- Establish controls over biological sample transfer, biosecurity and biosafety of materials/laboratories.

#### **Institutional & Operational Framework**

SDMA will coordinate all the disasters including those of biological origin in the state. A multi-sectoral approach must be adopted involving H&FW, Home Department, PR&DW, SSEPD, F&ARD and A&FE.

- The intelligence and deterrence required & the management structure must be identified and strengthened so as to act as one crisis management structure, committees, task forces and technical expert groups preferably within the Nodal department

**Table 10.2- Crisis Management Committee**

SL	Member	Dept./Instt.	Contact Details
Nil			

**Table 10.3 Task Force**

SL	Member	Dept./Instt.	Contact Details
Nil			

**Table 10.4 Technical Experts**

SL	Member	Dept./Instt.	Contact Details
Nil			

- A public health institution of eminence, matching international standards needs to be created, with following measures:
  - All existing public health institutions providing technical expertise in the area of field epidemiology, surveillance, teaching, training, research, etc., need to be strengthened. The core capacity needs to be developed for surveillance, border control at ports and airports, quarantine facilities, etc.
  - Each District will strengthen its public health infrastructure, including public health institutions which would collect epidemiological intelligence, share information with IDSP, provide for outbreak investigations and manage outbreaks.
  - Hospitals will develop capabilities to attend to mass casualties and public health emergencies with isolation facilities. In the districts, DDMA's will provide the requisite management structure for district DM, factoring in the requirements for managing biological disasters.
- The strategic approach for management of biological disasters must be done with responsible participation of the government, private sector, NGOs and civil society.

**Nodal Public Health Institution**

Name of the Institution, Address & Contact details of the contact (Nodal) Person	No. of trained Doctors (Biological Disaster)	No. of trained Paramedical staffs (Biological Disaster)	Facilities available	Equipment's available

**Collaborative Institutions**

Name of the NGO/CSO/ Private Sector	Expertise	Contact Person	Contact Details (Number & Email ID)	Address

**Preventive Measures**

Prevention and preparedness shall focus on the assessment of bio-threats, medical and public health consequences, medical countermeasures and long-term strategies for mitigation. The important components of prevention and preparedness would include

- An epidemiological intelligence gathering mechanism to deter a BW/ BT attack;
- A robust surveillance system that can detect early warning signs, decipher the epidemiological clues to determine whether it is an intentional attack;
- Capacity building for surveillance, laboratories, and hospital systems that can support outbreak detection, investigation and management.
- Developing a biological disaster response plan
- Pre-exposure immunisation (preventive, if available any) of first responders against anthrax and smallpox must be done to enable them to help victims' post- exposure.

#### **Pre-Disaster Preventive Measures**

- Important buildings and those housing vital installations need to be protected against biological agents wherever deemed necessary through security surveillance.
- Restricting the entry to authorised personnel only by proper screening,
- Installation of High Efficiency Particulate Air (HEPA) filters in the ventilation systems to prevent infectious microbes from entering the circulating air inside critical buildings.
- Those exposed to biological agents may not come to know of it till symptoms manifest because of the varied incubation period of these agents. A high index of suspicion and awareness among the community and health professionals will help in the early detection of diseases.
- Environmental monitoring can help substantially in preventing these outbreaks.
  - Water Supply: A regular survey of all water resources, especially drinking water systems, & proper maintenance of water supply and sewage pipeline will go a long way in the prevention of biological disasters and epidemics of waterborne origin.
  - Personal hygiene: Necessary awareness must be created in the community about the importance of personal hygiene, and measures to achieve this, including provision of washing, cleaning and bathing facilities, and avoiding overcrowding in sleeping quarters, etc. Other activities include making temporary latrines, developing solid waste collection and disposal facilities, and health education.
  - Environmental engineering work and generic integrated vector control measures including.
- Elimination of breeding places by water management, draining of stagnant pools and not allowing water to collect by overturning receptacles, etc.
- Biological vector control measures e.g. Gambusia fish, as an important measure in vector control.
- Outdoor fogging and control of vectors by regular spraying of insecticides.

**Table 10.7 Important/Critical Infrastructure**

Sl	Infrastructure/ Institution Type	Dept./Instt.	Contact person with contact Details

#### **Post-Disaster Preventive Measures**

- When exposure is suspected, the affected persons shall be quarantined and put under observation for any atypical or typical signs and symptoms appearing during the period of observation.
- Health professionals who are associated with such investigations will have adequate protection and adopt recognised universal precautions.

- It often may not be possible to evolve an EWS. However, sensitisation and awareness will ensure early detection.
- Dead bodies resulting from biological disasters increase risk of infection if not disposed off properly. Burial of a large number of dead bodies may cause water contamination. With due consideration to the social, ethnic and religious issues involved, utmost care will be exercised in the disposal of dead bodies.

#### 10.8 Infrastructure that can be used as quarantine centres

Sl	Infrastructure/ Institution Type	Dept./Instt.	Contact person with contact Details

#### Disease Containment by Isolation and Quarantine Methodologies:

- Isolation refers to isolating suspected cases in hospital settings. In the case of biological disasters such as pandemic influenza which affects millions, home isolation may have to be recommended to those who can be treated at home.
- Quarantine refers to not only restricting the movements of exposed persons but also the healthy population beyond a defined geographical area or unit/institution (airport and maritime quarantine) for a period in excess of the incubation period of the disease.
- Restrictions in the movement of the affected population is an important method to contain communicable diseases. The status of the law-and-order mechanism of the state and district is an important factor in helping health authorities in this regard.

#### Preparedness and Capacity Development

An important aspect of medical preparedness in Biological Disaster Management includes the integration of both government and private sectors. The important components of preparedness include planning, capacity building, well-rehearsed hospital DM plans, training of doctors and paramedics, and upgradation of medical infrastructure at various levels to reduce morbidity and mortality. A biological disaster response plan is to be evolved on the basis of the national guidelines with due participation of health officials, doctors, various private and government hospitals, and the public at the national, state and district levels. The government health departments also need to be equipped with state-of-the-art tools for rapid epidemiological investigation and control of any act of biological threat. The important components of preparedness are.

#### Establishment of Command, Control and Coordination Functions

The incident command system needs to be encouraged and instituted so that the overall action is brought under the ambit of an incident commander who will be supported by logistics, finance, and technical teams etc. EOCs will be established in all the state health departments with an identified nodal person as Director (Emergency Medical Relief) for coordinating a well-orchestrated response.

- **Human Resource Development:** The DHO, in consultation with the state epidemiological cell, will develop a simple & informative format for daily data collection, depending upon quantum of information available at each level.
- **Control rooms** will be nominated/ established at different levels in order to get all the relevant information and transmit it to the concerned official. The addresses and telephone numbers of the district collector, DHO, hospitals, specialists from various medical disciplines like paediatrics, anaesthesia, microbiology etc., and a list of all stakeholders from the private sector will be available in the control room.
- **Manning the health Facilities:** The shortfall of public health specialists, stipulated period of time. Teaching/training institutions for these purposes will be established

- **Training & Education**
- Necessary training /refresher training must be provided to medical officers, nurses, emergency medical technicians, paramedics, drivers of ambulances, and QRMTs/ MFRs to handle disasters due to natural epidemics/ Bio disaster.
- Structured education and web-based training must be given for greater awareness and networking of knowledge so that they are able to detect early warning signs and report the same to the authorities, treat unusual illnesses, and undertake public health measures in time to contain an epidemic in its early stage.
- Refresher training will be conducted for all stakeholders at regular intervals. An adequate number of specialists will be made available at various levels for the management of cases resulting from an outbreak of any epidemic or due to a biological disaster.
- Standardised training modules for different medical responders /community members for capacity building in the area of disaster management developed by state government or national government should be followed to create adequate training facilities for the same.
- Selected hospitals will develop training modules and standard clinical protocols for specialised care, and will execute these programmes for other hospitals. Table- top exercises using different simulations will be used for training at different levels followed by full-scale mock drills twice a year.
- A district-wise resource list of all the laboratories and handlers who are working on various types of pathogenic organisms and toxins will be prepared.
- BDM related topics will be covered in the various continuing medical education programmes and workshops of educational institutions in the form of symposia, exhibition/demonstrations, medical preparedness weeks, etc.
- Biological disaster related education shall be given in various vernacular languages. Simple exercise models for creating awareness will also be formulated at the district level.
- Biological disaster plans will be rehearsed as a part of training every six months.
- Knowledge of infectious diseases, epidemics and BT activities will be incorporated in the school syllabi and also at the undergraduate level in medical and veterinary colleges.

### **Community Preparedness**

Community members including public and private health practitioners are usually the first responders, though they are not so effective due to their limited knowledge of BDM. These people will be sensitised regarding the threat and impact of potential biological disasters through public awareness and media campaigns. The areas which need to be emphasised are:

- **Risk communication to the community**
  - Community education/awareness about various disasters and development of Dos and Don'ts.
  - The public will be made aware of the basic need for safe food, water and sanitation. They will also be educated about the importance of washing hands, and basic hygiene and cleanliness. The community will also be given basic information about the approach that health care providers will adopt during biological disasters.
  - Toll-free numbers and a reward system for providing vital information about any oncoming Biological disaster by an early responder or the public will be helpful.

- Definition of predisposing existing factors, endemicity of diseases, various morbidity and mortality
- indices. The availability of such data will help in planning and executing response plans.
- **Community participation**
  - Providing support to public health services, preventive measures such as chlorination of water for controlling the possibility of epidemics, sanitation of the area, disposal of the dead, and simple non-pharmacological interventions will be mediated through various resident welfare associations, ASHA /ANM, village sanitation committees, and PRIs.
  - Community level social workers who can help in rebuilding efforts, create counselling groups, define more vulnerable groups, take care of cultural and religious sensitivities, and also act as informers to local medical authorities during a biological disaster phase, will be created after proper training and education.
  - NGOs and Voluntary Organisations (VOs) will be involved in educating and sensitising the community.
  - Supporting activities like street shows, dramas, posters, distribution of reading material, school exhibitions, electronic media, and publicity, etc., will be undertaken.

A legally mandated quarantine in a geographic area, isolation in hospitals, home quarantine of contacts, and isolation management of less severe cases at homes would only be possible with active community participation.

### **Medical Preparedness**

Medical preparedness will be based on the assessment of bio-threat and the capabilities to handle, detect and characterise the microorganism. Specific preparedness will include pre- immunisation of hospital staff and first responders who may come in contact with those exposed to anthrax, smallpox or other agents. It further relates to activities for management of diseases caused by biological agents, EMR, quick evacuation of casualties, well- rehearsed hospital DM plans, training of doctors and paramedics and upgradation of medical infrastructure at various levels which will reduce morbidity and mortality. Medical preparedness will also entail specialised facilities including chains of laboratories supported by skilled human resource for collection and dispatch of samples. The major aspects of medical preparedness are e.g. Hospital DM Plan

Hospital planning will include both internal hospital planning, and for hospitals being part of the regional plan for managing casualties due to biological disasters. The major features will include the following:

- Hospital disaster planning will consider the possibility & needs to evacuate or quarantine or divert patients to other facilities.
- The plan will be 'all hazard', simple to read and understand, easily adaptable with normal medical practices and flexible enough to tackle different levels and types of disasters.
- The plan will include capacity development, development of infrastructure over a period of time and be able to identify resources for expansion of beds during a crisis.
- The plan will be based on the need assessment analysis of mass casualty incidents. There will be a triage area and emergency treatment facilities for at least 50 patients and critical care management facilities for at least 10 patients.

- The quality of medical treatment of serious/ critical patients will not be compromised. The development plan will aim at the survival and recuperation of as many patients as possible.
- Hospitals will plan to recruit a sufficient number of personnel, including doctors and paramedical staff, to meet the patients' needs for emergency care.
- It is essential that all hospital DM plans have the command structure clearly defined, which can be extrapolated to a disaster scenario, with clear-cut job definitions when an alert is sounded. Emergency services provided must be integrated with other departments of the hospital.
- The hospitals will submit data on their capabilities to the district authorities and on the basis of the data analysis, the surge capacities will be decided by the district administration.
- There is no universal hospital DM plan which can be implemented by all hospitals in all situations. Therefore, on the basis of their specific considerations, each hospital will develop a disaster plan specific to itself. The plan shall be available with the district administration and tested twice a year by mock drills.
- The hospital DM plan will cater to the increased requirement of beds, ambulances, medical officers, paramedics and mobile medical teams during a disaster. The additional requirement of disease related medical equipment, disaster-related stockpiling and inventory of emergency medicines will also be factored into the hospital DM plan. The DM plan must be strengthened by associating the private medical sector.
- Networking between public and private hospitals must be done and hospital DM plans need to be updated at the district/state level through frequent mock drills.
- The registration and accreditation policy must make it mandatory to have a hospital DM plan.
- The existing infectious diseases hospitals will be remodelled to manage diseases with microorganisms that require a high degree of biosafety, security and infection control practices. There will be one such hospital in each state capital. In addition, the district hospitals and medical colleges will have isolation wards to manage such patients. Also, identified hospitals in vulnerable states will be strengthened for managing CBRN disaster victims by putting in place decontamination systems, critical care Intensive Care Units (ICUs) and isolation wards with pressure control and lamellar flow systems. The infectious control practices will include the following:
  - When dealing with biological emergencies, the health workers associated with the investigation of such exposures will have adequate personal protection.
  - Depending upon the risk, the level of protection will be scaled up from use of surgical masks and gloves, to impermeable gowns, N-95 masks or powered air-purifying respirators. They will follow laid down SOPs for use of PPE.
  - Infection control practices will be followed at all health care facilities, including laboratories.
  - Of the potential biological disaster agents, only plague, smallpox and VHFs are spread readily from person to person by aerosols and require more than standard infection control precautions (gowns, masks with eye shields, and gloves).
  - The suspected victims and those who have been in contact with them will be advised to follow simple public health measures such as using masks/ handkerchief tied over the nose and mouth, frequent washing of hands, staying away from other people by at least a metre, etc.

- To handle biological disasters, a hospital DM plan will have the following facilities:
  - Medical and paramedical staff: It is important to train medical staff and paramedics properly in universal safety precautions, use of PPE, communication, triage, barrier nursing, and collection and dispatch of biological samples. A team of specialists must be made available to handle infectious diseases affecting various body systems and they will be suitably immunised against agents such as anthrax and smallpox.
  - Expansion of casualty area: If the hospital casualty ward is unable to accommodate a large number of casualties, provision will be made to use the patients' waiting hall, duly reoriented, to receive the casualties. Each major hospital will cater to at least 50 additional patients at times of disaster.
  - Isolation wards: Adequate number of isolation wards are required to be planned with surge capacity to accommodate a large number of patients of infective disease. If required, side rooms, seminar rooms, other halls can be improvised for this purpose.
  - Security arrangements: Hospital security staff will prepare SOPs to prevent overcrowding of hospitals by visitors, relatives, VIPs, and the media at the time of a disaster. Help of the district administration will be sought, if required.
  - Identification of patients: The process will start at the time of giving first aid and triage. A system of labelling and identifying patients during spot registration by giving a serial number to the patient and putting an identification tag around the wrist can be done. In mass casualties, it can be supplemented by giving colour coded tags, such as red for serious patients, yellow for moderately serious patients, blue for those in need of observation and black for the dead.
  - Brought dead: All those brought in dead and patients who die while receiving resuscitation will be segregated and shifted to the mortuary through a separate route. Temporary mortuary facilities will be created to cater for a mass casualty incidence.
  - Diagnostic services: All laboratories and radio diagnostic services will be kept fully operational and utilised as and when required. These services will be available within the emergency treatment areas.
  - Communication: Both intra & inter communication facilities will be made available. These can be further augmented by the use of mobile phones.
  - Medical supplies: Adequate supply of essential drugs and non-drug items will be made available for at least 50 patients in the emergency complex itself for immediate use. Additionally, hospital medical stores will have adequate buffer stocks.
  - Blood bank services: The services will cater for an adequate supply of safe blood and its components. Voluntary blood donations will be encouraged to fulfil the increased demand of blood.
  - Other logistic support: Adequate, uninterrupted supply of water and electricity will be ensured for proper management of casualties. The laying down of public health standards for hospitals and strengthening of CHCs across the nation for basic specialities on 24x7 basis under NRHM by GoI are steps in the right direction to strengthen medical care facilities in rural areas. NRHM initiatives will be expedited to reach every nook and corner of the country.

Table 10.9

L.NO	NAME OF THE POST	SANCTIONED	IN POSITION	VACANCY
01	DOCTOR	141	76	65
02	STAFF NURSE	122	66	56
03	PHARMACIST	66	57	9
04	MPHS(M)	31	25	6
05	MPHS(F)	25	6	19
06	MPHW(M)	99	75	24
07	MPHW(F)	205	185	20
08	RADIOGRAPHER	9	7	2
09	LT	25	15	10

#### Mobile Hospitals and Mobile Teams

States will acquire and locate at least one mobile hospital at strategic locations. These hospitals can be attached to earmarked hospitals for their use in non-disaster periods.

These will be manned by trained manpower and perform the following functions:

- To be mobilised to the disaster site for management of cases at times of any epidemic outbreak or biological disaster.
- Provide on-site medical treatment to casualties as per triage and evacuation guidelines. The teams will also make a complete assessment of the situation and transmit information to the appropriate authorities.
- Additional medical teams will be mobilised to assist in handling the large number of casualties in the wake of a mass casualty event.
- Adequate stock of medical stores, including essential drugs, will be stocked and made available to the medical teams.
- The stocking of emergency medical stores shall be done by the state government. Brick of medical stocks capable of treating 25/50/100 casualties will be kept ready to move with mobile units at short notice.
- Drills will be conducted at regular intervals by mobile hospitals and mobile teams to keep them in a functional mode at all times.

Table 10.10 Mobile Hospitals &amp; Health Teams

Sl	Mobile Hospitals & Health Teams	Nodal Person	Contact Details

- **Stockpile of Antibiotics and Vaccines**

- Government medical stores will stock sufficient quantities of essential drugs, antibiotics and vaccines based on the risk assessment. State and local public health authorities have to develop plans for distributing and administering these materials. There is a need to have a supply of readily available anthrax, smallpox and other vaccines, which will be administered

rapidly in the event of an outbreak to contain the spread of the disease. All first responders will be vaccinated in an impending disaster situation.

- A plan will be prepared to define the availability of antibiotics, anti-virals, vaccines, sera and other drugs from private pharmaceutical companies who will be able to supply these items at short notice.

**Table-10.11-Stockpile of Medicines**

Sl	Medicine/Drugs	Actual Requirement	Present availability

- **Public Health Issues**

- Panic is a critical element in a disaster and, therefore, DM plans will address measures to allay public anxiety and fear arising out of Bio Terrorisms.
- Availability of safe food, clean water, and minimum standards of hygiene and sanitation will be ensured. Vulnerable groups such as children, pregnant women, the aged and patients suffering from diseases like HIV/AIDS will be given special attention.
- The routine training of medical undergraduates, nurses and health workers for mental health services is grossly inadequate. There is virtually no emphasis on the mental health aspects of disasters even in the routine postgraduate training in psychiatry. There is a need for coordinated training services and monitoring at the district and state levels.
- Most victims at the scene of a disaster suffer from psycho-social problems. Some people, including relief workers, may develop post-traumatic stress disorders. The plan will involve community level social workers who can help victims of psychosocial problems.
- Complete ban on the press or media is not the right approach in such circumstances. The media is very useful for disseminating proper information and educating the community during a disaster.

- **Emergency Medical Response**

A biological disaster can lead to mass casualty incidences, both intentional or otherwise. The development of infectious diseases depends on various factors such as type of agents, incubation period, immune status of individuals, amount of infectious agent entering the body, etc. However, a large number of cases arising in a short span of time may require prompt establishment of medical posts near the incident site. They would triage the patient, provide basic life-support if required at the site, and transport patients to the nearest identified health facility along with collection and dispatch of biological and environmental samples. If the incident command system is implemented, then the RRT/MFR will be integrated with the ICP and function under the overall directions of the incident commander. Important components of an EMR plan are as follows:

- Pre-hospital care shall be established and operationalised using a trained medical force. EMR at the site will depend upon the quick and efficient response of MFRs.
- MFRs must be trained in the use of PPE and in collection and dispatch of samples from air, water, food and biological materials. The standards for detection and basic life support (airway maintenance, ventilation support, anti-shock treatment and preparation for transportation) will also be developed. EMR will be integrated with ICP and will function under the overall directions of the incident commander

- There will be periodic mock drills for checking response time and reducing it to a minimum. Periodic training and refresher training schedules will also be prepared.
- The medical posts shall provide evacuation services, specialised health care, food, shelter, sanitation, etc. These will coordinate with other functionaries involved in search, rescue, helplines and information dissemination, transport, communication, power and water supply, and law and order.
- SOPs for providing hospital care and a command control centre with the district collector as supreme head, will be laid down and rehearsed using mock exercises.
- The modes of communication will be dovetailed with emergency services of the district. Inter-hospital and inter-services communication will be established at all levels.
- Mechanisms for checking the status of coordination in planning, operations and logistic management will be developed.

### **Psycho Social Care**

Disasters usually leave a trail of human agonies including loss of human life, livestock, damage to properties, loss of livelihood, and all development works. In any disaster the magnitude of psychosocial and mental health problems is enormous. Apart from logistic and material help, relief and rehabilitation, the sufferings of human beings will require psychosocial and mental health interventions. It has been recognized that most of the disaster affected persons' experience stress and emotional reactions after disaster as a 'normal response to an abnormal situation', and are able to cope well with a little psychosocial support. However, a significant proportion of people are not able to cope effectively with the situation in the absence of appropriate/ adequate support system and they experience significant signs and symptoms requiring psychosocial support and mental health services. The symptoms are directly related to trauma experience. The Greater the trauma, the more severe is the response if other factors are same.

Psychosocial support in the context of disasters refers to comprehensive interventions aimed to help individuals, families and groups to restore social cohesion and infrastructure along with maintaining their independence and dignity in the aftermath of a disaster. Psychosocial support helps in reducing the level of actual and perceived stress that may prevent adverse psychological and social consequences among disaster affected people.

### **11 Disaster Mental Health Services**

The Psycho-Social Support and Mental Health Services (PSSMHS) should be considered as a continuum of the interventions in disaster situations. While psychosocial support will comprise of the general interventions related to the larger issues of relief work needs, social relationships and harmony to promote or protect psychosocial wellbeing, the mental health services will comprise of interventions aimed at prevention or treatment of psychological symptoms or disorders. The experiences of the people subsequent to the disaster have direct relevance to recovery. The more the problems and life difficulties the survivors experience during the recovery phase, the more persistent will be their emotional reactions. This warrants appropriate interventions in accordance with the phase of recovery of the affected population with the diminished social supports being built for speedy recovery.

**Table-10.12 Nodal Psycho Social Health Institution**

Name of the Institution, Address & Contact details of the contact (Nodal) Person	No. of trained Doctors (Psycho Social)	No. of trained Paramedical staffs (Psycho Social)	Facilities available	Equipment's (If required any) available

**Table-10.13-Collaborative Institutions**

Name of the NGO/CSO/ Private Sector	Expertise	Contact Person	Contact Details (Number & Email ID)	Address

### 13 Community Based Disaster Psychosocial Care

The psychosocial aspects of disasters on human beings have been acknowledged as an international agenda (WHO, 1992). However, in India, the psychosocial aspects have never been emphasized until very recently after tsunami, 2004. The Bhopal gas tragedy (1984) was the most important disaster to draw the national attention due to its severe impact and the sensitivity of the politico-economic issues involved. The psychosocial impact was studied systematically although intervention programmes were more of psychiatric in nature. Marathwada earthquake (1993), and Andhra Pradesh Super Cyclone (1996) were disasters in which mental health professionals took an active part in terms of providing mental health services and undertaking research to study the psychosocial impact of these disasters.

The ICMR studies over last twenty years have provided strong base for integration of mental health services with general health care services and sensitization of the community members and rescue workers. Further, In the post Tsunami phase in India, the WHO along with the Department of Social Welfare, United Nations Team for (UNTRS), and partners have developed a model for providing sustained, low-cost community-based volunteer provided support systems. Community level workers who are the anchor for this programme are selected from various categories of people, including teachers, health workers, and members of Self-Help Groups etc, who have volunteered for this purpose. However, the finer details of the mechanisms and strategies for integration of mental health services with general health care services still need to be worked out.

**Table-10.14 Volunteers & Paramedical Staffs (Community)**

Name of Volunteers	Institution/ Organisation	Contact Person with contact details	Contact Details (Number & Email ID)	Address

### Concept of Social Support Network

The psychological response to a disaster depends on three main factors

**Table-10.15**

Disaster	Community	Survivor
<ul style="list-style-type: none"> <li>» Place of occurrence</li> <li>» Magnitude</li> <li>» Suddenness</li> <li>» Type</li> </ul>	<ul style="list-style-type: none"> <li>» Level of preparedness</li> <li>» Social support network</li> <li>» Leadership</li> <li>» Past disaster experience</li> </ul>	<ul style="list-style-type: none"> <li>» Age / Sex</li> <li>» Level of education/ exposure</li> <li>» Marital status</li> <li>» Physical health / » Disability</li> <li>» Personality/ » Coping skills</li> <li>» Magnitude of losses</li> <li>» Social support available</li> </ul>

The psychological reactions that people experience as a result of the disaster may be either adaptive or maladaptive.

**Table-10.16**

Adaptive	Maladaptive
<ul style="list-style-type: none"> <li>• Adaptive responses allow individuals to overcome the difficulties caused by the disaster.</li> <li>• For instance, obtaining information or developing effective survival skills.</li> </ul>	<ul style="list-style-type: none"> <li>• Maladaptive reactions can include denial, ineffective actions etc. reactions can be prevented from occurring and if they do occur then they can be treated.</li> <li>• The incident of a young girl can be considered here from Orissa cyclone. The rescue team saw her hanging from a tree after five hours, but she was not having any clothes on her body. After accepting the clothes from the rescue team, she immediately jumped in the floodwater and committed suicide.</li> </ul>

After a disaster there are four main phases, which the survivors go through. The first phase is considered as rescue which is up to 72 hours after the disaster. The second phase is relief which continues for three months after the disaster. The third phase is rehabilitation, which lasts for one to two years and the last phase is rebuilding, or reconstruction, which extends over lifetime. Reconstruction phase is the longest period when the population rebuilds personal skills, social support and leadership. This overlaps with the rebuilding phase.

**Table-10.17**

Phases after a Disaster	Duration	Characteristics
Occurrence of the disaster	Hours	Apathy, Disorientation, Wandering Surprise, Fear, Perplexity Anxiety, Helplessness
Heroic	Up to 1-2 weeks	Feeling strong, Direct feeling of saviour, eroism, Solidarity, Optimism
Honeymoon	2 weeks to 3 to 6 months	Great solidarity, Eagerness to rebuild, Sharing of common experience
Disillusionment	2months to 2 years	Withdrawal, Loneliness, Anger, frustration, Community disorganization, Negativity, Hostility, Impulsiveness, Violence, Alcohol and drug abuse

Reconstruction	2-5 years and Lifetime	Acceptance of losses Realistic assessment of the situation, Search for alternatives to rebuild lives
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#### 14. Coping with Loss & Circles of Support

It is very clear that the usual social support systems are eroded after a disaster. The family and the neighbourhood no more exist as a functional unit. The tertiary level of support system exists to some extent in terms of larger community, government and other external agencies. So, it is essential to pull these external resources (out of the affected community) for rebuilding the social support system and normalize the life of the survivors. At the third level the government and external agencies take the main role to rebuild the entire support system. Apart from the government agencies a lot of other players also come to the forefront. These include:

- Professionals from the medical, legal and other such fields.
- Student volunteers
- Religious social service groups
- Non-government organizations both national and international
- Business communities
- Civil society bodies
- Individuals in their own capacity contributing their skills or money

#### 15. Needs of More Vulnerable Groups

The reactions to and impact of a single disaster event may vary among specific groups of survivors within the affected community, i.e. people with special needs or more vulnerable groups viz. children, people with disability, women, elderly people and people needing special medical care facilities. Lot of inter group and intra group variations are there in terms of vulnerabilities as detailed below

**Table-10.18**

Category	Exposure/Vulnerability
Children	<ul style="list-style-type: none"> <li>• Children who were physically, neurologically, mentally and sensory challenged in the pre-disaster period and those who became disabled after the disaster</li> <li>• Children who need critical medical care facilities e.g. children suffering from cancer, diabetic, asthma, poor heart condition, blood borne diseases, HIV-AIDS, etc.</li> <li>• The children with special needs who become orphans after a disaster, are most vulnerable to different types of exploitation.</li> <li>• Orphaned and unaccompanied Adolescent children, especially girls Children whose parents are missing or remarried</li> </ul>
Women	<ul style="list-style-type: none"> <li>• Pregnant and lactating women</li> <li>• Disabled women</li> <li>• Women on critical health care facility</li> <li>• Women who lost their children and plan to undergo recanalization surgery</li> <li>• Elderly women</li> <li>• Women with prior history of psychiatric illness</li> </ul>
Elderly	<ul style="list-style-type: none"> <li>• Reduced physical &amp; mental capabilities, delayed response syndrome,</li> </ul>

	<ul style="list-style-type: none"> <li>• increased transfer trauma &amp; the array of emotional difficulties,</li> <li>• dementia, and rigidity</li> </ul>
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As per the PWD Act (1995) of Govt. of India, people with disabilities are a highly diverse group. Thus, each disability has its unique characteristics and disability specific needs. Since, their life conditions even prior to disaster are at a higher deprivation level, life conditions after a disaster become even worse. This could induce higher level of psychological distress and negative emotional reactions, which in turn could jeopardize their whole life functions. Therefore, psychosocial care givers should take extra caution to safeguard their self-respect and cater to their mental health needs. In case special intervention programme is needed to address their overall safety, dignity and needs, more emphasis should be placed on the inter-sectoral collaborations for their betterment. The following aspects & vulnerabilities should receive special attention of the care givers in the post-disaster phase:

- Accessibility to shelters and availability of basic amenities
- Availability of auxiliary aids, equipment's and services during the relief
- Special livelihood programme
- Treatment for any associated psychiatric illness
- Long-term community rehabilitation
- People on Dialysis
- People with organ transplantation
- Alcohol/drug dependents
- Heart patients
- People living with HIV/AIDS (PLWHA)
- People on Specific therapies (such as Cancer patients)
- Insulin dependent diabetics on high doses of insulin

#### **16. Principles of Psychosocial Support**

- No one who experiences or witnesses the event is untouched by it
- Disaster stress and grief reactions are normal responses to an abnormal situation
- Disaster results in two types of trauma i.e. individual and collective trauma. Individual trauma manifests itself in stress and grief reactions, while collective trauma can lead to deterioration in the social ties of survivors with each other.
- Disaster mental health services must be tailored to the needs of specific communities to be served
- Interventions must be appropriate to the phase of disaster 1. Initial phase: listening, supporting, ventilation, catharsis and grief resolution are helpful and 2. latter phase: handling frustration, anger and disillusionment
- Support systems are crucial for recovery
- Attitude of the caregiver

#### **17. Basic Techniques of Disaster Psychosocial Care**

- Ventilation: ventilation is a process to help the disaster survivors in expressing their thoughts, feelings and emotions related to the disaster and the resulting living conditions.
- Empathy: "looking at the event from the other person's perspective and trying to realise the trauma of the other person by keeping himself/herself in that situation". This skill of developing empathetic attitude towards survivors comes
- through regular habit of active listening of the survivor.
- Active listening Active listening is an important skill to facilitate ventilation and
- develop empathy, which in turn facilitate the whole process of providing

emotional support. The following guidelines can help the care givers in achieving better results.

- Look at the person while he/she is talking:
- Respond occasionally while listening:
- Avoid interruptions
- Be tolerant & Empathise:
- Social support: Social support networks are extremely important for feeling comfortable and secure. In a disaster situation all the support systems get disrupted, hence the need to rebuild and restore.
- Externalization of Interests: Engaging them in small but productive activity/work (keeping age, gender, physical status, skills and interest as considerations) would help them in imbibing a positive thinking and feelings.
- The Value of Relaxation: Introducing relaxation activities for children (for instance some games, songs, dancing, painting, colouring and other things) and adults involving physical movement has proved to be very beneficial in helping survivors recover from their trauma and pain.
- Turning towards Religion and Spirituality: Helping people to turning towards his/her practiced religious rituals and practices (e.g. daily worship, prayer and related activities) would also facilitate the ventilation process, whereby there is a possibility of verbal/nonverbal expression of feeling/emotions and thus, making the survivor more peaceful in mind.

### 18. Understanding of Stress Symptoms & Management

The concept of stress was first used by Selye (1956) in his biological stress theory. It was defined as a set of specific physiological responses to environmental stimuli, e.g. chronic fatigue, nervous breakdown, physical damage etc. The important role of psychological factors remain in understanding the occurrence and modification of stress response.

**Table10.19**

Emotional	Interpersonal	Sensational	Biological	Behavioural	Cognitive
Anxiety Guilt Embarrassment Depression Hurt Jealousy Feel like dying Cry frequently Moody	Cannot keep relationships Suspicious Gossip Competitive Withdraw Fearful and unassertive Aggressive	Heart rate Headaches Nausea Aches and pain Tremble Fainting Numbness Dry mouth Stomach cramps Sweaty Indigestion	Digestion problems Blood pressure Heart problems Tiredness Allergies Low immunity Mental problems	Substance dependence Sleep problems Tea smoking Restless Eating problems Aggression Irritation Speech problems Accident prone Eat, talk, walk faster Unkempt and untidy Low productivity	I must do well Life should not be like this I must have what I want This is terrible I cannot take this any longer Everyone should like me Working long hours » Not getting time to

				Bad time management	relax and take care of personal issues » Not able to contact the family members » The weather in the area etc
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**Diverse Stress Responses**

**Table 10.20**

<b>Cognitive Responses:</b>	<b>Emotional Responses:</b>	<b>Self-image</b>	<b>Psychosomatic/Physiologic al Responses</b>
Low awareness of the environment » Restricted scope of perception » Lowered ability to concentrate » Disturbed memory functions » Hesitation in decision making » Change in content of thinking » Low creativity and change in performance » Less ability to utilise relevant information	» Feelings of deprivation, guilt, anxiety, tension, aggression, irritation, worry, sadness, hopelessness and maladjustment.	» Low self confidence » Identity problem » Depression & Helplessness	» Headache & Body Ache » Muscular tension and pain » Gastrointestinal disorders/low appetite » Sleeplessness » Difficulty in breathing » High Blood Pressure (Source: Zimbardo, 1979) » Vague pain in different parts of the body » Increased heart beat & palpitation » Sweating in palms and feet » Shaking of the body & Fatigue » Butterfly sensation in the stomach

**Relaxation Exercises Table 10.21**

<b>Abdominal breathing</b>	» Sit comfortably » Close your eyes » Put one hand on the abdomen » Focus on your breathing and try and see that you are breathing from your abdomen rather than your chest » Concentrate on the fact that your stomach is rising as you breath in and falling as you breath out
<b>Count breathing</b>	Sit comfortably

	<ul style="list-style-type: none"> <li>» Close your eyes</li> <li>» Count 1-2 two as you inhale</li> <li>» Release your breath slowly counting 1-2-3-4 (double the count of your inhalation)</li> <li>» Practice this till you feel relaxed</li> </ul>
<b>Nostril breathing</b>	<ul style="list-style-type: none"> <li>» Inhale naturally and then let out with a whooshing sound. Hold for some time and then let out again</li> <li>» Breathe through one nostril and breathe out through the other one</li> <li>» Combine breathing with visualization that you are getting energy and refreshment</li> <li>» Listening to some music while practicing these will enhance positive impact of the techniques</li> </ul>
<b>Free Meditation</b>	<ul style="list-style-type: none"> <li>» Sit comfortably or lie down and close your eyes</li> <li>» Put on some music and listen to the music</li> <li>» Do not try to think of anything, just concentrate on your breathing</li> <li>» If any thoughts come in do not try to control them or force them out, instead spend time on them and let them go as they come</li> <li>» Do it initially for about 5 minutes and slowly as you become better at it go on increasing the time period to about 20 –25 minutes and it would prove to be very relaxing</li> </ul>
<b>Candle meditation</b>	<ul style="list-style-type: none"> <li>» Sit comfortably</li> <li>» Light a candle or a lamp in front of you</li> <li>» Concentrate on the flame</li> <li>» Spend time just looking at the flame glowing and flickering</li> <li>» If you feel after some time close your eyes and look at the image in your mind</li> <li>» Slowly open your eyes after you are completely at ease</li> <li>» Do it initially for about 5 minutes and slowly as you become better at it go on increasing the time period to about 20 –25 minutes. It would prove to be very relaxing</li> </ul>
<b>Relaxation</b>	<ul style="list-style-type: none"> <li>» Lie down on the ground</li> <li>» Slowly move from your feet to your head saying the following to yourself</li> </ul>

**Disaster Psychosocial Referrals Table-10.22**

<p><b>Within Caregiver’s Control if the Survivor:</b></p> <ul style="list-style-type: none"> <li>» Is aware of who s/he is, where s/he is, and what has happened with him/her.</li> <li>» Is only slightly confused or dazed or show slight difficulty in thinking and decision making or finding difficulty in concentrating</li> </ul>	<p><b>Referral if the Survivor:</b></p> <ul style="list-style-type: none"> <li>» Is unable to tell/recall his/her name, name of the place and what has happened to him/her in past 24 hours</li> <li>» Complains about what is happening with him/her</li> </ul>
<b>Behaviour</b>	

<p>Is restless, mildly agitated and excited</p> <ul style="list-style-type: none"><li>» Has sleep difficulty and decreased appetite</li><li>» Sad, rigid, clenches the fists</li></ul>	<p>Is apathetic, immobile and unable to move around</p> <ul style="list-style-type: none"><li>» Is withdrawn and mutilates himself/herself, does not take care of self</li><li>» Violent and causes harm to others</li></ul>
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	<ul style="list-style-type: none"> <li>» Uses alcohol or drugs</li> <li>» Repeats ritualistic acts as compulsions</li> </ul>
<b>Emotions</b>	
<b>Within Care giver's Control if the Survivor</b> <ul style="list-style-type: none"> <li>» Is crying and weeping consistently by reiterating about the incident</li> <li>» Has blunt emotions, is numb and hardly reacts correctly to his/her environment</li> <li>» Easily irritated and angered over trivial issues</li> <li>» Shows high spirits or laugh excessively</li> <li>» Very quiet with no emotions</li> </ul>	<b>Consider Referral if the Survivor</b> <ul style="list-style-type: none"> <li>» Is unable to be aroused and is completely withdrawn</li> <li>» Is excessively emotional and shows inappropriate emotions</li> <li>» Is excessively happy, or sad and depressed</li> </ul>
<b>Perception</b>	
Has all senses intact and has no perceptual disturbance, like seeing the ghosts of those expired	<ul style="list-style-type: none"> <li>Hears voices in absence of the actual living organism</li> <li>» Sees things in absence of any living organisms' existence</li> <li>» Has complaints about vague bodily sensations</li> <li>» Takes a constant peculiar body position for days together</li> </ul>
<b>Within Care giver's Control if the Survivor</b> <ul style="list-style-type: none"> <li>» Talks excessively about the disaster</li> <li>» Refuse to talk much</li> <li>» Has rapid or stammered speech</li> </ul>	<b>Consider Referral if the Survivor</b> <ul style="list-style-type: none"> <li>» Is talking irrelevant</li> <li>» Shows overflowing of incoherent speech</li> <li>» Does not talk at all for days together</li> </ul>
<b>Thought</b>	
<ul style="list-style-type: none"> <li>Has a feeling of despair and worthlessness</li> <li>» Has a doubt on his/her own recovery</li> <li>» Is over concerned about unimportant things and neglects important things</li> <li>» Denies what happened to him/her and blames Others</li> </ul>	<ul style="list-style-type: none"> <li>Is excessively preoccupied with one idea or thought</li> <li>» Has bizarre thoughts, which have no answerable reason in that situation</li> <li>» Has a false but extremely firm and strong belief of something that is going to happen to him/her</li> <li>» Is attempted suicide or has suicidal thoughts</li> </ul>

### 19. Ethics & Confidentiality

- Never make false promises to the survivors
- Maintain the confidentiality of the very private information/problems what the survivors share with you.
- Have the commitment and strive to help and support the survivors in an unbiased manner
- Helping the co-workers and taking care of your self is very crucial.
- Whenever, the pressure of work or dealing with human suffering become stressful for you, seeking help and support is a must.
- Keep smiling and spread smiling among others

## **Chapter – 11**

### **Capacity Building: -**

#### **Approach**

Developing a DDMP without building capacity or raising awareness amongst stake- holders can be detrimental to the development of a successful and sustainable plan. Stakeholders and communities are critical components to a successful, long-term, sustainable disaster management plan. Capacity Building develops and strengthens skills, competencies and abilities of both Government and non-government officials and communities to achieve their desired results during and after disasters, as well as preventing hazardous events from becoming disasters

Developing institutional capacity is very important. At the same time, by making the local community part of the process and solution would help in ensuring that disaster mitigation measures are more likely to be implemented and maintained over time.

#### **Capacity Building Programmes of Govt. Officials at District and Sub-District Levels**

*[Note: a training strategy should be formulated for training of major government and non- governmental cadres in the district who can aid in disaster management. Programmes to be finalized by the district based on need and requirement.*

*Districts to first utilize the funds available under different schemes at the district level, for capacity building activities. Besides, funds are also available under State Disaster Response Fund (SDRF). District Administration to prepare the Capacity Building plan for the district and send the same with detailed budget to SDMA for necessary funding.*

#### **Indicative Training Programme for District Level Officials of Government Departments as per the Capacity Building Frame Work of the State**

**Table-11.1**

Sl No.	Departments/ Sector	Participants	No. of Batches
1.	Agriculture and Farmers Empowerment	DAO, DHO, AAO, ADH, ADSC, SCO, ASCO, PD Watershed, SMS	30
2.	Commerce & Transport Department	RTO, MVI	9
3.	General Administration and Public Grievance	Lokayuktas	2
4.	Cooperation	District Central Cooperative Banks, Registrar Cooperative Society, Asst RCS & JRCS, Ware house In-charges	8
5.	Electronics and IT Department	District Data Managers, OSWAN	3
6.	Energy	EE/AEE/J E- 90 Discom	3
7.	Excise	Superintendent of Excise, Dy SE, IE	15
8.	Finance	Lead District Managers	3
9.	F&ARD	District Fisheries Officers, Adl FO, CDVO, ADVO, SDVO	15
10.	Food, Supplies and Consumer Welfare Department	CSO and ACSO	18
11.	Forest & Environment	DCF/AC CF/DFO, ACF/SDFO, Rangers	48
12.	Handloom Textile & Handicrafts	Primary weavers Cooperative Society,	51

		Mills & Looms	
13.	Higher Education	Principals, NSS Coordinators	108
14.	Health & Family Welfare	CDMO, ADMO and Medical Officers	39
15.	Housing and Urban Development Department	SE Circle, PH Divisions, PH Sub Divisions, Dist. Town Planning Units, Special Planning Authorities	15
16.	Industries	Dy. Dir, ADF	3
17.	Information & Public Relations	DIPRO	3
18.	Labour and ESI Department	District Labour & Employment Officer	3
19.	Law	Head of DLSSA & Juvenile Justice Boards	3
20.	MS & ME Department	GM-DIC, IPO	36
21.	Planning & Convergence	District Planning Officer	3
22.	Revenue & Disaster Management	ADMs, Sub Collector, Emergency Officers, District Project Officers	12
23.	Rural Development	SE, EE	9
24.	Social Security & Empowerment of Persons with Disability	DSSO, Heads of Special School	36
24.	Sports & Youth Services	District Sports officer, Coaches	3
25.	ST&SC Development Department	PA, ITDA, DWO, DSWO, Special Officer, Micro Projects Heads, Cluster Heads	18
26.	Steel and Mines Department	.MO & DDM, JDCA & DDCA, ADG, JDG, DDG	3
27.	Tourism	Tourist Officers, Heads of Tourism Units	9
28.	Water Resources	CE, SE	9
29.	Women and Child Development Department	DSWO, Committees for Women & Childs	6
30.	Works	DIPR, SE, EE, RDQPSE, EE, OBCC, Technical Person, Architect, Procurement, Design, Building, SE, EE NH-SE, EE	21

(For the Training Schedule and Module of the above-mentioned training programmes Capacity Building Frame Work of the State may kindly be referred)

**Indicative list of Training Programmes for Sub District Level Officials of Government Departments as per the Capacity Building Framework of the State**

**Table-11.2**

Sl No.	Departments/Sector	Participants	No. of Batches
1.	Agriculture and Farmers Empowerment	AO, HO, JSCO, VAW	
2.	Commerce & Transport Department	Empanelled Driving Training Schools	6
3.	General Administration and Public Grievance	Advocates	20
4.	Cooperation	District Central Cooperative Banks, Registrar Cooperative Society (RCS), Asst RCS & JRCS, Ware house in charges	8
5.	Electronics and IT Department	Block Data Managers, OSWAAN	30
6.	Excise	SIE, ASIE, House Constables	116

7.	Finance	Bank Mangers	30
8.	F&ARD	AFO, SFTA, JFTA, BVO, VAS, LI, VT	777
9.	Food, Supplies and Consumer Welfare	Inspector of Supplies, Marketing Intelligence Officer	51

	Department		
10.	Forest & Environment	Forester, Forest Guards	48
11.	Handloom Textile & Handicrafts	Tasar & Mulberry Societies	9
12.	Higher Education	Universities/Colleges	108
13.	Health & Family Welfare	MO-CHC, MO-PHC	681
14.	Housing and Urban Development Department	Chairman, Executive Officers, Municipality & NAC, PD	21
15.	Revenue & Disaster Management	Tahsildars, Revenue Supervisors, RIs & ARIs	1362
16.	Rural Development	Project & Support Staff	207
17.	Social Security & Empowerment of Persons with Disability	Child Care Institutions, Specialised Adoption Agency & Open Centres	36
18.	Sports & Youth Services	Coaches	33
19.	ST&SC Development Department	Hostels, Schools	387
20.	Steel and Mines Department	Director ate of Geology; Director ate of Mines	165
21.	Water Resources	CE, SE	102
22.	Women and Child Development Department	DSWO, Committees for Women & Childs	30

(For the Training Schedule and Module of the above-mentioned training programmes Capacity Building Frame Work of the State may kindly be referred)

**Community Capacity Building and Community Based Disaster Management:**

(District to provide detailed information on formation of village disaster management committees and task forces, their orientation and preparation of village disaster management plans)

**Table 11.3**

Sl. No.	District	Block	GP	No. of Vulnerable Villages covered in first phase	No. of VDMC Constituted	No. of Task Force Formed	No. NGOs involved in the process	Remarks
1	Malkangiri	Malkangiri	4	09	09	09	1	
2	Malkangiri	Mathili	19	56	56	56	1	
3	Malkangiri	Khairput	8	23	23	23	1	



**Training Programmes for Cyclone and Flood Shelter Maintenance & Management Committee (CSMMC & FSMMC) and Task Force members:***(Indicative list of Training Programmes for CSMMC, FSMMC and Task Force Volunteers)***Table- 11.5**

Sl No.	Training Programmes	Participants
1.	Basics on Disaster Management with Early Warning	Members of CSMMC & FSMMC
2.	Training on Personal Hygiene, Relief Distribution and Logistics Management	CSMMC / FSMMC and Village Volunteers
3.	Shelter Management	CSMMC / FSMMC Member
4.	Shelter Level Mock Exercise	CSMMC/FS MMC/Task Force/ Volunteers
5.	Specialized training on basic survival skills	Task Force members (S&R and First Aid)
6.	Safety and Protection	Task Force members (S&R and First Aid)
7.	Specialized training on Search & Rescue	Search and Rescue Group

**Mock Drills at Shelter level:****Table-11.6**

Sl. No.	Type	No. of Cyclone/ Flood Shelters to be covered	No. of villages to be covered.	Month/ Date
1.	Cyclone Mock drill	0	10	September
2.	Tsunami Mock drill	NA	NA	NA
3.	Flood Mock drill	04	130	June

**11.6 District/ Block level Mock Drills:***(Periodic mock drills to be organized involving district and block level officials/ institutions to assess the capacity and*

*preparedness to face certain disasters. All recommendations and findings will be incorporated in updating of DDMP)*

**Table-11.7**

Sl. No.	Type of Mock Drill	Officials/ Institutions to be involved	Month/ Date	Remarks
1.	Tsunami			
2.	Flood	Fire, ODRAF, Police, CDMO, C DVO, RD, R&B, RWSS, Agriculture, Hoti culture, Block and Tahasils	June	
3.	Cyclone	Fire, ODRAF, Police, CDMO, C DVO, RD, R&B, RWSS, Agriculture, Hoti culture, Block and Tahasils	September / October	
4.	Earthquake			
5.	Industrial Accidents/ Industry Specific Mock drills	Fire, Police	March/April	
6.	Crowd Management	Fire, Police	March/April	

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## Chapter 12 Preparedness:

### Relief Lines: District to Blocks

Table-12.1

Sl. No	Name of the Road		Type of Road & Length	Vulnerability of the route (Description of the Vulnerability)	Coverage (Blocks)
	From	To			
			Pucca	Good	
	Malkangiri	Mathili	40 Km	Good	
	Malkangiri	Khairput	60Km	Good	
	Malkangiri	Chittrakonda	60Km	Good	
	Malkangiri	Korukonda	15Km	Good	
	Malkangiri	Kalimela	40Km	Good	
	Malkangiri	Podia	70Km	Good	

**Relief Line Channels: Block to GPs & Villages****Table-12.2**

Sl. No	Name of the Road		Type of Road & Length	Vulnerability of the route (Description of the Vulnerability)	Coverage (In Nos.)	
	From	To			Village	Population

**Resources Available: Response Forces & Volunteers Table-12.3**

Sl. No	Response Forces/	Capacity (In Nos.)	No. of trained person			Name of Nodal Person	Contact Details (Mobile/Phone)
			Search /Rescue	First Aid	Relief line Clearance		
1	NDRF						
2	ODRAF						
3	Police	25				Sri Nitesh Wadhvani,IPS	9438916820
4	Home Guards	15				Sri Nitesh Wadhvani,IPS	9438916820
5	Civil Defense					Kamal Kumar Gouda	9938987790
6	NCC						
7	NSS						
8	NYK	30	30			Harish Rupal	9178271322
9	Trained Task Force						
10	Apada Mitra Volunteers	200	200	200	200	Kamal Kumar Gouda	9938987790

## PROCEDURE FOR USING INMARSAT ISAT PHONE 2

1. Stand outside with a clear view to the sky with the phone antenna pointing upwards.
2. There must be a clear line of sight between the phone's antenna and the satellite.
3. Point the antenna towards **South-East** direction.
4. Switch on the phone by pressing the Red power button of the phone for few seconds. Until the screen lights up.
5. Align the antenna for getting the maximum satellite signal strength (minimum two bars)
6. The screen will show "searching for satellite" "registering with network".
7. The screen will show "ready for service". Inmarsat name will come in top right corner.
8. Then the phone is ready to operate
9. Simply dial the desired no:
  - i. From satellite to landline: Dial **00** + Country code 91+ **STD code (without 0)** + desired **Telephone No**
  - ii. From **Satellite to mobile**: Dial 00 + 91+ Mobile Number
  - iii. From **Satellite to satellite**: 00+ satellite phone number
  - iv. From **Landline** (should have ISD facility) to **satellite**: 00 + satellite phone number
  - v. From **Prepaid mobile** (should have ISD facility with sufficient balance) to **satellite**: 00 + satellite phone number
10. To end the call Press 'red' button

### NOTE:

- A delay in microseconds will be observed so the user is advised to listen to one end and then speak.
- The user is also advised to SPEAK SOFTLY to get better voice quality at the other end.
- Check the Battery. (Display will show a rectangular block that will be filled according to the charge in the battery). Always charge the battery till it gets charged 100%.
- For more detail information please follow the **User Guide document**.

**Allotted Satellite Phone Numbers Table**  
12.4

Sl	Districts	Calling Numbers	Sl	Districts	Calling Numbers
1	Collector Angul	870776146926	27	Collector Rayagada	870776146919
2	Collector Balasore	870776146936	28	Collector Sambalpur	870776146920
3	Collector Bargarh	870776146928	29	Collector Saharanpur	870776146951
4	Collector Bhadrak	870776146927	30	Collector Sundargarh	870776146952
5	Collector Bolangir	870776146930	31	ODRAF Cuttack, OASP 6th Battalion	870776146961
6	Collector Boudh	870776146929	32		870776146962
7	Collector Cuttack	870776146932	33	ODRAF Bhubaneswar, OSAP 7th Battalion	870776146959
8	Collector Deogarh	870776146931	34		870776146960
9	Collector Dhenkanal	870776146934	35	ODRAF Baripada, OSAP 5th Battalion	870776146957
10	Collector Gajapati	870776146933	36		870776146958
11	Collector Ganjam	870776146949	37	ODRAF Rourkela, OSAP 4th Battalion	870776146955
12	Collector Jagatsinghpur	870776146950	38		870776146956
13	Collector Jajpur	870776146947	39	ODRAF Koraput, OSAP 3rd Battalion	870776146953
14	Collector Jharsuguda	870776146948	40		870776146954
15	Collector Kalahandi	870776146945	41	ODRAF Jharsuguda, OSAP 2nd Battalion	870776146908
16	Collector Kandhamal	870776146946	42		870776146909
17	Collector Kendrapada	870776146943	43	ODRAF Chatrapur, OSAP 8th Battalion	870776146906
18	Collector Keonjhar	870776146944	44		870776146907
19	Collector Khorda	870776146935	45	ODRAF Balasore	870776146904
20	Collector Koraput	870776146942	46		870776146905
21	Collector Malkangiri	870776146918	47	ODRAF Bolangir	870776146902
22	Collector Mayurbhanj	870776146925	48		870776146903
23	Collector Nabarangpur	870776146924	49	ODRAF Jagatsinghpur	870776146963
24	Collector Nayagarh	870776146923	50		870776146964
25	Collector Nuapada	870776146921	51	Special Relief Commissioner (SEOC)	870776146917
26	Collector Puri	870776146922	52	Managing Director, OSDMA	870776146916

**Preparedness at District level: (The list is Indicative & may be extended further as per need & requirement) Table-12.5**

Task	Activity
District Emergency operation Centre (DEOC)	<ul style="list-style-type: none"> <li>• Test Checkup of all communication Interfaces in regular interval</li> <li>• Proper manning of the Control Room as per Para-10 of the Odisha Relief Code</li> <li>• A dedicated vehicle must be earmarked for Control Room</li> </ul>
Upward & Downward Communication	<ul style="list-style-type: none"> <li>• Have a list of Nodal persons with contact details</li> <li>• Establish regular linkages with all important stakeholders</li> <li>• Contact SEOC regularly</li> </ul>
Meeting of DDMA (Heads of the department & stakeholder)	<ul style="list-style-type: none"> <li>• DDMA must meet twice every year &amp; before any disaster</li> <li>• Fix time &amp; venue for regular Preparedness meeting to Assess preparedness of District /Department/Civil Society /Block Community /Family /Individual level regularly</li> <li>• Circulate the minutes of the meeting with clear-cut role &amp; responsibility</li> </ul>
Capacity Building	<ul style="list-style-type: none"> <li>• Identifying &amp; designating Nodal Officer for different Dept.</li> <li>• Capacity building &amp; skill upgradation of ODRAF/Fire services/ Police/Home Guard</li> <li>• Identify Volunteer like Civil Defense/Cyclone shelter Task Force/NCC/NSS/Scout &amp; Guide &amp; train them on Search &amp; Rescue, First aid, evacuation etc.</li> <li>• Take stake of required materials for search &amp; rescue, first aid, casualty management, evacuation, relief etc. &amp; update IDRN portal regularly</li> <li>• Assess preparedness through Mock drill at District, Block &amp; Community level</li> </ul>
Shelter Management	<ul style="list-style-type: none"> <li>• Take necessary steps for operation &amp; maintenance of shelters</li> <li>• Test Check of various Equipment at shelter level &amp; repair of the defective ones</li> <li>• Ensure regular meeting of Shelter committee</li> <li>• Assess Shelter level preparedness through Mock drill</li> </ul>
Planning & Reporting	<ul style="list-style-type: none"> <li>• Collect &amp; transmit Rain fall data regularly</li> <li>• Collect &amp; transmit weather report regularly</li> <li>• Ensure preparation of Disaster Management Plans &amp; Safety plans at all levels</li> <li>• Capacity building of all Stake holders</li> <li>• Integrate the District plan with block &amp; Village disaster management Plans</li> <li>• Develop healthy media partnership</li> </ul>

**Preparedness at Community Level Table-  
12.6**

Task	Activity
Early Warning Dissemination	<ol style="list-style-type: none"> <li>1. Build regular linkages with BEOC &amp; DEOC</li> <li>2. Test Check of various Equipment at shelter level &amp; repair of the defective ones</li> <li>3. Keep updates from BEOC/DEOC</li> <li>4. Monitor &amp; Transmit updates to BEOC</li> <li>5. Supply required information to BEOC &amp; DEOC</li> </ol>
Ensuring Preparedness	<ol style="list-style-type: none"> <li>1. Have a list of Nodal person deployed in the village with contact details</li> <li>2. Identification of safer routes &amp; shelters</li> <li>3. Identify possible ways to reach persons like Farmers/Fisherman/NTFP collectors etc. who ventures into fields, sea &amp; forest respectively</li> <li>4. Build teams from among the task force on Search &amp; Rescue, First aid, Damage &amp; loss assessment</li> <li>5. Assess preparedness at Family/Individual level</li> <li>6. Test Check-up of equipment's</li> </ol>
	<ol style="list-style-type: none"> <li>1. Understand Local dynamics exposed &amp; vulnerable to different disaster</li> <li>2. local Social Economic &amp; weather conditions</li> <li>3. Develop Village DM plan</li> <li>4. List of emergency contact Nos. &amp; display it in Centre places.</li> <li>5. Participate in the activities of Preparing village Disaster Management, developing Safety plans, Capacity building Programmes &amp; Mock Drills</li> </ol>

**Preparedness at Family Level (The list is Indicative & may be extended further as per need & requirement) Table-  
12.7**

Task	Activity
Warning Communication	<ol style="list-style-type: none"> <li>1. List the minimum Important requirements Keep all the important Documents in a water proof polythene</li> <li>2. Record the Safe &amp; alternative routes to shelter</li> <li>3. Keep News update in Radio/TV</li> </ol>

Preparedness	<ol style="list-style-type: none"> <li>1. Always keep in readiness a “Ready to go Emergency Kit” containing Dry food (for 72 hours x Family member), Drinking water (2ltr/per person per day), Hand wash/soap, Important Documents/Valuables, Whistle/match box/lighter/ torch/battery/ umbrella, Mobile &amp; charger /radio</li> <li>2. Family must have a “Ready to go First Aid Kit” containing Iodine/ Band aids/ Cotton/ Medicines/ ORS/ ointments/ scissor/ halogens etc.</li> <li>3. Assess preparedness on a regular basis by checking Radio/Mobile/ Emergency Kit/First Aid Kit/Fuels &amp; Kerosene (as per need)</li> <li>4. Replace the damaged outdated or expired materials with new ones.</li> </ol>
Capacity Building	<ol style="list-style-type: none"> <li>1. Participate &amp; involve in the activities of village disaster Management plan, preparation of Safety plans, participate in Capacity building Programmes &amp; involve in Mock Drills</li> </ol>

**Preparedness at Individual Level (The list is Indicative & may be extended further as per need & requirement) Table-12.8**

Task	Activity
Early Warning Dissemination	<ol style="list-style-type: none"> <li>1. List &amp; keep a ready to go minimum Important requirements</li> <li>2. Record the Safe &amp; alternative routes to shelter</li> <li>3. Keep News update in Radio/TV</li> </ol>
Ensuring Preparedness	<ol style="list-style-type: none"> <li>1. Every individual/child must have a Personal Identity information like a copy of Aadhar card/ Voter ID / School Identity Card &amp; Contact numbers of Preferably two who can be contacted in time of emergency</li> <li>2. Family members especially kids must be sensitized about family gathering point during disaster &amp; crowded places</li> <li>3. Assess preparedness on a regular basis by checking Radio/Mobile/ Emergency Kit/First AidKit/Fuels &amp; Kerosene (as per need)</li> </ol>
Capacity development	<ol style="list-style-type: none"> <li>1. Participate &amp; involve in the activities of</li> <li>2. Disaster Management</li> <li>3. Safety plans</li> <li>4. Capacity building Programmes</li> </ol> <p>13 Mock Drills &amp; FAMEX</p>

**12,10 Preparedness of Departments (The list is Indicative & may be extended as per need & requirement) Table-12.9**

Name of the Department	Normal Time
Collector/ADM / Emergency Officer	<ul style="list-style-type: none"> <li>• Ensure regular meetings of District Disaster Management Authority</li> <li>• Develop &amp; update Disaster Management Plan, carry out Hazard analysis in the district</li> <li>• Identify safe alternate routes to cyclone shelters.</li> <li>• Keep a list of Contacts of EoCs, Nodal officer of different departments, Important stake holders, Village leaders, shelters</li> <li>• List of Relief lines &amp; storage places</li> <li>• List &amp; maintenance of SAR equipment</li> <li>• Capacity building of stakeholders &amp; volunteers</li> <li>• Asses preparedness through Mock Drills for different disasters at district department, block &amp; community level</li> <li>• Adopt sustainable mitigation measures</li> <li>• Integrate DM &amp; DRR features in development programmes</li> </ul>
CDMO	<ul style="list-style-type: none"> <li>• Disaster Management Plans &amp; Safety plans for Hospitals</li> <li>• Capacity building of Medical &amp; Para Medical Staffs</li> <li>• Assess preparedness through Mock Drills &amp; familiar exercises</li> <li>• Integrate department plans with plans with Village &amp; Block Plans and development programmes</li> <li>• Develop media partnership</li> <li>• Develop capacity of hospitals with advance equipment, proper manning &amp; disaster resilient infrastructures</li> </ul>
Superintendent of Police (SP)	<input type="checkbox"/>
EE- RWSS	<input type="checkbox"/>
EE- Irrigation	<input type="checkbox"/>
DAO- Agriculture	<input type="checkbox"/>

EE- Rural Works	<input type="checkbox"/>
EE- Public Works	<input type="checkbox"/>
DTO-Telecom	<input type="checkbox"/>
CDVO	<input type="checkbox"/>
RTO/MVI	<input type="checkbox"/>
DFO-	<input type="checkbox"/>
Railway	<input type="checkbox"/>
EE- Electricity	<input type="checkbox"/>
EE - PHED	<input type="checkbox"/>
DEO- School & Mass Education	<input type="checkbox"/>
DEO - Higher Secondary Education	<input type="checkbox"/>

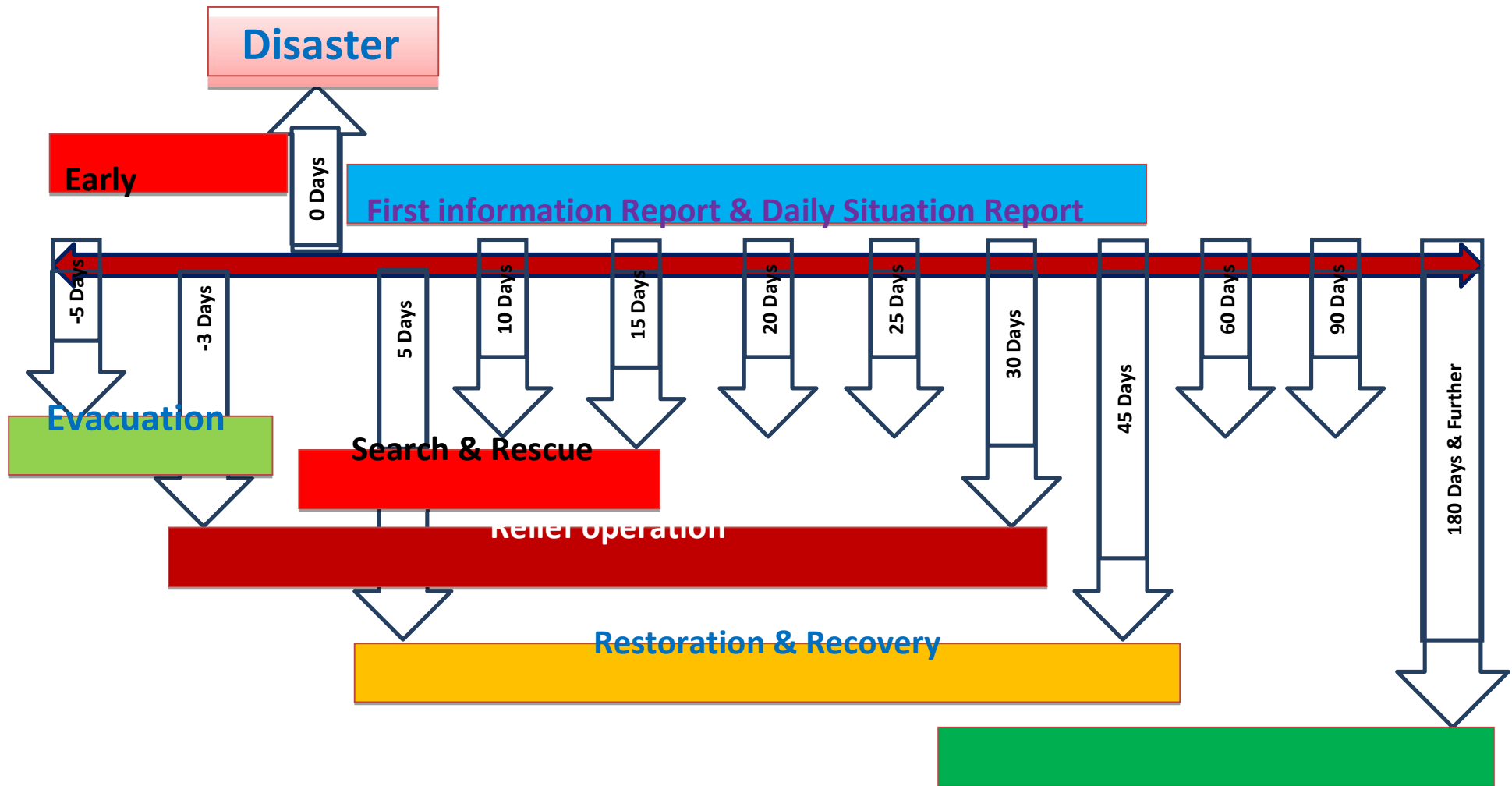
**Standard Operating Procedure prepared by OSDMA for all line department as per the disaster situation (pre, during , post ) may be referred**

## **Chapter-13**

### **Response: -**

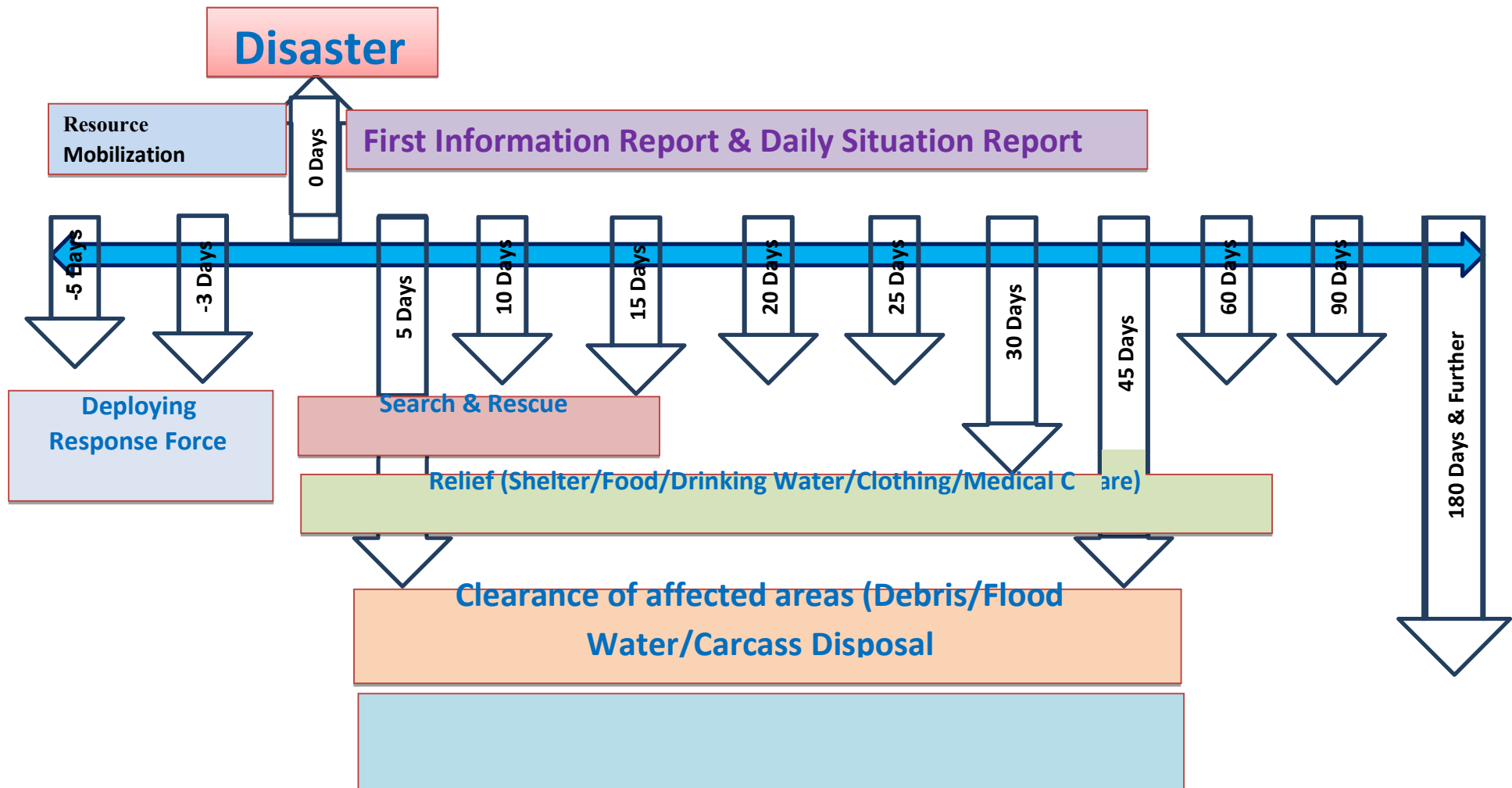
Response refers to activities done for handling disaster to bring the situation to normalcy not exceeding fifteen days from the abatement of disaster. The onset of an emergency creates the need for time sensitive actions to save life and property, reduce hardships and suffering, and restore essential life support and community systems, to mitigate further damage or loss and provide the foundation for subsequent recovery. Effective response planning requires realistic identification of likely response functions, assignment of specific tasks to individual response agencies, identification of equipment, supplies and personnel required by the response agencies for performing the assigned tasks. A response plan essentially outlines the strategy and resources needed for search and rescue, evacuation, etc.

Phases of Response: Timeline (Indicative)  
Figure- 13.1



## Rehabilitation & Preparedness

**Relief Management:  
Timeline Figure - 13.2**



## **Restoring Infrastructures (Roads/ Electricity/ Communication)**

**Response: District (The list is Indicative & may be extended further as per need & requirement)**

**Table- 13.1**

Task	Activity
Warning Communication	<ul style="list-style-type: none"> <li>• Warning dissemination to the list of Nodal person &amp; concerned BDOs</li> <li>• Recording the receipt of information &amp; regular Status update</li> <li>• Transmitting updates to SEOC in regular interval as instructed</li> </ul>
Meeting of DDMA (Heads of the department & stakeholder)	<ul style="list-style-type: none"> <li>• Collector to take up a department coordination meeting &amp; distribute works among all the Departments</li> <li>• Collector issues circular to keep Govt. offices open cancelling all holidays.</li> <li>• A fixed time to be finalized every day for reporting at all level.</li> <li>• A nodal officer is identified for media management</li> <li>• Circulate the minutes of the meeting with clear-cut role &amp; responsibility</li> </ul>
Pre-positioning of staff, resources & Evacuation	<ul style="list-style-type: none"> <li>• Identifying &amp; designating Nodal Officer for different stages of disaster &amp; affected areas.</li> <li>• Positioning of ODRAF/NDRF/Fire services/ Police/Home Guard in the affected areas</li> <li>• Pooling Volunteer services (Civil Defense/Task Force/NCC/NSS/Scout &amp; Guide)</li> <li>• Take stake of required materials for search &amp; rescue, first aid, casualty management, evacuation, relief etc.</li> <li>• Make necessary arrangements of shelters for evacuation</li> <li>• Constitute a special team for special care to vulnerable section like Specially abled, Sr. Citizen, Pregnant &amp; lactating women, Infants &amp; children etc.</li> </ul>
Response	<ul style="list-style-type: none"> <li>• EOCs to Ensure back up (Power/Fuel/internet/ Communication at Dist/Dept. &amp; Block levels</li> <li>• Response force under guidance of Nodal officers ensure complete Evacuation (Human/ Animal), carryout Search &amp; Rescue, clear relief lines,</li> <li>• Collector to submit requisition of vehicle/boat/ helicopters &amp; list of support from state &amp; Centre to all concerned authorities</li> <li>• CSO to store required relief materials (Chhuda. Gur, Dry Foods) in the nearby storage points</li> <li>• CDVO to store, transport &amp; distribute required fodders for animals to the affected areas</li> </ul>

	<ul style="list-style-type: none"> <li>• Cyclone shelter committee &amp; Village Disaster management committee to organize free kitchen in the shelters with help of revenue dept.</li> <li>• EE- RWSS &amp; CDMO to ensure supply of drinking water, disinfection of water &amp; maintain Health &amp; hygiene in the shelters</li> <li>• CDMO to carry out First aid &amp; casualty management                         <ul style="list-style-type: none"> <li>• Collector to collect &amp; transmit First Information Report (FIR) &amp; Daily Situation Report as per requirement</li> </ul> </li> </ul>
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**Response: Community Level (The list is Indicative & may be extended further as per need & requirement) Table-13.2**

Activity
<ul style="list-style-type: none"> <li>• DEOC to disseminate warning communication to BEOC &amp; Community</li> <li>• Response force to ensure Power/Fuel/internet/ Communication at Shelters back up</li> <li>• Supply Inspectors &amp; Marketing Inspectors to distribute relief materials with response force, Task force &amp; volunteers</li> <li>• Response force to carry out Search &amp; Rescue measures, Emergent relief operation, Relief line clearance, distribution of relief</li> <li>• Doctors to carry out First aid &amp; casualty management, Carcass disposal &amp; sufficient mortuary facility in the affected areas</li> </ul>

**Response: Family & Individual Level (The list is Indicative & may be extended further as per need & requirement) Table-13.3**

Task	Activity
Response	<ul style="list-style-type: none"> <li>• Listen to the instruction of the response force &amp; warnings</li> <li>• Economic use of “Ready to go Emergency Kit” Ready to go First Aid Kit</li> <li>• Cooperate the response force/officers &amp; Render volunteer service if asked for</li> <li>• Maintain cleanliness &amp; hygiene at shelter</li> </ul>

**Response: Standard Operating Procedures for Departments****(The list is Indicative & may be extended as per need & requirement)****Table-13.4**

Name of the Department	On Receiving Warning	Response time	Post Disaster
Collector/ADM / Emergency Officer	<ul style="list-style-type: none"> <li>● Review the situation in DDMC</li> <li>● Activate EOC &amp; Early Warning</li> <li>● Work distribution for operation</li> <li>● Circular to keep offices open</li> <li>● Arrange vehicle &amp; activate Evacuation (Normal/Forceful)</li> </ul> <input type="checkbox"/>	<ul style="list-style-type: none"> <li>● Activate Search &amp; Rescue</li> <li>● Arrange temporary shelters</li> <li>● Arrange logistics in shelters</li> <li>● Workout financial estimates (evacuation / relief/recovery)</li> </ul>	<ul style="list-style-type: none"> <li>● Activate relief line clearance</li> <li>● Proper relief Distribution</li> <li>● Start damage assessment</li> <li>● Facilitate Ex-gratia &amp; Compensation</li> <li>● Start primary damage estimate</li> <li>● Pool resources for SAR/shifting of critical patients</li> </ul>
CDMO	<ul style="list-style-type: none"> <li>● Disseminate the alert to all concerned (Staff list)</li> <li>● Arrangement of medicine, First aid kits &amp; teams</li> <li>● Mobile Health units for inaccessible pockets</li> <li>● Identifying &amp; shifting patients requiring intensive care to safer places</li> <li>● Supply of medicines &amp; pre-positioning of medical teams to vulnerable areas</li> <li>● Vaccination for prevention of communicable diseases</li> <li>● Measures to dis –infect drinking water</li> <li>● Availability of Blood Banks/Ambulance</li> </ul>	<ul style="list-style-type: none"> <li>● Mass Casualty Management units &amp; Triage</li> <li>● First Aid Centers</li> <li>● Medical surgical teams</li> <li>● Adequate mortuary facility</li> <li>● Measures to shift patients requiring intensive care</li> <li>● Pool of Blood donors (Preferably each group)</li> <li>● Additional laboratories</li> <li>● Carcass disposal team &amp; units</li> </ul>	<ul style="list-style-type: none"> <li>● Psycho-Social Counseling</li> <li>● Post Disaster Disease surveillance system</li> <li>● Special attention to vulnerable section</li> <li>● Networking with &amp; promote treatment in Private Hospitals</li> <li>● Carcass Management &amp; Issuance of Death Certificate</li> </ul>
Superintendent of Police (SP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EE- RWSS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EE- Irrigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DAO- Agriculture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EE- Rural Works	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EE- Public Works	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DTO-Telecom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CDVO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RTO/MVI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DFO-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Railway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EE- Electricity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EE - PHED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DEO- School & Mass Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DEO - Higher Secondary Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Sop for the Departments to be done accordingly**

**Format for First Information Report (FIR)**

On occurrence of Natural Calamity

(To be sent to Special Relief Commissioner, Orissa within maximum of 18 hours of occurrence of calamity)

From: District: \_\_\_\_\_

Date of Report: \_\_\_\_\_

To,

The Special Relief Commissioner, Odisha

State Emergency Operation Centre (SEOC),

Rajiv Bhawan, Ground Floor, Unit-5, Bhubaneswar

Fax No: 0674-2534176, E-mail: [relief\\_sr@yahoo.com](mailto:relief_sr@yahoo.com)/[src@ori.nic.in](mailto:src@ori.nic.in)

- a) Nature of Calamity
- b) Date and time of occurrence
- c) Affected area (number and name of affected Blocks)
- d) Population affected (approx.)
- e) Number of Persons
  - Dead
  - Missing
  - Injured
  - Animals
  - Affected
  - Lost
- f) Crops affected and area (approx. in hect.)
- g) Number of houses damaged
- h) Damage to public property
- i) Relief measures undertaken in brief
- j) Immediate response & relief assistance required and the best
- k) logistical means of delivering that relief from State/National
- l) Forecast of possible future developments including new risks
- m) Any other relevant information

Authorized Signatory

District Emergency Operation Centre (DEOC)

District: - \_\_\_\_\_

NB: The Districts will submit a detailed report on each of the above points as soon as possible after submission of the above First Information Report (FIR).

### Daily Status Report on Relief/ Restoration Measures Undertaken By Departments 1.Health Department.

- Medical Relief Centres Opened-
- Mobile teams deployed-
- Wells disinfected-
- ORS distributed-
- Halogen Tablets distributed-
- Minor Ailment Treated-

### 2.R.D. Department.

- Mobile vans deployed-
- Water tanker deployed-
- ORS Powder distributed-
- Halogen Tablets distributed-
- Water pouches distributed-
- Bleaching powder distributed-
- Sintex Tanks available-
- Tube wells disinfected-

### 3. FS & CW Department

- .....Qtls. Chuda, ..... Qtls gur supplied to .....Blocks  
(Qty .in quintals)

District	Chuda	Gur

- Qtls of rice has been allocated to the Districts mentioned below

**Blocks**                      **Quantity allocated (in quintal)**

**Total:**

### 4. Fisheries & A.R.D. Department

- Animals vaccinated-
- Animals treated-

**Damages to Roads/River Embankments**

**1.R.D. Department.**

Roads damaged-  
CD/Breach occurred-  
Breach closed-  
Building damaged-  
Building collapsed-  
Pipe water supply affected-  
Tube Wells affected-

**2.Works Department.**

Roads damaged-  
Breach occurred- CD  
works damaged- CDs  
washed away- Breach  
closed-

**3.W.R Department.**

Breach occurred-  
Breaches closed-

Breach closing works in progress

\*\*\*\*\*

## **Chapter 14**

### **Restoration & Rehabilitation: -**

Rehabilitation and restoration come under recovery phase immediately after relief and rescue operation of the disaster. This post disaster phase continues until the life of the affected people comes to normal. This phase mainly covers damage assessment, disposal of debris, disbursement of assistance for houses, formulation of assistance packages, monitoring and review, cases of non-starters, rejected cases, non- occupancy of houses, relocation, town planning and development plans, awareness and capacity building, housing insurance, grievance redress and social rehabilitation etc.

The district is the primary level with requisite resources to respond to any natural calamity, through the issue of essential commodities, group assistance to the affected people, damage assessment and administrating appropriate rehabilitation and restoration measures.

The District Disaster Management Authority reviews the relief measures submit financial requisition to the state Govt. under SDRF & NDRF. The requisition must reach the SDMA & SRC office in the prescribed format as detailed below for smooth & quick processing.

**Standard Operating Procedure: Restoration & Rehabilitation (The list is Indicative & may be extended further as per need & requirement)****Table-14.1**

Name of the Department	Normal Time
Collector/ADM / Emergency Officer	<ul style="list-style-type: none"> <li>• Restoration of Critical Infrastructures to bring situation to normalcy</li> <li>• Ensure Restoration of roads &amp; channels, Communication network, Electricity &amp; Energy</li> <li>• Ensure health in the affected areas</li> <li>• Adopt sustainable mitigation measures in the restoration activities</li> </ul>
CDMO	<ul style="list-style-type: none"> <li>• Carry out Disease surveillance measures to check epidemic prone diseases</li> <li>• Dis-infection of drinking water &amp; measures for health &amp; hygiene</li> <li>• Rehabilitation of deprived &amp; destitute</li> <li>• Carry out Trauma &amp; Psycho-social counseling</li> </ul>
Superintendent of Police (SP)	
EE- RWSS	
EE- Irrigation	
DAO- Agriculture	
EE- Rural Works	
EE- Public Works	
DTO-Telecom	
CDVO	
RTO/MVI	

DFO-	
Railway	
EE- Electricity	
EE – PHED	
DEO- School & Mass Education	
DEO - Higher Secondary Education	

**Damage & Loss Assessment****Table-14.2**

<b>Sector</b>	<b>Damage in Physical terms</b>	<b>Requirement of funds for repair of immediate nature</b>	<b>Out of (3) amount available from annual budget</b>	<b>Out of (3) amount available from related schemes/ programmes / other sources</b>	<b>Out of (3) amount proposed* to be met from SDRF/NDRF as per the list of works indicated in the revised items &amp; norms</b>
1	2	3	4	5	6
Roads & Bridges					
Drinking water Supply works (Rural)					
Drinking water Supply works (Urban)					
Irrigation					
**Power					

Primary Health Centres					
Community assets in social sectors covered by Panchayats					

**Calculation of Assistance for Agricultural Input Subsidy-SMF(Crop Loss 2020)**

**Table-14.3**

(Rs. In lakh)

SI No.	Name of the Block	Area held by SMF (in Hectares)	Total Agricultural area Affected [in Hect.]	Crop loss 33% & above			Expenditure incurred			Total
				Irrigated [in Hect.]	Rainfed [in Hect.]	Perennial	Irrigated @Rs.13,500/- per hectare	Rainfed @Rs.6800/- per hectare	Perennial @ Rs.18000/ per Hect.	
1	Malkangiri		1.22	1.22	0	0	16471	0	0	16471
2	Mathili		77.949	0	77.949	0	0	530075	0	530075
3	K.Gumma		6.865	4.43	2.435	0	59811	16560	0	76371
4	Korukonda		2.704	1.36	1.344	0	18363	9143	0	27506
5	Kalimela		568.309	270.139	298.17	0	3556652	1951674	0	5509856
6	Podia		232.73	3.473	229.257	0	46888	1541853	0	1588741
	<b>Total</b>		<b>889.777</b>	<b>280.622</b>	<b>609.155</b>	<b>0</b>	<b>3699715</b>	<b>4049305</b>	<b>0</b>	<b>7749020</b>

## Agricultural input subsidy- Farmers other than SMF

## Farmers affected first year

Table-14.4

(Rs. In lakh)

Sl	Name of the Block	Area held by farmers other than SMF (in hectares)	Crop loss > 33%							Total Amount Spent
			No of Farmers	Irrigated area in Hect	Amount spent @ Rs.13,500/- per Hect.	Rainfed Area in Hect.	Amount spent @ Rs.6800/- per Hect.	Perennial Area in Hect	Amount Spent @ Rs.18000/ per Hect.	
Nil										

## Farmers affected by successive calamities

Table-14.5

(Rs. In Lakh)

Sl.	Name of the Block	Area held by farmers other than SMF (in hectares)	Crop loss > 33%							Total Amount Spent
			No of Farmers	Irrigated area in Hect	Amount spent @ Rs.13,500/- per Hect.	Rainfed Area in Hect.	Amount spent @ Rs.6800/- per Hect.	Perennial Area in hect	Amount Spent @ Rs.18000/ per Hect.	
1	Malkangiri		4	1.22	16471	0	0	0	0	16471
2	Mathili		353	0	0	77.949	530075	0	0	530075
3	K.Gumma		21	4.43	59811	2.435	16560	0	0	76371
4	Korukonda		18	1.36	18363	1.344	9143	0	0	27506
5	Kalimela		834	270.139	3556652	298.17	1951674	0	0	5509856
6	Podia		353	3.473	46888	229.257	1541853	0	0	1588741
	<b>Total</b>		1583	<b>280.622</b>	<b>3699715</b>	<b>609.155</b>	<b>4049305</b>	0	0	<b>7749020</b>

**Animal Husbandry (Replacement of Animals)**

**Table-14.6**

Name of the Block	No of Livestock / Birds lost					No of animals qualifying for relief grant (i.e., subject to ceiling of 3 large milch animal or 30 small milch animals or 3 large draught animal or 6 small draught animal per household					Expenditure incurred ( Milch animals @ Rs.30,000 for large animal , Rs.3000 for small animals & Draught animals @ Rs 25000 for large animal, Rs. 16,000 for small animals)				Poultry @ 50/- per bird subject to a ceiling of assistance of Rs.5000/- per beneficiary household.	Total expenditure (11+12+13+14+15)
	Milch Animal		Draught Animal			Poultry Birds	Milch Animal		Draught Animal		Milch Animal		Draught Animal			
	Buffalo/ Cow	Sheep/ Goat	Camel/ Horse/ Bullock	Calf/ Donkey / Pony	Buffalo/ Cow		Sheep/ Goat	Camel/ Horse/ Bullock	Calf / Donkey / Pony	Buffalo/ Cow	Sheep / Goat	Camel/ Horse/ Bullock	Calf/ Donkey/ Pony			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

## Assistance sought for repair /restoration of damaged house

Table 14.7

(Rs. In Lakh)

Sl	District	Fully Damaged/ Severely Damaged								Partially (15% & More)	Huts		Cattle shed attached with house		TOTAL			
		Plain Areas				Hilly Areas					Nos.	Amount @ Rs. - 4100/-	Nos.	Amount @ Rs. - 2100/-				
		Pucca	Amount @ Rs. - 95100/-	kutch	Amount @ Rs. - 95100/-	pucca	Amount Rs. - 101900/-	Kutch	Amount @ Rs. - 101900/-									
1	Malkangiri	Nil	Nil	Nil	Nil	Nil	Nil	5	509500	13	67600	65	208000	Nil	Nil	2	4200	789300

**Assistance for provision for temporary accommodation, food, clothing and medical care**

Sl. No	Name of the district	Average No. (in a day) of relief camps	Average duration of operation of relief camps	Average No. of people accommodated per day in the relief camps	Expenditure incurred on (Rs. in lakh)				
					Temporary accommodation	Food	clothing	Medical care	Total expenditure
1	Malkangiri	3	22						
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
19									
<b>Total</b>									

**Extent of Damage Due to Natural Calamities**

District:

Nature and period of natural Calamity:

Sl.	Item	Details
1.	Total number of Blocks in the district	7
2.	Number and names of Blocks affected	5
3.	Number of villages affected	
4.	Population affected (in lakh)	
5.	Total land area affected (in lakh ha.)	
6.	Cropped area affected (in lakh ha)	
	i) Total cropped area affected	
	ii) Estimated loss to crops (Rs. in lakh)	
	iii) Area where cropped damage was more than 33%	
7.	Percentage of area held by SMF	
	i) In the State as a whole	
	ii) In the affected districts	
8.	House damaged	
	a) No. of houses damaged	
	i) Fully damaged pucca houses	
	ii) Fully damaged kutch houses	
	iii) Severely damaged pucca houses	
	iv) Severely damaged kutch houses	
	v) Partly damaged houses (pucca + kutch)	
	vi) No. of huts damaged	
b) Estimated value of damage to houses (Rs. in lakh)		
9.	No. of human lives lost	
	No. of persons with grievous injuries	
	No. of persons with minor injuries	
10.	Animal lost	
	a) No. of big animals lost	
	b) No. of small animals lost	
	c) No. of poultry (birds) lost	
11.	Damage to public properties	
	a) In physical terms (sector wise details should be given – e.g. length of State roads damaged, length of districts roads damaged, length of village roads damaged, No. of bridges damaged, No. of culverts damaged, No. of school buildings damaged etc.)	
	b) Estimated value of the damage to public properties	
	Estimated total damage to houses, crops and public properties	

## Format for working out the requirements under the head of repair of damaged infrastructure of immediate nature

(Rs. In lakh)

Sector		Damage in physical terms	Requirement of funds for repair of immediate nature	Out of (3), amount available from annual maintenance budget	Out of (3), amount available from related schemes/ programs/ other sources	Out of (3), amount proposed to be met from CRF/NCCF in accordance with list of works indicated in the Appendix to the revised items and norms
<b>Roads &amp; Bridges</b>	PWD Roads	No. of breaches- Length of Road damaged – No. of culverts damaged – No. of culverts washed away –				
	Rural Roads	No. of Roads damaged – Length of Road damaged – No. of breaches – No. of CD/Bridge damaged– No. of CD/Bridge washed away –				
	Urban Roads	Length of drain damaged – Length of Road damaged No. of culverts damaged –				
	Panchayat Roads	No. of Roads damaged – Length of breaches – Length of Road damaged – No. of culverts damaged – No of culverts washed away				
	River/Canal Embankment Roads	No of Roads damaged in river embankments– Length of Road damaged in river embankments No of Roads damaged in canal embankments – Length of Road damaged in canal embankments				
<b>Drinking</b>	Rural Water	No of Tube wells damaged –				

<b>Water Supply</b>	Supply	No of platforms damaged – No. of Rural pipe water supply system damaged				
	Urban Water Supply					
<b>Irrigation</b>	River Embankment	No of breaches – Length of breach in Km – No of partial damage -				
	Canal Embankments	No of breaches – Length of breach in Km – No of partial damage -				
	M I projects	No of Minor Irrigation projects damaged -				
	Clearance of Drainage channels	Length of drainage channels congested with vegetative materials –				
<b>Primary Education</b>	Primary School Buildings	No of Primary School buildings damaged -				
<b>PHCs</b>	PHCs	No of Primary Health Centres damaged -				
<b>Community assets owned by Panchayats</b>	Community Halls	No of Panchayat Ghar/Community Hall damaged -				
	AWW Centres	No of Anganwadi Centres damaged -				
<b>Power</b>	Electrical lines	No of Primary sub-stations damaged – 33 KV lines damaged – 11 KV lines damaged – Distribution Transformers damaged – LT lines damaged –				
<b>Total</b>						

## Chapter-15

### Recovery: -

A series of long-term activities framed to improve upon the repaired activities in the Reconstruction & rehabilitation phase are covered under Recovery phase. Recovery includes all aspects of mitigation and also incorporates the continuation of the enabling process, which assists the affected persons and their families not only to overcome their losses, but also to achieve a proper and effective way to continue various functions of their lives. The Recovery process is therefore a long-term process in which everyone has a role – the Government including the PRI members, NGOs and especially the affected people, their families and the community.

- Preparation of Recovery plan for displaced population, vulnerable groups, environment, livelihoods
- Organise initial and subsequent technical assessments of disaster affected areas and determine the extent of recovery works necessitated in addition to reconstruction & rehabilitation works.
- Evaluate the extent of works under SDRF/NDRF & other sources (damaged infrastructures)
- Explore opportunities for external aids like (International Agencies / Civil Society / Corporate Sector)
- Allocate funds for the stabilisation of the repaired & reconstructed infrastructure.
- Integrate Climate change & Disaster Risk Reduction features in the recovery programmes

The DM & Collector will be the co-ordinator of all Recovery activities in the District. The role of the DM & Collector will be to:

- Generally, monitor the management of the recovery process;
- Ensure implementation of the recovery plan by line departments, blocks
- Effective service delivery minimising overlap and duplication;

## **Chapter- 16**

### **Financial Arrangement: -**

#### **National Disaster Response Fund (NDRF)**

The National Disaster Response Fund (NDRF) has been constituted by the Government of India as per the sub-sections (1) of section (46) of Disaster Management Act, 2005 and recommendation of the 13th Finance Commission. NDRF has been constituted by replacing the National Calamity Contingency Fund (NCCF). It is administered by the National Executive Committee (NEC).

In the event of a calamity of a severe nature when the State Disaster Response Fund (SDRF) is insufficient to meet the relief requirements, additional central assistance is provided from NDRF, after following the laid down procedure. The State Government is required to submit a memorandum indicating the sector-wise damage and requirement of funds. On receipt of memorandum from the State,

- An Inter-Ministerial Central Team is constituted and deputed for an on the spot assessment of damage and requirement of funds for relief operations, as per the extant items ad norms.
- The report of the Central Team is considered by the Inter-Ministerial Group (IMG) / A Sub-committee NEC constituted under section 8 of DM act, 2005, headed by the Home Secretary.
- Thereafter, the High-Level Committee (HLC) comprising of the Finance Minister, the Agriculture Minister, the Home Minister and the Deputy Chairman, Niti Ayog considers the request of the State Government based on the report of the Central Team recommendation of the IMG thereon, extant norms of assistance and approves the quantum of assistance form NDRF.
- This is, however, subject to the adjustment of 75% of the balance available in the State's SDRF for the instant Calamity.

*(Please refer page no. of Volume-II for NDRF Items and Norms)*

#### **State Disaster Response Fund (SDRF)**

As per the provisions of Disaster Management Act, 2005 sub-section (1)(a) of Section (48) and based on the recommendation of the 13<sup>th</sup> Finance Commission, the Government of Odisha has constituted the State Disaster Response Fund (SDRF) replacing the Calamity Relief Fund (CRF). The amount of corpus of the SDRF determined by the 13th Finance Commission for each year the Finance Commission period 2010-15 has been approved by the Central Government. The Central Government contributes 75% of the said fund. The balance 25% matching share of contribution is given by the State Government. The share of the Central Government in SDRF is released to the State in 2 installments in June and December respectively in each financial year. Likewise, the State Government transfers its contribution of 25% to the SDRF in two installments in June and December of the same year.

Ministry of Home Affairs, upon being satisfied that exigencies of a particular calamity so warrant, may recommend an earlier release of the Central share up to 25% of the funds due to the State in the following year. This release will be adjusted against the installments of the subsequent year.

As per the Guidelines on Constitution and Administration of the State Disaster Response Fund (SDRF) laid down by the Ministry of Home Affairs, Government of India, the SDRF shall be used only for meeting the expenditure for providing immediate relief to the victims of cyclone, drought, earthquake, fire, flood, tsunami, hailstorm, landslide, avalanche, cloud burst and pest attack. The State Executive Committee (SEC) headed by the Chief Secretary SEC decides on all matters connected with the financing of the relief expenditure of immediate nature from SDRF.

*(Please refer page no. of Volume-II for SDRF Items and Norms)*

### **Chief Minister Relief Fund (CMRF)**

Chief Minister's Relief Fund aims to provide assistance to calamities and in distress condition, to indigent persons suffering from critical ailments and to undertake charitable activities for public welfare.

#### **Cases Eligible for Assistance under CMRF**

**Poor and persons in distress:** Relief to the poor, including grant and aid (financial or otherwise) to persons in distress.

**Aged, differently able, orphans, AIDS affected:** Assistance for the relief and rehabilitation of the aged, differently able' orphans, HIV/AIDS affected persons/families and those otherwise differently able or incapable of earning their livelihood, by grant and aid (financial and otherwise) and / or maintenance, establishment and support of institutions and homes for the benefit of such persons.

**Persons affected by calamities or violence:** Assistance for relief & rehabilitation of persons affected by natural or man-made calamities, communal violence', naxal violence or public disorder of a serious nature or any other calamity' affecting a family or a community, which deserves extreme compassion and not covered under any existing assistance scheme of State/central Government.

**Assistance for Rural Development:** Financial assistance out of CMRF may also be considered to undertake, promote, aid or otherwise support rural development including any programme for promoting the social and economic welfare of the public in any rural area either directly or through an independent agency following due procedure.

To assist more number of deserving person and for better utilisation of the Chief Minister's Relief Fund, the State Government have delegated powers to the Collectors

for sanction of assistance out of CMRF so as to extend such assistance to the deserving persons immediately at the time of their need.

#### **Release of Funds to Departments and Districts:**

Funds required towards pure relief to affected persons / families for natural calamities in shape of emergency assistance, organizing relief camp / free kitchen / cattle camp, agriculture input subsidy and other assistances to affected farmers, ex-gratia as assistance for death cases, grievous injury, house building assistance, assistance to fisherman / fish seed farmers / sericulture farmers, assistance for repair / restoration of dwelling houses damaged due to natural calamities are administered through the respective collectors.

Part funds towards repair / restoration of immediate nature of the damaged public infrastructure are released to the Departments concerned. On receipt of requisition from the Collectors / Departments concerned, funds are released after obtaining approval / sanction of S.E.C. However, funds towards pure relief are released under orders of Special Relief Commissioner / Chief Secretary and the same is placed before the State Executive Committee in its next meeting for approval. To save time, Collectors have been instructed to disburse the ex-gratia assistance from the available cash and record the same on receipt of fund from Special Relief Commissioner.

#### **Damage Assessments and Report after Flood/Cyclone**

Private properties and properties of Government under different Departments are damaged by high floods and cyclones. As per para-75 of Orissa Relief Code, the Collector shall undertake assessment of damages to private properties as well as properties of Government. This assessment shall be done quickly soon after the abatement of flood in the prescribed formats prescribed in Appendix- X of Orissa Relief Code.

#### **Submission of preliminary damage report (Para-76 of ORC)**

1. The Collector as well as the district level officers under each Department of Government shall immediately after assessment of flood damage forward a copy of their report to their immediate Head of Department. The district level officers may also supply reports to the Collector.
2. The Heads of Departments after necessary scrutiny shall forward their reports to their respective Departments of Government with copy to Special Relief Commissioner, not later than two weeks from the date of abatement of flood.
3. The Special Relief Commissioner shall compile the State report and shall furnish the consolidated preliminary report to the Revenue Department within a week of the receipt of the reports from the Heads of Department.
4. The preliminary flood damage report should be prepared as accurately as possible, as the relief measures, if any, are to be based on the merit and statistical data of that report.

### Submission of final flood damage report (Para-77 of ORC)

The concerned Heads of Departments as well as the Collector shall take immediate steps to compile the final report on flood/cyclone damage in the formats prescribed in Appendix- X soon after submission of the preliminary report.

Accidental errors, clerical mistakes, shortcomings, if any, noticed should be rectified in the final report. The final report shall be made available to Special Relief Commissioner as soon as possible and not later than one month from the date of abatement of flood.

On receipt of the reports from the different sources, Special Relief Commissioner shall forthwith compile the State report and furnish the same to the Revenue Department.

### Central and State Government programmes and Schemes on Natural Calamities

Mainstreaming Disaster Management in development planning is the most critical component to mitigate disaster risks. That's why it's important to make note of financial resources which are used in the implementation of such programmes and schemes which can lessen the risk from disasters by reducing vulnerability. It is also crucial to build communities resilience to deal with them. Moreover, as mandated by Ministry of Finance & Ministry of Home Affairs on 01st and 03rd June, 2014 respectively, 10 % flexi-fund within the centrally sponsored schemes (CSS) to be utilised, inter alia for mitigation / restoration activities in the event of natural calamities in the sector covered by CSS. Thus, relevant Central Government and State Government funded schemes are identified which are crucial to build over resilience of communities in the context of the district.

### Different State and Central Government Schemes and Programms

Table-16.1

Sl No.	Name of the Scheme	Sector	Nodal Department	Objective of the Scheme
1	National Agriculture Insurance Scheme (NAIS)/ Rastriya Krishi Bima Yojna (RKBY)	Crop Insurance	Agriculture Insurance Company of India (AICI)	To protect the farmers against the losses suffered by them due to crop failures on account of natural calamities, such as droughts, floods, hailstorm, storms, animal depredation, etc.
2	Janashree Vima Yojna	Life Insurance	Life Insurance	The objective of the scheme is to provide life

			Corporation Of India	insurance protection to the rural and urban poor persons below poverty line and marginally above the poverty line.
3				

***Note: Rest of the Schemes to be elaborated like above table***

**Roles of District Planning committee on financial outlay on mainstreaming Disaster Risk Reduction (DRR) in development programmes.**

***Note: Roles and jurisdiction of District Planning Committee to be elaborated***

**Fund provision for disaster preparedness & capacity building**

***Note: Provision of funds for different capacity building programmes and preparedness measures to be elaborated***

**Draft National Disaster Mitigation Fund**

## **Chapter 17**

### **Lessons learnt and Documentation:-**

**Note: In this chapter lessons learnt from past disaster in the district should be elaborated. Pandemic Management in the year 2020-21 may be documented in this Chapter.**

#### **COVID19: Crossing boundaries of health disaster**

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COVID19 outbreak has led to many uncertainties across the world, some just going unnoticed and maybe uncared for. India, too, started to experience the impact of this pandemic in early March. Resultantly, all the efforts have thereafter been channeled to contain the viral spread. Most of the meetings and video conferences are health-centric. On one hand we are fighting with the global health disaster and on the other side are the people for whom uncertainties have exponentially grown due to livelihood vulnerabilities.

This is about the small and marginal farmers in District Malkangiri for whom life has halted with the nationwide enforced lockdown. They came into notice when they had freed their cattle to feed on the well-grown horticultural farm produce mainly consisting of fruits and vegetables. It was unusual yet thoughtful of the farmer because nothing could be sold anymore due to the transport disruption. District Administration recognized this as a critical issue which can be a potential threat to the poor in the coming months.

#### **Together we can**

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Initially, vendors from premium markets in Vishakhapatnam, Raipur and Hyderabad were contacted to understand the demand scenario so that arrangements could be made to transport bulk farm produce to avoid farm losses for these farmers. However, it was found out after discussions with the vendors that there is a decline in overall demand of fruits and vegetables. There were many reasons cited by these potential buyers, closure of restaurants being the major one. Apparently, the bigger markets cater to the needs of the restaurants, street food and other eating joints which were mostly closed due to the lockdown situation.

This was when Block Development Officer, Mr. Umashankar Dalai suggested that the perishable items like vegetables and fruits can be procured through women Self Help Groups (SHGs) and supplied at the doorstep of the public. This would solve multiple problems at one time. From the health perspective, this initiative is continuously helping to contain the viral spread by making available these daily essentials at the people's doorsteps. Secondly from a livelihood viewpoint, it is allowing an active convergence between individual farmers and women Self Help Groups (SHGs). These were earlier seen as less profitable partnerships but during these tough times, this is the best community level solution.

#### **Planning and Implementation**

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To materialize this idea, State Rural Livelihoods Mission (SRLM) network was tapped and activated. District Project Manager of Odisha Livelihood Mission took a lead in this and identified 69 SHGs across the district who acted as farmer producer groups to procure farm produce from farmers and supply to 22 SHGs whose members were made responsible for supplying the produce to the doorsteps of the public. So, these 22 SHGs started to act as selling points for the rest of the district. This was all done with the help of Community Resource Persons (CRPs) across the district.

Simultaneously, **Agriculture Department** also assigned Rural Agriculture Extension Officers to identify more farmers who were producing the vegetables and fruits. These two departments (NRLM and Agriculture) then collaborated and mapped farmers with the selected

69 SHGs to bulk-procure the produce.  
**Addressing the challenges**

It was challenging to arrange transportation facility but the women from 22 SHGs came up with the idea of hiring the services of Auto Rickshaws to sell these vegetables and fruits. This made the local inclusive supply chain possible in very less time. Subsequently, three more SHGs in one of the blocks installed battery operated refrigerators in auto rickshaws to sell milk and milk products.

#### **Present Impact: Guiding the future efforts**

This multi-stakeholder initiative proved its worth as a win-win deal for all. This emergency response also guides the future possibilities of similar partnerships for sustainable development touching upon livelihoods, climate responsible transportation, inclusive supply chain and promoting local food consumption for good health. Till this date they have sold more than 500 (approx.) quintals of vegetables and more than 700 (approx.) quintals of watermelon fruits across the district.

Once the lockdown is over, this initiative can be scaled up with few technical inputs to amplify the efforts and expand the reach of the initiative to benefit the poor in an integrated way.

#### **NGO Assigned for Covid-19 Management**

Sl No	Name of the NGO	Assigned Blocks
1	Parivartan	Khairput, Mathili
2	CYSD	Mathili
3	GDS	Kalimela
4	PUSPAC	Mathili
5	SOMKS	Chitrakonda
6	SDS	Mathili
7	TSRD	Malkangiri & Kalimela
8	Madyam Foundation	Khairput
9	Porevartan	Chitrakonda
10	Umwsds	Podia
11	SLNDS	Malkangiri
12	PHRS	Khairput

*(Emphasis should be given on what went wrong and what were the best practices during*

#### **Covid-19 Management Of Malkangiri District– 2020-21**

Dedicated Covid Hospital started from Dt.13.04.2020 at old DHH, Malkangiri

- There are 30 beds now functional with arrangement to upgrade to 100 beds.
- At present there is provision of 13 beds for positive cases and 17 for isolation of non confirm cases in the wards for cohorts. There are also 8 individual rooms for single cases .
- There is a 4 bedded ICU facility and a High Dependency Unit.
- There are 6 ventilators, 1 digital X-ray units, Independent Path Lab with ABG, CBC machines, 1 Manifold Systems with 30 Jumbo Oxygen Cylinders, 50 Oxygen Concentrator, 30 Standard Oxygen Cylinders, Video Laryngoscope, 25 Multipara Monitors, 5 Syringe Pumps and 5 Infusion

Pumps, 1 Defibrillator.

- There is a dedicated Ambulance at present and 1 dedicated Dead body carrier. 3 more Ambulances are procured for this hospital which shall be here in 3 days.
- The B.M.W management systems is well placed with Inclinator, 1 Autoclaves and 2 Shredders.

**H.R: The HR requirements is as below depending on the bed strength**

Doctors, Paramedics and others	30 Beds	50 Beds	100 Beds	Remarks
Medicine/Pulmonary Medicine	4	6	8	
Anesthetist / Intensivist	4	6	8	
Pediatrician	4	4	8	
Psychiatrist/Psychologist	2	2	4	
General Duty Medial Officers	30	40	60	We have organized 35 MBBS Doctors from our system and trained 2 rounds
Staff Nurses	40	60	80	51 numbers picked from the system including the 42 recruited under COVID-19
Pharmacists / Radiographer / Lab Technicians	30	40	60	30 numbers picked from the system including the 20 recruited under COVID-19 (Trained for 3 days)
Sanitary Attendants	40	60	80	30 outsourced (trained for 3 days)
Hospital Manager	1	1	1	Arranged from System
Office Assistant	1	1	1	From system
Security Guard	25	25	25	20 outsourced (trained for 3 days)

- This team is led by AMO Dr. K.Ch.Mohapatra, MD, ICU Consultant his team of 5 doctors including our Anaesthetist Dr. Nihar Ranjan Tripathy to support him.
- To add to this 46 Ayush doctors trained and kept ready for management of RRT, CCC.
- The doctors & paramedics are working in 3 shifts for two weeks and then will be replaced with the 2nd Set. They shall be kept under quarantine in case they treat positive cases.
- The patients will be treated and discharged as per protocol.

**Logistics.**

- The required medicines and chemicals are available to treat the cases instantly and there are 100 PPE , 100 N-95 masks, 500 triple layer masks kept at hand for urgent use besides about 1500 PPE, 500 N-95 masks, 19800 three layer masks are at the District Store.
- The dedicated Covid Health Centre with 150 beds is established in B.E.D college and Covid Care Centre with 100 beds is set up at EMRS & 100 beds at ITI. Besides these we have quarantine centre, Old Degree College with bed capacity of 100 which can be converted to a CCC instantly. The CCC will be managed by the Ayush Doctors and will pay visit to Quarantine centres. Oxygen facility is made available at these sites too.

**Sample Collection.**

- We have 3 sample collection units. One each at Motu, Mathili and Malkangiri. Besides that, as and when required teams are moving to be blocks with PPE to collect SOS.
- By now 422 samples have been sent for testing out of which 290 results are received negatives.

**SURVEILLANCE**

- To control on spread of Novel Corona virus (COVID-19) the District adminstartion has set up a tracking mechanism for surveillance of the persons returned to the district.
- Monitoring mechanism for collection of data from each and every village on return of

persons came from out of Country / State / District have been made through all ICDS staff i.e. Anganwadi worker, ICDS Supervisor & CDPOs and submitted the data to the district level on daily basis.

- At district level the data has been analysed by District Team under the Supervision of the Divisional Forest Officer.
- The persons having symptoms like cough, cold, Fever and Respiratory illness have attended by RRT team & health check up conducted on daily basis.
- All symptomatic cases/ persons came from out of Country / State / District of have been advised for home / compulsory quarantine for minimum 14 days and regular follow up has been instituted. Those who are not following home quarantine, they have been shifted to TMC.
- For more intensive surveillance special Block zonal monitoring teams have been assigned to monitor any development of symptoms and observation of SoP of home quarantine .
- Necessary basic facilities like watch ward, sanitation worker put in each TMC and food arrangement made on out sourcing by WSHGs.
- All Border check post have been sealed and the team of officials & Police are attending the migrant workers came from other state and district. After health check up by Medical team they have been kept in TMC for 14 days.
- Till date 8197 persons returned from outside state, out of which 7272 persons were directly reached their village and 925 were kept in border quarantine.
- After lock down from 24.3.2020, 2652 persons came from outside state.
- 267 persons found symptoms with cough, cold & fever and all are having no symptoms at present.
- 247 numbers persons have been kept in TMC for compulsory quarantine those who are fails to maintain the SoP of home quarantine.

#### **Preparedness of COVID-19 MALKANGIRI DISTRICT (2021-22)**

- Strengthening of RTPCR Sample collection collecting more than 200 per day.
- Deployment of two HW(M) for sample collection
- Engagement of two vehicle for sample collection
- Engagement of three no's of LT with permissions from DPH, Odisha under process.
- Collection of sample from border line area i.e (Malkangiri, Kalimela, Podia Blocks) nearest to Chhattisgarh state and High risk groups like Shop keeper, vendor, priest of the temple and Local Hata.
- Opening of fever clinic at DHH, Malkangiri and all blocks.
- Formation of RRT at Block level
- Strengthening of IEC/BCC activity by DIPRO, Malkangiri
- Proper functioning of DCH. Malkangiri
- Functioning of COVID call centre at district level.
- Enforcement activity by Sub Collector, Malkangiri
- Involvement of BDOs in block task Force monitoring by Project Director, DRDA Malkangiri for migrants.
- Night curfew is continuing
- Functioning of Dedicated Covid Hospital at old DHH, Malkangiri.
- There are 30 beds now functional with arrangement to upgrade to 100 beds.
- There is a 10 bedded ICU facility and a High Dependency Unit.
- There are 6 ventilators, 1 digital X-ray units, Independent Path Lab with ABG, CBC machines, 1 Manifold Systems with 30 Jumbo Oxygen Cylinders, 50 Oxygen Concentrator, 30 Standard Oxygen Cylinders, Video Laryngoscope, 25 Multipara Monitors, 5 Syringe Pumps and 5 Infusion Pumps, 1 Defibrillator.
- There is a dedicated Ambulance at present and 1 dedicated Dead body carrier. 3 more Ambulances are procured for this hospital.
- The B.M.W management systems is well placed with Incinator, 1 Autoclave and 2 Shredders.

**Achievements**

- 1st dose 12 above :- 505532/ 507867=100%
- 2<sup>nd</sup> dose 12 above:-505532/457353 = 90%

**Payment of ex-gratia assistance to the Noks of the persons died due to Covid -19**

No. of Cause of death certificate issued by CDMO	Total no of application received for Ex-gratia	Total No. of application approved/ sanctioned	No. of application Disbursed	Payment made to the beneficiaries in lakhs
92	92	92	92	46,00,000 /-

**SUCCESS STORY OF COVID MANAGEMENT OF MALKANGIRI DISTRICT**

As per order of the NDMA, Government of India and Notification No.1706 /R&DM (DM) dated 13.03.2020 of Revenue & Disaster Management, Department, Odisha, COVID-19 has declared as a “DISASTER” under Section 2 (d) of the Disaster Management Act, 2005 for the State of Odisha and authorized the Disaster Management authorities, State Executive Committee and Public Authorities in the State to take such action under the Act as may be required for management of the said Disaster. As per Order No. 8980, dated. 24.03.2020 of Health & Family Welfare Department, Odisha the COVID-19 Management system have organised by District Administration and Locked Down was started in entire Malkangiri District on 24.03.2020.

**The lockdown have followed with following stipulations:**

- No public transport services including operation of taxis, auto- rickshaws were permitted. The exception will include transport of all kinds to and from hospitals.
- All shops, commercial establishments, offices and factories.** Workshops, godowns etc. were close their operations.
- All distribution of benefits such as pension and PDS were postponed for the time being.
- All foreign returnees were directed to remain under strict home quarantine/ Isolation for a period as decided by local Health Authorities
- People were required to stay at home and come out only for basic services while strictly following social distancing guidelines.

The Sub- Collector, Tahasildars, B.D.Os, Executive Officer of Urban Local Bodies were authorized to take all necessary actions for enforcement and implementation of the aforesaid measures. Local Police were render necessary assistance as and when requisitioned by the aforementioned officers.

The district Administration have declared and delineation of Red, Green and Orange Zones of the area as per positivity ratio covid-19 infection which was decided by the local authorities. The Panchayats were identification and implementation of Containment Zones and Buffer Zones by respective local authorities will be guided by instructions issued by MoHF&W. The Temporary Medical Camps (TMCs) accommodating returnees and others, for the purpose of mandatory

quarantine, have contributed to a significantly large number of COVID-19 positive cases in the district.

COVID Care Centres and COVID Hospitals were treated at the same level as Containment Zones and restrictions applicable to Containment Zones shall be applicable to such facilities. In the Containment Zones, only essential activities shall be allowed. There shall be strict perimeter control to ensure that there is no movement of people in or out of these zones, except for medical emergencies and for maintaining supply of essential goods and services. Guidelines of MoHFW, GOI and H&FW Department, Government of Odisha shall be taken into consideration for the above purpose. In the Containment Zones, there were intensive contact tracing, house-to house surveillance, and other clinical interventions, as required.

**Night curfew:-**

The movement of individuals shall remain strictly prohibited between 7.00 pm to 7.00 am, except for essential activities. The movement of individuals, for all non- essential activities, were prohibited.

**Protection of vulnerable person:-**

Persons above 65 years of age, persons with co-morbidities, pregnant women, and children below the age of 10 years, shall stay at home, except for essential and health purposes.

**8. MIGRANT LABOURERS/ TRAVELLERS:-**

**1- No. of migrant who have been kept in camps:**

Total nos of transit camps / temporary medical camps established	: 368 nos
Migrants from other state staying in transit camp /TMC	: 436
Migrants from other district staying in transit camp /TMC	: 12602
Migrants from intra district staying in transit camp /TMC	: 15155
<b>Total migrants staying in transit camp /TMC</b>	<b>: 28193</b>

Before 03.05.2020 i.e after relaxation of lockdown 2115 migrant labourers/ travellers are accommodated in 96 Border Transit Camps in the district up to 2 to 5 days due to non-availability of sufficient vehicles in the district. They have been accommodating with basic facilities like food, drinking water, Toilets/ sanitation, Electricity, health Check up facilities. After facilitating vehicles from nearby districts for their onward transportation facilities along with food, drinking water , face mask, snacks, Police escorts and Nodal officers .All are allowed to travel to their destinations with proper transportation facilities and no one is allowed to travel by walk or bi-cycle .

**2-Feeding:**

Govt has declared Motu as interstate border check point & the inflow of migrant labourers/ travellers are more in numbers from other state/ other district / within the district. At Border Check point, basic facilities are provided like safe drinking water, Amul Cool drink, biscuits/ Snacks & baby foods maintaining the SoP of Social distancing of COVID-19 .It also provided hygienic face mask all migrants' labourers/travellers. Then intra state, intra district & inter district wise registration, stamping on forearm of each migrant labourers/travellers are being done at border

check point, Motu. The migrant labourers/travellers have been accommodated in different transit camps near by border check point Motu. All basic facilities / infrastructures are made available with proper sanitation and drinking water facilities. Foods are being supplied to each migrant labourers/travellers as per menu fixed by the GPNO (Morning Breakfast with Tea, Lunch, Evening Snacks with tea & Dinner). Lunch and Dinner are also being provided at Border Check points, Motu for the migrant's labourers/travellers.

### **3-Action taken to keep them engaged in camps:**

The migrant labourers/travellers of intra district migrants are being provided with job cards and to engage them in White washing, Plantation, works under MGNREGA to create wage employment during quarantine period. Morning prayer, Yoga, Exercise, Story Telling, Motivational talk have been practiced on daily basis. "10 days basic certificate training on COVID volunteers" has been imparted to all the inmates.

### **4-Sending migrants to destination states:**

District Administration, Malkangiri has been facilitated vehicles (Bus) , food , safe drinking water, hand sanitizer, dry food & health check up to the migrant labourers/ travellers to the respective destination. As on date 436 migrants labourers/ travellers form other state ( Tamilnadu: 17, Karnatak:09, Rajastan: 10, West Bengal: 237, Jharkhand: 65, Bihar: 15, Chatisgarh :45, Uttar Pradesh: 38).



### **5-Walking migrant-action taken to prevent the same:**

Till date, 13020 migrants' labourers/ travellers have crossed the border by walk and 1118 persons have dropped by Trucks by the East Godavari and Telengana State the BCP after dropped at border check point, Motu. They have been provided with safe drinking water, Amul Cool drink, biscuits/ Snacks, hot cooked food & baby foods maintaining the SoP of Social distancing of COVID-19. They have been provided with transport facilities to accommodate at transit camp/ Temporary medical camps. Foods are being supplied to each migrant labourers/ travellers as per menu fixed by the GPNO (Morning Breakfast with Tea, Lunch, Evening Snacks with tea & Dinner). Thermal screening to each & every migrant's labourers/ travellers at border point have been done by the medical team. Also medical team visiting to transit camps/ Temporary medical camps are making health checkups of migrant labourers/travellers at regular interval. 3469 migrants labourers/ travellers of other districts /state have been provided with transport facilities ( Bus) to their respective destination. Similarly, 9551 migrants labourers/ travellers of Malkangiri districts have been provided with transport facilities ( Bus) to respective TMCs located at various GPs & ULBs.



## **6. Migrants transiting through the state:**

5904 migrants' labourers/ travellers of other state/ district have been crossed the border check point, Motu through 535 own arranged vehicles. They have been provided with safe drinking water, Amul Cool drink, biscuits/ Snacks and also Registration, stamping on forearm has been done maintaining the SoP of Social distancing of COVID-19.

### 7. Action regarding intra state, inter- district migrants ( transport, camps, feeding etc):

The officials deployed at Border Check Point intimated to District Control room about the movement of migrants labourers/ travellers belong to other district & other state. District Administration, Malkangiri has been given utmost priority for facilitation of vehicles, foods, accommodation in transit camps/TMCs. It also given special care to the vulnerable groups like pregnant woman, children, sick, elderly person, lactating mothers during their movements.

Thermal screening to each & every migrant's labourers/ travellers at border point have been done by the medical team .Also medical team visiting to transit camps/ Temporary medical camps are making health checkups of migrant labourers/travellers at regular interval.

All the migrants labourers/ travellers have been sensitized on SOP of social distancing through Street Player, Poetry, Distribution of leaflets and Pamphlets and displaying the LED TV for update information on COVID-19 and News organized awareness camp at BCP, Motu. For safety measures disinfection / sanitation has been taken at BCP,Motu in regular interval.



### 8-Act

#### Action taken to receive and quarantine migrants coming from other states:

649 migrants stranded at different states have been contacted & they have been facilitated for movement of Passes and brought the Malkangiri district. They have been accommodated in TMC for institutional quarantine. During quarantine period all basic

facilities have been provided.

The influx of Migrants from East Godavari District of Andhra Pradesh & Telengana States are continuous without any intimation to the District Administration which caused difficult to make any projection for the days ahead. They have been dropped / allowed by Truck/ bi-cycle/ walking the migrants/travellers to the district As a result, on our part it is very difficult to manage the day to day transportation to their destination point and also manage them at transit camps at BCP Motu. However the District Administration has been provided basic facilities like food, electricity, Toilets/Sanitation, Drinking water, Vehicles with Police escorts and Nodal Officers, accommodation at Border Transit Camps. The District Administration has been taking

various initiatives to maintain the SOP of Social Distancing to control the disaster. The District Administration has closely monitored for the smooth transpiration of the Migrants/ travellers and nobody is allowed to go the destination by walk or bi-cycle. Rather all preventive measures have been taken further smooth onward transportation of the travellers/migrants

After arrival of migrant traveller/labourers at Border Check point, the officials deployed at BCP are welcoming the travellers & giving Amul Cool drink & biscuits to each traveller, baby foods to children after hand washing. Also for respiratory hygiene mask is being provided to all migrants. Then intra state, intra district & inter district wise registration of each migrant are being done.

Then they have been sifted to transit camp near border check point& Foods are being supplied to each migrant traveller/labourers as per menu fixed by the GPNO (Morning Breakfast with Tea, Lunch, and Evening Snacks with tea & Dinner). Lunch and Dinner are being provided at Border Check points to migrants those who are coming during Lunch & dinner time.

**9-Construction workers assistances and any other notable action taken to mitigate the problems:**

25,619 eligible registered beneficiaries under BOCW / construction workers have been provided with special financial assistance @ Rs.1500/- each amounting Rs. 3, 84, 28,500 /- .

Further they have provided Job Cards under MGNREGS, Urban Wage Employment Initiatives (UWEI) & provided wage employment in the projects of GP/ line departments for their livelihoods support. Further they have been covered under individual entitled benefits under different Government Schemes.

**Covid-19 Management Of Malkangiri District– 2020-21**

Dedicated Covid Hospital started from Dt.13.04.2020 at old DHH, Malkangiri

- There are 30 beds now functional with arrangement to upgrade to 100 beds.
- At present there is provision of 13 beds for positive cases and 17 for isolation of non confirm cases in the wards for cohorts. There are also 8 individual rooms for single cases .
- There is a 4 bedded ICU facility and a High Dependency Unit.
- There are 6 ventilators, 1 digital X-ray units, Independent Path Lab with ABG, CBC machines, 1 Manifold Systems with 30 Jumbo Oxygen Cylinders, 50 Oxygen Concentrator, 30 Standard Oxygen Cylinders, Video Laryngoscope, 25 Multipara Monitors, 5 Syringe Pumps and 5 Infusion Pumps, 1 Defibrillator.
- There is a dedicated Ambulance at present and 1 dedicated Dead body carrier. 3 more Ambulances are procured for this hospital which shall be here in 3 days.
- The B.M.W management systems is well placed with Inclinator, 1 Autoclaves and 2 Shredders.

**H.R: The HR requirements is as below depending on the bed strength**

Doctors, Paramedics and others	30 Beds	50 Beds	100 Beds	Remarks
Medicine/Pulmonary Medicine	4	6	8	
Anesthetist / Intensivist	4	6	8	
Pediatrician	4	4	8	
Psychiatrist/Psychologist	2	2	4	
General Duty Medical Officers	30	40	60	We have organized 35 MBBS Doctors from our system and trained 2 rounds
Staff Nurses	40	60	80	51 numbers picked from the system including the 42 recruited under COVID-19
Pharmacists / Radiographer / Lab Technicians	30	40	60	30 numbers picked from the system including the 20 recruited under COVID-19 (Trained for 3 days)
Sanitary Attendants	40	60	80	30 outsourced (trained for 3 days)
Hospital Manager	1	1	1	Arranged from System
Office Assistant	1	1	1	From system
Security Guard	25	25	25	20 outsourced (trained for 3 days)

- This team is led by AMO Dr. K.Ch.Mohapatra, MD, ICU Consultant his team of 5 doctors including our Anaesthetist Dr. Nihar Ranjan Tripathy to support him.
- To add to this 46 Ayush doctors trained and kept ready for management of RRT, CCC.
- The doctors & paramedics are working in 3 shifts for two weeks and then will be replaced with the 2nd Set. They shall be kept under quarantine in case they treat positive cases.
- The patients will be treated and discharged as per protocol.

**Logistics.**

- The required medicines and chemicals are available to treat the cases instantly and there are 100 PPE , 100 N-95 masks, 500 triple layer masks kept at hand for urgent use besides about 1500 PPE, 500 N-95 masks, 19800 three layer masks are at the District Store.
- The dedicated Covid Health Centre with 150 beds is established in B.E.D college and Covid Care Centre with 100 beds is set up at EMRS & 100 beds at ITI. Besides these we have quarantine centre, Old Degree College with bed capacity of 100 which can be converted to a CCC instantly. The CCC will be managed by the Ayush Doctors and will pay visit to Quarantine centres. Oxygen facility is made available at these sites too.

**Sample Collection.**

- We have 3 sample collection units. One each at Motu, Mathili and Malkangiri. Besides that, as and when required teams are moving to be blocks with PPE to collect SOS.
- By now 422 samples have been sent for testing out of which 290 results are received negatives.

**SURVEILLANCE**

- To control on spread of Novel Corona virus (COVID-19) the District administration has set up a tracking mechanism for surveillance of the persons returned to the district.
- Monitoring mechanism for collection of data from each and every village on return of persons came from out of Country / State / District have been made through all ICDS staff i.e. Anganwadi worker, ICDS Supervisor & CDPOs and submitted the data to the district level on daily basis.
- At district level the data has been analysed by District Team under the Supervision of the Divisional Forest Officer.
- The persons having symptoms like cough, cold , Fever and Respiratory illness have attended by RRT team & health check up conducted on daily basis.
- All symptomatic cases/ persons came from out of Country / State / District of have been advised for home / compulsory quarantine for minimum 14 days and regular follow up has been instituted. Those who are not following home quarantine, they have been shifted to TMC.
- For more intensive surveillance special Block zonal monitoring teams have been assigned to monitor any development of symptoms and observation of SoP of home quarantine .
- Necessary basic facilities like watch ward, sanitation worker put in each TMC and food arrangement made on out sourcing by WSHGs.

- All Border check post have been sealed and the team of officials & Police are attending the migrant workers came from other state and district. After health check up by Medical team they have been kept in TMC for 14 days.
- Till date 8197 persons returned from outside state, out of which 7272 persons were directly reached their village and 925 were kept in border quarantine.
- After lock down from 24.3.2020, 2652 persons came from outside state.
- 267 persons found symptoms with cough, cold & fever and all are having no symptoms at present.
- 247 numbers persons have been kept in TMC for compulsory quarantine those who are fails to maintain the SoP of home quarantine.

#### **Preparedness of COVID-19 MALKANGIRI DISTRICT (2021-22)**

- Strengthening of RTPCR Sample collection collecting more than 200 per day.
- Deployment of two HW(M) for sample collection
- Engagement of two vehicle for sample collection
- Engagement of three no's of LT with permissions from DPH, Odisha under process.
- Collection of sample from border line area i.e (Malkangiri, Kalimela, Podia Blocks) nearest to Chhattisgarh state and High risk groups like Shop keeper, vendor, priest of the temple and Local Hata.
- Opening of fever clinic at DHH, Malkangiri and all blocks.
- Formation of RRT at Block level
- Strengthening of IEC/BCC activity by DIPRO, Malkangiri
- Proper functioning of DCH. Malkangiri
- Functioning of COVID call centre at district level.
- Enforcement activity by Sub Collector, Malkangiri
- Involvement of BDOs in block task Force monitoring by Project Director, DRDA Malkangiri for migrants.
- Night curfew is continuing
- Functioning of Dedicated Covid Hospital at old DHH, Malkangiri.
- There are 30 beds now functional with arrangement to upgrade to 100 beds.
- There is a 10 bedded ICU facility and a High Dependency Unit.
- There are 6 ventilators, 1 digital X-ray units, Independent Path Lab with ABG, CBC machines, 1 Manifold Systems with 30 Jumbo Oxygen Cylinders, 50 Oxygen Concentrator, 30 Standard Oxygen Cylinders, Video Laryngoscope, 25 Multipara Monitors, 5 Syringe Pumps and 5 Infusion Pumps, 1 Defibrillator.
- There is a dedicated Ambulance at present and 1 dedicated Dead body carrier. 3 more Ambulances are procured for this hospital.

- The B.M.W management systems is well placed with Incinator, 1 Autoclave and 2 Shredders.

### **COVID Vaccination Preparation**

- District Level Task Force Meeting conducted in the chairmanship of Collector & DM, Malkangiri
- Block Level Task Force Meeting conducted in the chairmanship of BDO of Blocks
- All DHH/SDH/CHC/PHC identified for CVC( Covid Vaccination Centre)
- Special Focus on AEFI (Adverse Event Following Immunisation) management system
- Line listing prepared at field level for dropout beneficiary.
- Special Vaccination session conducted for FLWs at different offices.
- Special Vaccination session conducted for peignoirs at Jail.
- Special Vaccination session conducted at village level in HAR GHAR DASTAK to cover dropout beneficiaries and Disable persons.
- Vaccination session conducted in all school/ colleges for vaccination of age group 12 to 18.

### **Conclusion**

The Covid 19 decesed is a national disaster, it is smoothly Managed by District Administration with help all line departments. The District Public Health and Family Welfare department managed the pandemic situation dedicatedly with their all efforts. The Malkangiri district overcomes from the pandemic situation of COVID-19 as better than other district of the states.

### **Heat Wave action Plan**

1. Functioning of Control Rooms: Functioning at Blocks, FIRE stations / TPSODL/Health/ Animal Husbandry /DSWO /DRDA and in Collectorate, Malkangiri ,
2. Rural Drinking water facilities : As detailed below

Sl No	Name of the Block	Total Population	No of GPs	Total No of villages	Total No of existing Tube wells	No of Tube wells functioning	No of Tube wells under repair	Total No of piped water supply stam p posts	No of Pipes functioning	No of pipes under repair	No of Jalac hatras Opened
1	2	3	4	5	6	7	8	9	10	11	12
1	Malkangiri	104013	19	123	2542	2514	28	538	538	4	0
2	Mathili	96073	20	143	2264	2253	11	45	39	6	62
3	Khairput	47875	11	134	1300	1286	14	460	429	31	14
4	Chitrakonda	62532	18	254	1408	1372	22	52	49	03	92

5	Korukonda	72265	12	151	1418	1397	21	573	573	0	45
6	Kalimela	129878	23	407	2705	2670	35	735	62	12	115
7	Podia	46738	8	46	1044	1000	11	143	143	0	39
<b>Total</b>		<b>559374</b>	<b>111</b>	<b>1258</b>	<b>12681</b>	<b>12492</b>	<b>142</b>	<b>2546</b>	<b>1833</b>	<b>56</b>	<b>367</b>

3. Urban Drinking water facilities: As detailed below

SI No	Name of the urban body	Total Population	No of wards	Total No of existing Tube wells	No of Tube wells functioning	No of Tube wells under	Total No of piped water	No of Pipes functioning	No of pipes under repair	No of Jalachatras Opened	No of water hkers ailable
1	2	3	4	5	6	7	8	9	10	11	12
1	<b>Malkangiri</b>	<b>39695</b>	<b>19</b>	<b>388</b>	<b>388</b>	<b>0</b>	<b>87</b>	<b>87</b>	<b>0</b>	<b>03</b>	<b>0</b>
2	<b>Balimela</b>	<b>13349</b>	<b>12</b>	<b>134</b>	<b>134</b>	<b>0</b>	<b>110</b>	<b>110</b>	<b>0</b>	<b>04</b>	<b>0</b>
<b>Total</b>		<b>53044</b>	<b>31</b>	<b>522</b>	<b>522</b>	<b>0</b>	<b>197</b>	<b>197</b>	<b>0</b>	<b>7</b>	<b>0</b>

#### 4-Health Measures :

- Arrangement of **HEAT STROKE ROOM** made in all CHCs , PHCs with 02 beds & in DHH with 04 beds for immediate respond of sunstroke Cases.
- I.V Fluids & I.V Sets are available sufficient in all CHCs/PHCs (N) area Hospitals & DHH.
- 220 ORS Packets are available with ASHA Workers and AWWs accordingly 500 in PHCs & 2000packets in each CHCs in this district.
- Cool Drinking water facilities with aqua guard filters made in each CHC and PHC
- For public awareness , save from sun stroke **“DO”s and “DO”nts** during pick heat wave situation have been revealed on Swasthya Kanthas and discussed in GKS Meeting.
- Life savings drugs stock kept available in sufficient at Block level and District level .
- **No. sun stroke death occurred** till to date during this season accordingly , no such incident took place in this district earlier.

5-Pre-cautions taken to combat heat wave in the district

#### DWO:

SI No	Department	Name of the Block	No of SSD Schools	Remarks
1	DWO	<b>Malkangiri</b>	17	As reported by the DWO, Malkangiri in all schools Drinking water & Electricity facilities are available
2		<b>Mathili</b>	13	
3		<b>Khairput</b>	16	
4		<b>Chitrakonda</b>	4	
5		<b>Korukonda</b>	5	
6		<b>Kalimela</b>	13	
7		<b>Podia</b>	8	
		<b>Total</b>	<b>76</b>	

**6-DSWO:**

As per instruction issued by the WCD Department all the AWCs are functioning between **7.30AM to 9.30 AM**. Drinking water facilities with First Aid Kits kept ready in all AWCs. Awareness programme is being continued by AWW among the ICDS beneficiaries as well as in villages kind of precautions to be taken up to tackle Heat wave.

**7-LABOUR INTENSIVE –**

- As per instruction issued vide letter No-2005/dt-11.3.2022 Labour and ESI Deptt, Odisha, Bhubaneswar working hours prohibited between **11.00AM to 3.30PM** in view of pick heat wave. Field officers from District Labour Office, Malkangiri are approaching the labourers & contractors as well as works department to follow up all the precautions at work sites during their surprise visit.

**8-ANIMAL HUSBANDRY**

- i. Mobile Veterinary Unit in each block is available along with the medicines to provide door step service at any time.
- ii. To make the people aware about the risks associated with the heat wave, identifying the risk, “DO’s” and “Don’t” to protect oneself from the said risks public awareness camps conducted through MVUs.
- iii. Save the cattle from drinking water scarcity, construction of vats at identified tube wells are in progress.

**AGRICULTURE SECTOR**

Sl.No	Name of the Crop	Programme for Rabi Crop-2021-2022 in Hc.	Achievement in Hc.
1	Rice	0	530
2	Maize	2155	2155
3	Pulses	10150	10169
4	oil seeds	17569	17498
5	Vegetable	16913	16320
6	Other Crops	1256	1286
	<b>Total</b>	<b>48043</b>	<b>47958</b>

Time to time supervision of heat wave situation in the District , the district level officers have been assigned .

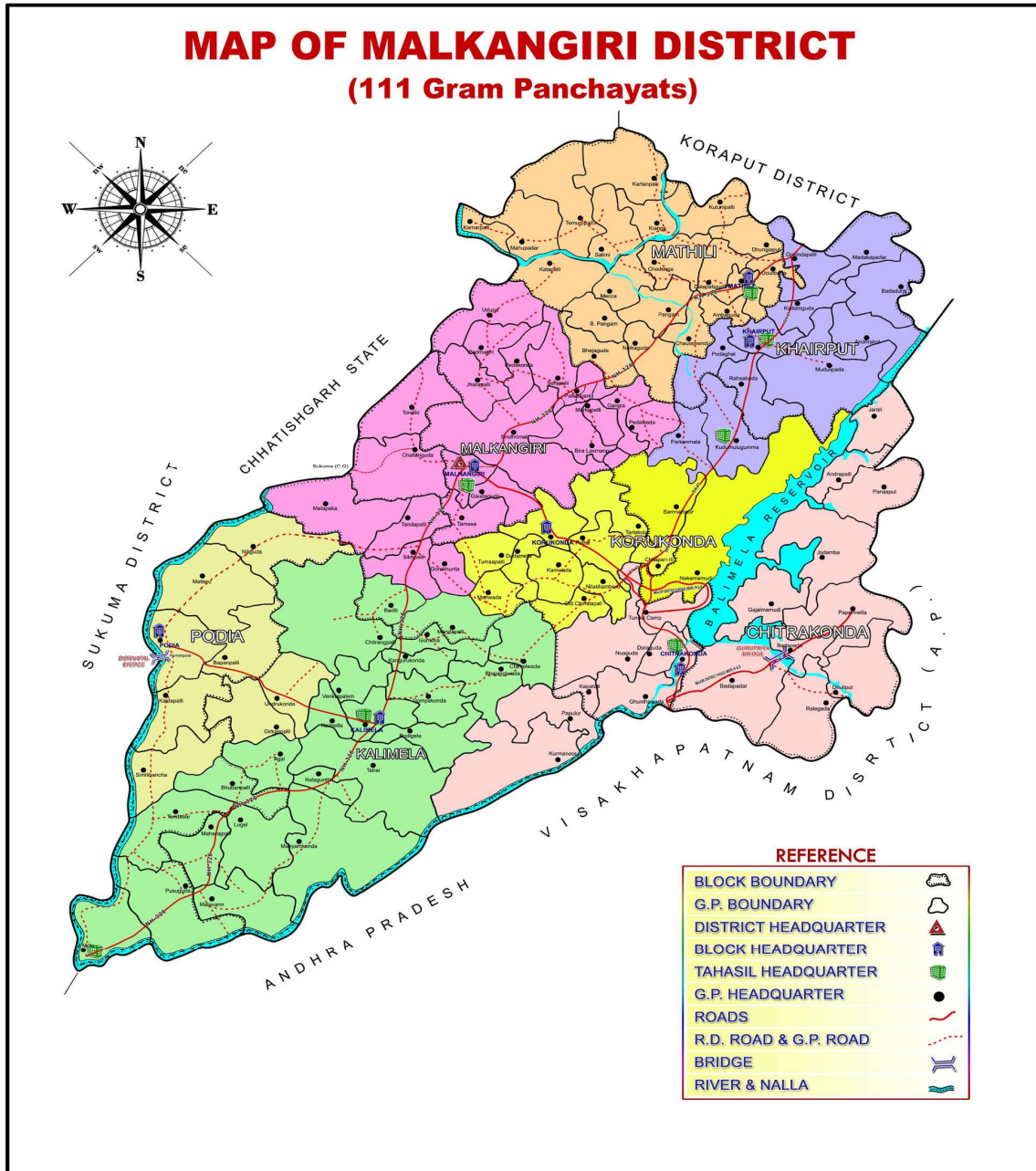
**IMPACT OF HEAVY RAIN AND ACTION TAKEN**

- Low lying areas in Malkangiri, Mathili, Korukonda, Podia and Kalimela affected due to heavy rain.
- Mainly vehicular traffic was affected due to submergence of bridges Potteru, Kangurukonda, Kanyashram, MV-37,Korukonda, MV-96, MV-90, Pangam and Challanguda. Disruption of vehicular traffic was experienced from Jeypore to Motu, Malkangiri to Balimela, Malkangiri to Sukuma (CG) and Kalimela to Podia.

**1. Analysis of deaths due to different disasters like Lightning, Drowning, Snake Bite etc. to be mentioned here.**

Sl No	Name of the Tahasil	Snakebite	Drowning	Lightening
1	Malkanigiri	4	2	2
2	Mathili	8	8	0
3	Khairput	9	15	1

4	Chitrakonda	14	17	0
5	K.Gumma	12	12	1
6	Kalimela	16	12	2
7	Podia	11	9	0
	Total	74	75	6



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