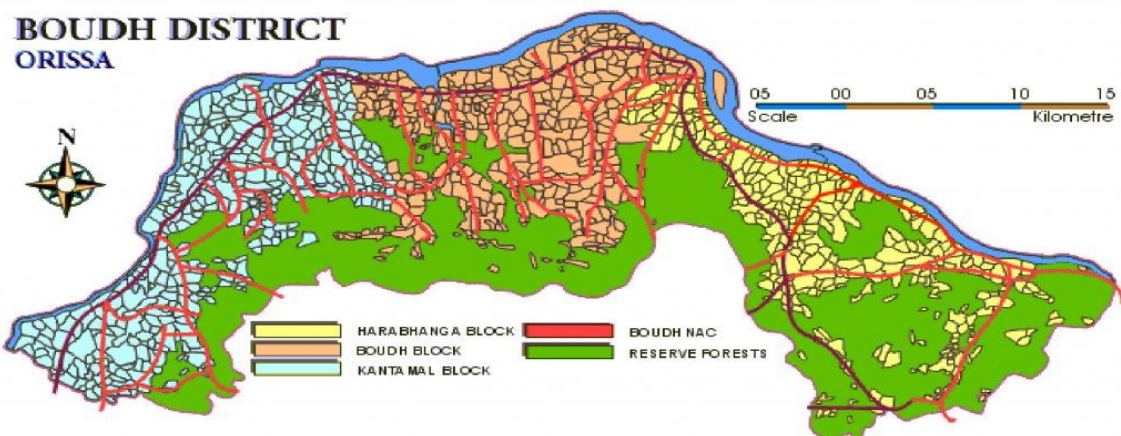


District Disaster Management Plan (DDMP) For the Year -2022-2023 District -,Boudh



Volume -I

**Prepared by
District Disaster Management Authority
Boudh**

Table of Contents

Sl No.	Chapters	Chapter Number	Page No.
1.	Introduction	1.	4-9
2.	District Profile	2.	10-25
3.	Hazard, Risk and Vulnerability Analysis	3.	26-37
4.	Institutional Arrangement	4.	38-66
5.	Prevention and Mitigation	5.	67-71
6.	Climate Change Adaptation	6.	72-78
7..	Inclusive Disaster Risk Reduction	7.	79-81
8.	Safety of Schools and Child Care Institutions	8.	82-86
9.	Chemical (Industrial), Nuclear and Radiological	9.	87-95
10.	Biological Disaster & Public Health in Emergencies	10.	96-116
11.	Forest Fire	11.	117-1553
12.	Capacity Building	12.	154-170
13.	Preparedness	13.	171-180
14.	Response	14.	181-192
15.	Restoration and Rehabilitation	15.	193
16.	Recovery	16.	194-198
17.	Standard Operating Procedure (SOP)	17.	199
18	Financial Arrangement	18.	205-231
19	Lessons Learnt and Documentation	19.	232-263

Abbreviation

ADM	Additional District Magistrate
CCA	Climate Change Adaptation
CDPO	Child Development Programme Officer
DDMA	District Disaster Management Authority
DDMP	District Disaster Management Plan
DRR	Disaster Risk Reduction
DEOC	District Emergency Operation Centre
HRVA	Hazard Risk and Vulnerability Analysis
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 Office
VAW	Village Agriculture Worke
CDM & PHO	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
LI:	Labour Inspector
DLO	District Labour Officer
DAO / TO	District Accounts Officer / Treasury Officer

Chapter –1

Introduction

BACKGROUND:

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 to minimize the loss. Section 31 of Disaster Management Act 2005 (DM Act) makes it mandatory to have a district disaster management plan for every district. District Disaster Management Plan (DDMP) shall include Hazard Vulnerability Capacity and Risk Assessment (HVCRA), prevention, mitigation, preparedness measures, response plan and procedures. In this context, Boudh district has evolved its DDMP. It is expected that these multi-hazard response plans would increase the effectiveness of administrative intervention in reducing the impacts and suffering of the affected people during disasters.

1.1 AIMS AND OBJECTIVES OF THE DDMP:

- I. To identify the areas vulnerable to major types of the hazards in the district.
- II. To adopt proactive measures at district level by all the govt. departments to prevent disaster and mitigate its effects.
- III. To define and assign the different tasks and responsibilities to stakeholders during the pre-disaster and post-disaster phases of the disaster.
- IV. To enhance disaster resilience of the people in the district by way of capacity building.
- V. Reduce the loss of public and private property, especially critical facilities and infrastructure, through proper planning.
- VI. Manage future development to mitigate the effect of natural hazards in the district.
- VII. To develop the standardized mechanism to respond to disaster situation to manage the disaster efficiently.
- VIII. 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.
- IX. 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.
- X. To make the use of media in disaster management.
- XI. 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 in a planned way to minimize human sufferings, 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:

District Disaster Management Plan has a vital role in the district to mitigate the crisis during natural disaster. In this plan all the district level officers, NGOs and eminent person should involve in the activities of DDMP. To prepare the DDMP all the data relating to different departments and their role of action should be determined to execute the plan during disaster. This plan is most important and highly essential in the district for the smooth management of crisis during disaster.

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 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 as lay down in the act:

- I. To provide assistance to the District Collector in disaster management activities.
- II. 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.
- III. To undertake capacity building measures and awareness and sensitization of the community.
- IV. To ensure that all construction projects under it conform to the standards and specifications laid down.
- V. Each department of the Government in a district shall prepare a disaster management plan for the district. The local authorities need to ensure that relief, rehabilitation and reconstruction activities in the affected area within the district are carried out.
- VI. Trust / Organisations managing Places of Worships & Congregation
 - a) Each establishment / organisation identified as —critical infrastructure and key resource
 - b) Including places of congregation in a district shall prepare —on-site and —off-site
 - c) Disaster management plan carry out mitigation, response, relief, rehabilitation and
 - d) Reconstruction activities.

Private Sector:

- I. The private Sector Should be encouraged to ensure their active participant in the pre-disaster activities in alignment with the overall plan developed by the DDMA or the Collector
- II. They should adhere to the relevant rules regarding prevention of disasters, as may be stipulated by relevant local authoirity
- III.As a part of CSR, Undertake DRR projects in consulation with district collector for enhancing district resilience.

NGOs and Volunteers:

- I. Local community groups and volunteers including NGOs normally help in prevention and mitigation activities under the overall direction and supervision of the DDMA or the Collector & DM.
- II. They should be encouraged to participate at all stages of disaster risk reduction and also in training activities as may be organized and should familiarise themselves with their role in disaster risk management as the first responder.

Community Groups /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 PLANS FOR REVIEW AND UPDATING: PERIODICITY DISSEMINATION OF THE PLAN:

As part of the dissemination of the DDMP, the DDMA will organise sharing meetings at each block as well as district level to ensure high level of awareness among different stakeholders involved. The PRI members will also be oriented on their roles and responsibilities in pre, during and post disaster scenarios.

Revise and Maintainance:

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:

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

The responsibility for the coordination of the development and revision of the basic plan, volume II of the plan, annexes, appendices and implementing instructions will be with Additional District Magistrate with support from the Dy. Collector, Emergency under the guidance of the Collector and DM, Boudh. The accomplishments and the lessons learnt of the preceding year will also be recorded during the revision of the DDMP. The targets mentioned in the plan will also be revisited and included in the report.

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.

MAJOR DISASTER IN THE DISTRICT:

Keeping in view of the 1982 flood situation in Boudh, more focus is giving to rescue & relief operation in low lying areas of Boudh District by district administration. In that flood, the water from Mahanadi & Tel Nadi directly heat to the inhabitants. Near about 3250 people severely affected by that flood. The flood water entered in to the town and the water level was 4 feet in Gandhi chhak. Two people died in that flood. The district administration provided free food to the people for 8 days which

were so much difficult in that time. Two hundred 23 villages severely affected during that period. Near about 4 hundreded hectores of agricultural land covered with sand casting. Along with this the flood in last year in the August 2019 majorly impacted the District Disaster management Authority a lot. Learning from last year flood also helped in improvised the preparedness of district administration like visit of all shelter & keep ready all the equipment & keep data base ready of vulnerable demography in low lying areas of Boudh district.

CHANGE IN STRATEGY/PREPAREDNESS IN MITIGATION:

To face such type of eventuality the Govt. of Odisha particularly the Revenue & Disaster Management Department after super cyclone in 1999 changed the approach from mitigation to preparedness. So in R & DM Department separate wings are added which is known as OSDMA headed by one IAS as Managing Director OSDMA. 5 no's of shelter have constructed in Boudh district with properly equipped. The equipment like flood light, Aska Light, Life Jacket, Chain saw. Combi tool etc which are very essential during flood & cyclone timewhich are provided by OSDMA keep ready in four Multy purpose flood and cyclone shelter. Four nos of Fire station also established in Boudh district with well-equipped instruments & trained fire personnel. Apart from that in 2019 in two numbers of ODRAF team stationed in Boudh in 5th IRB. So, both fire & ODRAF team are ready in their own arrangements to face any kind of eventuality.

Regarding awareness generation on Disaster Management activities, OSDMA has developed a training calendar for Odisha as a whole and Boudh in particular. Last year the Emergency department with support of Fire & ODRAF team has organized 43 no's of Area familiarization exercise and Community Awareness programme in different locations like in GP head quarter, in selected colleges & school Premises. The fire & ODRAF team members show life saving techniques & skills to the audience to keep ready any kind of disaster like gas fire, road accident, first aid etc. In these events we wereable to involve around 8000 students,500 PRI members, 200 ASHA & 300 Anganwadi workers with 1000 public in different School, college & GP head quarter.

NEW SURFACE OBSERVATORY:

To know the temperature & rainfall position in Boudh District one surface observatory has newly installed by Indian Metrological Department in Dist. Head quarter in 15th January 2020. So that it is very easy to forecast the weather, temperature & rainfall situation of the district by IMD.

COMMUNITY LEVEL ACTIVITIES AND INITIATIVES:

As a programme of OSDMA, we have already prepared 109 no's of Village Disaster Management Plan with the support of NGO, SURABHI & YCDA in flood prone villages of Boudh, Kantamal & Harabhanga blocks in Boudh district along with this 109 no's of Village Disaster Management committee have formed in different flood affected villages & trained them in rescue & relief activities .

Chapter-2 **District Profile:-**

INTRODUCTION:

The name of the district needs some explanations. Boudh was an Introducing Feudatory State till 1st January, 1948 when the Raja transferred power of the District to the Government of Odisha, Boudh as a Feudatory State had a number of Khond villages who were so important that the Raja sent a telegram on 1st January, 1948 declaring that his Khond subjects would not be willing to submit to the Government of Odisha. They however, willingly accepted the new Government.

ORIGIN OF THE NAME OF THE DISTRICT:

Creation of Boudh as a new district is of greater significance. After the merger of princely states with Orissa, Boudh-Boudh was declared a separate district with its headquarters at Phulbani in the post-independence. The people of Boudh sub division were unhappy of being administered under Phulbani administrative unit and expressed their resentment in 1985 against the inclusion of Boudh with Boudh.

Boudh being situated on low land differs in language, culture and religion from Boudh (high land) and was the ancient headquarters of the ruling chiefs. Numbers of Associations were formed to create awareness among the people of Boudh sub division for its separate identification as a district in the political map of Orissa. A meeting was organised by “Sachetan Yuva Parisad” at town hall in 1990 being supported by the lawyers, political leaders, educationists, students to resolve a mass movement for “Mahanadi Zilla” comprising the area of Boudh and Athmallik sub-division. However the movement lost its momentum.

During this time the Government of Orissa under Biju Pattnaik launched the programme of good governance by multiplying more number of districts. It was the ripe time when a grand meeting was convened by the youth society at Buddha Ground in 1991 and resolved to achieve the goal by mass agitation with the slogan, “Our Demand Boudh District”. The matter was brought to the notice of the Government for consideration. Gradually the people of Boudh from Kantamal to Harabhanga were aware of the genuine demand. In the year 1993 the Government announced 27 districts in phased manner on the basis of territorial arrangement.

The demand of Boudh was set aside. It hurt the sentiment of the people. “Boudh Zilla Krianusthana Committee” was formed in 1993 consisting of the members irrespective of all political parties to stimulate the people for vigorous movement. The movement was accelerated by the dynamic leadership of the Bar Association with the support of Banika Sangha, Journalist Forum, Jai Bhairabi Club, Town Athletic Club, Jogindradeb Club, Ramaleela Natya Sansad, Gehla Maa Club, Bhagabata Club, Lokakala Bikash Kendra, Sarasara Youth Club, Radhanagara Club, Ama

Sanskrutika Parisad (Kantamal), Jayakalyana Samiti and Mahila Srusti Club along with the farmers, labourers, have and have-nots. The agitation was marked with picketing, road blockade, shut down of shops and markets. People participated in the Dharana (day and night) in large scale. The delegation used to meet the Chief Minister in regular interval.

The lawyers boycotted the court and the Dharana continued for about four months. The law and order situation turned to be uncontrolled on the part of the district administration. Some youth members were detained in the police station. A women delegation met the Chief Minister and convinced him for favourable consideration. The agitation reached the climax when a government vehicle was burnt down.

Observing the gravity of the situation, the government of Orissa announced Boudh sub-division as a new district w.e.f 1.1.94 vide letter No.DRC-218/93-56413/R date-22.12.93. The then Hon'ble Chief Minister Sri Biju Pattnaik inaugurated the district on 2.1.94 in a colourful ceremony with untold pleasure and show. Boudh was over whelmed with joy and jubilation on the day. Sri Karunakar Pattnaik, the first Collector of Boudh district was present on the inaugural day. To commemorate this day, the District Administration has been organising the annual Mahotsav since 1996. The district of Boudh was created in the year 1994 with one sub-division, viz., Boudh with its headquarters at Boudh. To trace the origin of its component parts, the ex-State of Boudh was named after its headquarters town Boudh, a place located on the Mahanadi.

Boudha was flourishing centre of Buddhism is evident from three statues of Buddha found in Boudh. Boudh was previously a vassal state under the Bhoumakars of Tosali who was great patrons of Buddhism. So, ultimately Buddhism flourished in this region. It is also possible that the name of this town is changed from Dhritipuspa (ancient capital of the Bhanjas of Khinjli Mandala) to Boudh which is perhaps named after Lord Buddha.

LOCATION, BOUNDARY, TOTAL AREA AND POPULATION

The district Boudh recently formed Boudh a district on January 2nd 1994 is located in the central part of Odisha. It is surrounded by the river Mahanadi in the North. To its South is located Phulbani district, western boundary touches Sonapur district and eastern boundary touches Nayagarh district. It lies between 20.22° N and 20.50° N latitudes and between 83.34° E and 84.49° E longitudes. The district extends over a territory of 3,098 sq. Km (1.99% of the state) and is inhabited by 4, 41,162 people with sex ratio 991 Females per 1000 Males (2011 Census). It ranks 22nd in size and 29th in population among the thirty districts of Odisha. As of 2011 it is the second least populous district of Orissa, after Debagarh.

HISTORY OF THE DISTRICT AS AN ADMINISTRATIVE AND CHANGES IN ITS PARTS

The Boudh region was occupied by the Marathas in 1800 A. D. and it remained under the rule

of the Bhonsla Raja of Nagpur. In November 1803, when British occupied Cuttack after defeating the Marathas, the latter led by Shankar Bapu took shelter in the territory of the Raja of Boudh. But when a British detachment appeared at Barmul, the Raja hastened to offer solicitation to the British and extended his protection to them by which they occupied Boudh in 1804. In 1810 the Bhonsla Raja of Nagpur claimed Boudh and subsequently in 1818 he got jurisdiction over that State. Boudh was finally ceded to the British Government by Madhoji Bhonsla in 1826. The Raja of Boudh had jurisdiction over Athmallik till 1819. But that year the British made a separate Kabuliyat with the samant of Athmallik. After the death of Raja Chandra Sekhar Deva of Boudh in 1852, Athmallik became practically independent of Boudh. The Raja of Boudh had sovereignty over Khondmals from early times. But in the middle of the 19th century when the Khonds rose in rebellion under Chakra Bisoyee the Raja failed to bring order in that territory and later the Khondmals were brought under the administration of the British in February 1835. The Khondmals were made a subdivision of the district of Angul in 1891 and in 1904 Phulabani was made the subdivisional head-quarters. During the rule of Raja Pitambar Deva of Boudh the British Government recognised his hereditary title of Raja and a Sanad was granted to him in 1875. He was succeeded by Jogendra Deva in 1879 and the new ruler received another Sanad in 1894 and had his tribute fixed in perpetuity. He died in 1913 and was succeeded by Narayan Deva during whose rule the State of Boudh merged with Odisha on 1st January, 1948. Before separation from Boudh on January 2nd 1994, the district of Boudh-Khondmals was constituted with the ex-State of Boudh and the Khondmals subdivision on the 1st January, 1948. In the same year, 51 villages of Dahia police out-post, an enclave in Boudh area of Sonepur subdivision of Balangir district, were added to the jurisdiction of Boudh subdivision. These villages originally formed a part of Boudh. They were transferred to Sonepur as dowry and became a Zamindari under the Ruling Chief and continued to remain so for some time. Later they became an integral part of Sonepur State till ultimately they were transferred again to Boudh in 1949. The district is divided into only one subdivision, three Tahsils and six police stations. Boudh subdivisions are divided into three Tahsils, namely Boudh, Kantamal and Harabhanga.

Administrative Setup:

Content of the Admin set-up	Numbers	Content of the Admin set-up	Numbers
Subdivisions	01	Assembly constituency	02
Tahasils	03	Police Stations	06
Blocks	03	Fire stations	04
ULBs	01	D.Hqrs.Hospitals	01
Gram Panchayats	69	PHCs	12

Villages	1182	CHCs	05
Inhibited	1130	Mobile Health Unit	2
Un-inhibited	52	Anganwadi Centers	727
No of RI circle	Boudh-10, Harabhanga-7 & Kantamal-8 Total-25	Normal rainfall (mm)	1246mm
No of wards	Boudh- 387,Harabhanga- 340, Kantamal- 392 & NAC- 17 = Total-1117	Major Rivers:	Mahanandi, Tel, Salunki and Bagh

Climate & Rain fall:

The climatic condition of Boudh is much varied. The district comes under the ambit of Western Central Table Land characterized by hot and moist sub-humid climate. It has mainly 4 seasons. The summer season is from March to Mid June, the period from Mid June to September is the Rainy season, October and November constitute the post monsoon season and winter is from December to February. The best time to visit this district is during winter.

There is a meteorological observatory in the district. The data of this observatory may be taken as representative of the meteorological condition of the whole district. The month of May as the hottest month reach to a daily maximum temperature of 44 degree Celsius. In association with the passage of western disturbances across north India during winter months, short spells of cold occur and the temperature drops down to 10 degree Celsius.

The average annual rainfall of the district is 1510.33 mm. However there is a great variation of rainfall from year to year. The month wise rainfall data for last ten years with reference to normal rainfall of these Districts indicated below:

Year month wise rainfall report (in mm) of Boudh district (2010 to 2021).

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
2010	3	0	0	0	61.3 3	153.67	273.57	249.23	225.27	74.47	21.0 7	24. 87	1086.48
2011	0	24.2	0	27.53	37.7 3	116.98	139.07	473.93	444.4	0	--	--	1263.84
2012	0	0	0	0	0	167.13	325.7	468.25	153.33	78.67	25.6 7	0	1218.75
2013	0	0	0	5	14.3 4	274.03	266.23	185.03	147.93	277.63	0	0	1170.19

DDMP-2022-2023, Boudh

2014	0	0	0	0	125.5	36.47	669.33	458.63	342.97	57.77	0	0	1690.64
2015	0.33	0	0.71	74	22.83	287.83	267.33	157.33	--	--	--	--	810.36
2016	0	1.33	20	0	16.13	147.87	202.6	368.06	337.43	70.73	0	0	1164.15
2017	0	0	3.73	0	1.33	322.63	282	192.03	202.23	152.87	16	0	1172.82
2018	0	0	0	29.63	57.33	156.1	507.87	359.13	300.4	137.33	2	72.13	1621.92
2019	2.33	23.43	34.8	34.4	26.43	164.5	294.13	519.83	337.9	94.33	0	0	1532.08
2020	18.13	83.97	57.23	129.37	28.43	266.27	339.63	546.17	125.03	99	0	0	1693.23
2021	0	0	0	20.53	93.97	124.70	362.67	97.40	500.80	34.20	12.67	0	1246.94
2022	38.2	0.67	0	0									

Rain gauge and Automatic Weather Stations:

Four numbers of Rain gauge Stations at Boudh, Harabhanga & Kantamal Block are functioning.

Sl no	Block	Location
1	Boudh	Circuit House
2	Kantamal	Block office premises
		Ghantapada RI office
3	Harabhanga	Block office premises

Geography:

Majority of the land area of Boudh district is under gross crop area i.e. 1, 36,000 hectares (as per Statistical records 2012) and forest area covers 94,952.11 hectares. The district is well connected with other districts. The bounties of nature has endowed the district with rich forest abound in Sal, Sisal, Bija, Asana, Mahua flower trees etc. Forest produce of economic importance of the district mainly consists of Kendu Leaf, Tamarind, Mahua Flower and Seeds, Sal Seeds etc. tigers, elephants and spotted dears are the wild animal species residing in Boudh district. Collection of minor forest produce is the major source of livelihood of the people in the district. There is a crocodile sanctuary namely Satakoshia Ganda at Tikarpada that attracts tourists from far places.

Topography:

The district has only one town Boudh, the headquarters of the district which is very small towns having a population 8,891 and 20,424 according to 1971 and 2011 Census respectively. Boudh town is managed by a Notified Area Council, Boudhgarh.

The district Boudh covers fertile plains and hilly zones. This area consists of a long strip of level land running parallel to the Mahanadi many small streams, tributary rivers, fountain (locally called jhor) find their way to the Mahanadi. The river line plains of Boudh are drained by the tributaries of the Mahanadi while the southern and the western region are drained by the tributaries of the Tel.

The district may be broadly divided into two distinct physical divisions; the plain legion in the north and the highlands in the south. Between the high mountain ranges of the Harabhanga in the south

and the river Mahanadi in the north forming the northern boundary of the district lie the fertile plains of Boudh. The district consists of a long strip of level land running parallel to the Mahanadi with gradual undulating rises to the hill ranges which form the Khondmals. The natural features of the country lend themselves to irrigation, the hills of the southern border forming a natural watershed from which many small streams find their way to the Mahanadi. The hills on the southern border and the district along their foot are thickly covered with forests.

RIVERS:

As we know the rivers are the main source of ancient habitation, the importance of major rivers in this area cannot be ignored.

THE MAHANADI:

The river Mahanadi played an important role for the development of pre-historic culture in this region. The river which originates from the Amarakantaka hill range of Madhyapradesh flows downwards in a South-East direction. The cultural pattern is generally same in the entire Mahanadi valley. Culturally, the river Mahanadi is divided into three important parts liked the upper Mahanadi valley, middle Mahanadi and the lower Mahanadi valley. The district of Boudh comes under the middle Mahanadi valley. The river Mahanadi is considered as an ancient river of India which is evident from the Mahabharata and other puranic texts. Boudh is the only district in Odisha in where this has a touch almost in all areas. It appears as a necklace on the body of Boudh. This river is a perennial one like the Ganges and the Yamuna.

THE BAGH:

The Bagh rises in the hills near Bandhagarh of the Phulabani hill tract and falls into the Mahanadi flowing for about 64 k.m.s. This river also has pre-historic sites.

THE SALKI:

The Salki rises in the Baliguda sub-division of Phulbani district but has a real touch in the district of Boudh. So far as the pre-historic culture of this region is concerned, these rivers played a significant role. Besides these rivers like the fountain and small streams (locally known as jhor) like the Meheruni, Ramjal, Atharnala, Digi etc. are having pre-historic treasure.

Lake and Tanks:

No lake occurs in the district. There are a large number of tanks. Lakes and the Government tanks have been transferred to the control of the Tanks Grama Panchayats for taking up pisciculture. Besides, they too are used for bathing and irrigation purposes.

Demography:

Area of District	3,098 Sqr. KMs (1.99 % of the State) Rank among district of India 379 th (22 nd in the State)
Geographical boundary	North- River Mahanadi & Angul Dist.

	South- Boudh Dist. East- Nayagarh Dist. West- River Tel &Subrnapur Dist.			
Location	Latitude- 20.240 to 20.540- North Longitude- 83.340 to 84.480- East			
No. of Villages	1182			
No. of R.I. Circle	25			
No. of Tahasil	3			
No. of G.P.s	69			
	Name of the Tahasil	No. of Revenue Village	No. of uninhibited village out of Rev. village	No. of hamlets
	Boudh	420	20	9
	Harabhanga	354	17	18
	Kantamal	408	15	24
	Total	1182	52	51
Population (2011 Census)	4,41,162 (1.05 % of the State Population, 29 th position) (Rank-524 th among the districts of the country) Rural population- 4, 21,921 (95.91 %) Urban Population 17,996 (4.09%)			
Sex Ratio	940/1000 male as per 2011 Census in National Survey 978/1000 boys as per Census 2011 child sex Ratio			
Forest	Total Forest area 1196.9532 Sqr. KMs.			
Irrigation	Medium Irrigation Projects- 2 (Salunki, Bagh)			

Table-2.1-Households and its distribution

Sl. No	Total Number of Families / HH	Category		Category				Category	
		Rural	Urban	SC	ST	OBC	GEN	BPL	APL
1.	106961	102402	44559	25783	13611	59472	19011	71872	40346

Table-2.2-Population and its Composition

Sl. No	Population			S C		S T		O B C	
	T	M	F	M	F	M	F	M	F
1	441162	221625	219537	52497	52437	27362	28002		

Population density of the district and decadal growth of population

Table-2.3- Age Group

Sl. No.	Total Population	0-5 years	6-14 years	15-59 years	60 years and above
1.	441162	61847	95963	2,82,983	18369

Table-2.4-Sex Ratio

1.	Sex Ratio (Females per 1000 males):	991/1000
2.	Sex Ration (0-6 Years):	978/1000

Table-2.5-Literacy Rate

	Total	Male	Female
Literacy Rate	71.61%(2,71,612)	83.34%(1,58,648)	59.70%(1,12, 964)

Table-2.6-Vulnerable Group

Name of the block/ ULB	No of GP/Villages	Children (0-below 18yrs)		People with Disability		Elderly Person above 60 Years	
		Male	Female	Male	Female	Male	Female
Boudh	23/420			1142	757	7768	7521
Harabhanga	22/354			758	491	6827	6568
Kantamal	24/408			969	824	7663	7397
Boudhgarh NAC	17 wards			91		1922	

Socio-Economicprofile:

1. Work force participation-

Workers and Non-Workers	Male	Female	Total
Total Workers (Main and Marginal)	11902655	5638934	17541589
(i) Main Workers	8794413	1913130	11902655
(ii) Marginal Workers	3108242	3725804	5638934

2. Land Holding Pattern:

3. Agriculture and Irrigation

Sl. No.	Name of the Block	Total Area (in Hectares.)	Cultivable Area	Net Sown Area	Irrigated Area
01	Boudh	106496	32396	32396	16416
02	Harabhanga	125076	25207	25207	18376
03	Kantamal	126720	27577	27577	18167
	Total	358292	85180	85180	52959

Employment and livelihood:

Ninety three percent population of the district is rural and the economy is mostly based on agriculture and forest produce with very limited industrialization. The distribution of workers population in the district indicates heavy dependence on agriculture. Percentage of workers to the total population decreased from 51.13 percent in 1981 to 47.24 percent in 2001. About 69.4 percent workers in the district are cultivators and agricultural laborers indicating predominance of agriculture as a source of livelihood.

Education:

Sl. No.	Name of the Block	No. of Villages	No. of Villages having Primary School within the village	No. of Villages having Access to ME/ High School within 5 Km.	
				UPS	H.S
1	Boudh	449	397	397	449
2	Harabhanga	376	336	347	376
3	Kantamal	431	395	407	430
4	NAC, Boudhgarh	17	17	17	17
	Total	1273	1145	1168	1272

Sl. No.	Name of the Block	Total No. of Children Enrolled Class-1 to X	No. of Children Dropped Out	No. of Children Never Enrolled
1	Boudh	22925	0	0
2	Harabhanga	19038	0	0
3	Kantamal	26157	0	0
4	NAC, Boudhgarh	1505	0	0
	Total	69625	0	0

Boudh district has several operational schemes including National Rural Health Mission (NRHM) and Integrated Child Development Scheme (ICDS) that aim at improving the health and nutrition status. NRHM, a flagship program for improving rural health services is operational in the district as per the Central Government guidelines. It operates under the supervision of the Chief District Medical Officer (CDMO) supported by the District Program Manager (DPM). The Schemes under NRHM like the Janani Surakhya Yojana (JSY) and Rogi Kalyana Samiti (RKS) are successfully operational. Accredited Social Health Activist (ASHA) is appointed to assist Auxiliary Nurse Midwife (ANM) at sub center level for early registration, identification of complicated pregnancies and providing at least three antenatal cares. They undertake post delivery visits, organize appropriate referrals and arrange transport for pregnant mothers in need. These health assistants work in villages and identify pregnant woman from BPL families as beneficiaries of the scheme

Health:1.33- Major Health Indicators:

Sl. No.	Block/ ULB	Child Mortality Rate/1000 Live birth (HMIS 2019-20)	Maternal Mortality Rate (AHS 2012-13)	Institutional Delivery in percentage	Immunization status of Children below 5 years in percentage	Any Other
1	Boudh	22	NA	86%	101%	
2	Harabhanga	23	NA	85%	95%	
3	Kantamal	9	NA	98%	96%	
4	NAC Boudh	NA	NA	100%	99%	
5	District Average	18	245	97%	97%	

Incidence of Major Diseases during last 5 years:

Sl. No.	Name of the Disease	Incidents/ Cases Treated	No. of Deaths due to disease
1	Malaria	6550	0
2	Jaundice	8	0
3	Pneumonia	1022	0
4	Diarrhea	51826	0
5	TB	1295	116

4. Housing:

Biju Pucca Ghar Yojana, IAY, PMAY, Mo Kudia etc. are some of the rural housing schemes being run by the Odisha Government to provide pucca houses in rural areas of Boudh district. The basic approach behind the schemes is that housing is a fundamental human need and is a basic requirement for human survival as well as for a decent life.

Sl. No.	Name of the Block/ ULB	Total No. Of HHs	No. of Home less HHs	Houses			
				Total No.	Katcha Houses	Semi Pucca Houses	Pucca House
1	Boudh	30323	06	30323	30317		
2	Harabhanga	23816	03	23816	23813		
3	Kantamal	29251	15	29251	29236		
	Total	83390	24	83390	83366		

5. Electrification**Drinking water and sanitation:****DRINKING WATER& FLOOD VOLUNERABILITY:**

Sl. No.	Name of the Block	Total No. of Functional Tube Wells	No of tube wells with raised platforms	Total No. of Sanitary Wells	Pipe Water Supply (PWS SCHEME)					
					No. of PWS	Length of Mts	No. of Villages Covered	No. of Households	No of overhead tanks	No of stand points
1	Boudh	2408	60	0	46	73600	46	9389	26	700

DDMP-2022-2023, Boudh

2	Harabhanga	2208	55	0	63	102400	64	12639	37	1032
3	Kantamal	2112	530	0	52	83200	52	10061	18	675
	Total	6728	645	0	161	259200	162	32089	81	2407

SAFE DRINKING WATER & CRISIS:

Sl no	Name of the block ULB	No. of villages having access to safe drinking water	Village/wards without proper source of drinking water		Village/wards having crisis of drinking water during summer season		Fluoride contamination		Others(Iron if any nitrate)
			No of village/wards	population	No of village/wards	population	No of village/wards	population	
1	Boudh	386	0	0	15	4586	NIL	NIL	NIL
2	Harabhanga	338	0	0	0	0	17	457	NIL
3	Kantamal	392	0	0	0	0	NIL	NIL	NIL
	Total	1116	0	0	15	4586	17	457	NIL

SANITATION

Sl. No	Name of the Block	Villages Sanitation				Total No. of Community Sanitary Complexes	Households		Schools	
		Total No.	No. of ODF Villages	No. of Villages having covered drains	Length in Km.		Total No. of HHs	No. of HHs having IHHL	Total No.	No. of Schools having functional Toilets
1	Boudh	383	383	0	0	1	27901	27901	Information will be provided by school & Mass Education Department	
2	Harabhanga	338	338	0	0	0	27824	27824		
3	Kantamal	389	389	0	0	0	33221	33221		
	Total	1110	1110	0	0	1	88946	88946		

6. Food security

Sl. No	Block/ ULB	Households Covered under PDS									
		No. of HHs	HHs covered under NFSA	HHs covered under SFSS	Total	Total No. of Beneficiaries under NFSA & SFSS	Consumption in qtls.		No. of PDS outlets in the block	Storage Points	
							Rice	Wheat		Nos.	Storage Capacity (in Qtls.)
1	2	3	4	5	6	7	8	9	10	11	12
01	Boudh	39314	34172	1620	36687	117258	6530.84	386.61	42	2	650000
02	Kantamal	42213	37449	745	38770	126304	6949.17	380.68	43	1	25000.00

DDMP-2022-2023, Boudh

03	Harabhanga	33959	32378	1046	33620	106057	5852.75	484.25	28	1	50000.00
04	Boudhgarh (NAC)	4476	3326	137	3373	10656	579.94	116.86	14	0	0
	Total=	119962	107325	3548	112450	360275	19912.70	1368.40	127	4	140000.00

7. Social Security

Sl. No.	Block	No. of Persons covered under Old Age Pension Schemes			No. of Persons Covered under Widow Pension		Total	No. of Persons covered under Disability Pension		
		Male	Female	Total	Male	Female		Male	Female	Total
1	Boudh	7514	3597	11111	0	6949	6949	819	527	1346
2	Harabhanga	5600	3452	9052	0	5383	5383	693	441	1134
3	Kantamal	6849	4750	11599	0	6153	6153	719	478	1197
4	Boudh NAC	570	444	1014	0	533	533	85	45	130
	Total	20533	12243	32776	0	19018	19018	2316	1491	3807

Critical infrastructure**Human Resource Availability:**

Sl. No.	Block	No. of Doctors	No. of Paramedical Staffs	No. of ANMs	No. ASHAs	Others
01	Boudh	8	33	27	231	--
02	Harabhanga	7	27	28	184	--
03	Kantamal	10	23	29	220	--
04	DHH Boudh	26	45	1	0	--
	Total	51	128	85	635	--

Veterinary Hospitals:

Sl. No.	Block	Veterinary Hospitals	No. of Doctors	Livestock Aid Centres	No. of Livestock Inspectors	No. of Artificial Insemination Centres	Others (to be specified)
1	Boudh	3	4	10	07	20	20
2	Harabhanga	2	7	5	12	12	10
3	Kantamal	2	2	12	8	12	15
	Total	7	13	27	27	44	45

1. Police and Fire Stations:

Name of Block/ULB	Sl. No.	No. of Police Stations	No. of Police Personal	Total	No. of Fire Stations	Human Resource
Kantamal	1	Kantamal	DSP-1,,SI-02,ASI-04,Cr.HAV-01,Const-07 OAPF-02	24	Kantamal	Station Officer-01 Driver-01 Leading Fire Man-02 FMD-1 Fireman-9
	3	Manamunda	Inspr-1,SI-03,ASI-04,Cr.HAV—1,Const-06 OAPF-2	14	-	-
Boudh	3	Baunsuni	SI-02,ASI-05, Cr.HAV-01,Const-05	13	Baunsuni	Station Officer-01 Driver-01 Leading Fire Man-02 FMD-1 Fireman-7
	4	Boudh	Inspr-1,SI-03,ASI-08, Cr. HAV-03,Const-12,OAPF-4	36	Boudh	Asst. Fire Officer-01 Driver-01 Leading Fire Man-02 FMD-2 Fireman-09
Harabhanga	5	Purunakatak	Inspr-1,SI-02,ASI-05,Cr.HAV-01,Const-08 OAPF-01	17	Charichhank	Driver-01 Leading Fire Man-02 FMD-1 Fireman-8
	6	Harabhanga	Inspr-1,SI-02,ASI-03,Cr.HAV-01,Const-05 OAPF-2	18	-	-

2. Police:

The sanctioned strength of the police force in the district includes I Superintendent of Police, 1 Addl. Superintendent of Police, 3 Deputy Superintendent of Police, 1 Sub-Divisional Police Officer, 1 Reserve Inspector, 7 Inspectors, 1 Sergeants, 21 Sub-Inspectors, 1 FPSI, 1 Drill Sub-Inspector, 47 Assistant Sub-Inspectors; 1 Havildar Major, 1 Driver Havildar Major, 29 Havildars, 7 CI Havildar, 5 Lance Naiks, 10 Assistant Drivers, 80 APR constable 131 OR Constables, 1 Scientific Officer, 1 Lab Assisstant, 1 ASI photo, 1 Lab Attendant, 1 Head clerk, 2 Sr Clerk/Jr Accountant, 5 junior Clerk, 1 Junior stenographer, 10 menials, 36 OAPF & 2 Traffic Constables. The Policing of this district is being ensured through SDPO office. There are 7 Police Stations, 5 Out Posts, 01 T.O.P, 3 B.Hs. The required numbers of force are being deployed to the P.S. on requisition from R.O., Boudh at the time of exigency. The list of P.Ss, O.Ps, B.Hs and TOP are furnished below.

Sl. No.	Name of P.Ss.	O.Ps.	TOP	Beat House
1.	Boudh	BaghiaPada, Jahnapanaka	Town OP	---

2.	Baunsuni	---	--	---
3.	Mamamunda	Sagada	--	Palasaguda
4.	Kantamal	GhantaPada	--	---
5.	Harabhanga	---	--	---
6.	Purunakatak	Adenigarh	--	Madhapur, Tileswar
7	Spl. Energy PS	-	-	-

3. Cooperative Societies:

Sl.No.	Block	No. of PACs	No. of Farmers	Total amount of Seed distributed during last year (in Qtls.)	Total No. of Fertilizer distribution during last year (in Qtls.)	Total amount of Loan distributed (amount in Lakhs.)	Total amount of Paddy procured during previous season (K +R) amount in Qtls.
1	Boudh	14	34016	1170.00	14133.45	8945.56	581253.91
2	Harabhanga	13	20801	1973.00	13318.45	7402.41	452656.49
3	Kantamal	15	25324	1945.00	16253.40	11192.88	765527.72
	Total	42	80141	5088.00	43705.3	27540.85	1799438.12

4. Communication:

Sl. No.	Block	N.H. (Length in Km.)	S.H (length in KM)	ODR (length in KM)	Rural Roads (in KM)
1	Boudh	NH57 51/0-100/0 = 49K.M	0	24KM	526.52
2	Harabhanga	NH57 100/0-162/01 =62.01K.M	42.69(S/H-29)	19KM	
3	Kantamal	NH157 0/0-4/0KM =4 K.M.	56 (S/H-41)	5KM	

5. Flood Shelters:

Sl.No.	Name of the Block	Name of the GP	Place
1	Kantamal	Kultajore	Kultajore
2	Harabhanga	Harbhanga	Dharmanagar
3	Boudh	Bahira	Bahira
4	Kantamal	Ghantapada	Ghantapada
5	Boudh NAC	Boudh NAC	Boudh NAC

On the basis of past experience, following temporary flood centres are selected for immediate shifting of flood affected people of the flood shelters.

Sl. No.	Name of the Block	Name of the G.P.	Name of the flood shelter.	Name of the village from which affected people to be shifted to flood shelter.
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DDMP-2022-2023, Boudh

1	2	3		4	5
1	Boudh	Raxa	1	Dahya High School	Maheswarpinda Amuruda
		Manupali	2	Khaliapali UG ME School	Gudguda
		Ainlapali	3	Ainalpali UP School	Tatarkila
		Bohira	4	Bohira ME School	Tentulipali Tala Bahira
		Baunsuni	5	Baunsuni High School	Malisahi Baunsuni Tikarapada
		Talasarada	6	Tainjan UG ME School	Damargada Podakhal Maneswar
		Talasarada Telibandha	7	Sahajpal High School	Kankala Kampara
		Telibandha	8	Telibandha High School	Subarnapura Ramapura
		Laxmiprasad	9	Jagati UGME School	Jagati Dumuribida Sapadohali Kaoudiatola
		Khuntabandha	10	Khuntabandha UG ME School	Jagannathapur Chandigada Ghingira sahi of Gobindpur
	Harabhanga	Kusanga	1	Kussanga Pry. School	Tirada
			2	Commercial Centre of Main village	Atalsara
			3	Kumari ME School	Kumari Rugudi Sahi
			4	Kusanga Primary School	Kusanga Check gate Sahi
			5	Ayodhya Pry. School.	BhagamundaMahulad orSahi)
		Harabhanga	1	Harabhanga Flood Centre	Harabhanga (Bazarsahi) Tikirasahi Harijana Sahi
			2	Harabhanga Anchalika College.	Kodasinga Diaghat Surundi
		Sankuloi	3	Panighara P.S.	Panighari Nadi Khandi Sahi
		Dhalapur	4	Dhalapur GP Office	Khandi dhalapur
			5	Kankala village	Kankala
			6	Tentulipadar flood shelter.	Tentulipadar Kharsankuloi
		Mathura	7	Kelakata Pry. School	Krushnamohankpur Balipur Jharasahi

DDMP-2022-2023, Boudh

		Ramagarh	8	Palaspat Pry. School	Jharasahi
		Sarasara	9	Badabankapada PS	Kaleswar Sanbankapada Sanbagabar Badabankapada
		Birnarsinghpur	10	Birnarsinghpur Forest Rest shed	Karadi
			11	Hatagaon Community Centre	Hatagaon
3	Kantamal			Srimal UP School	Srimal
				Mallikud Community Center	Mallikud
				Manikpur P.S.	Manikpur
				Ghantapada High School & GP Office	Ghantapada
				Manikpur Primary School	Tambasahi
				Udepur Primary School Dumalpali Community Center	Udepur Dumalpali
				Thelkobeda Pry. School	Kamghat
				Sanchhapali PS	Gambharipadar
				Guabahal Community Center	Guabahal
				Flood Relief Center Ghikundi & Patharkhandi Pry. School	Tundumal Ambagahana
				Manamunda M.E. School	Manamunda (Dhibara Sahi) Deuli
				Bhurkipada Pry. School	Sahupada
				Badachhapali Pry. School	Badachhapali (Harijan Sahi)
3	Boudh NAC				
In Boudh NAC the following flood shelters have been selected where the affected people of Boudh NAC are to be shifted.					
			1	J.D. High School	
			2	Town Hall, Boudh	
			3	Cinema Hall, Boudh	

DETAILED BANK BRANCHES OPERATING IN THE DISTRICT

SI No	Name of Banks	Name of Branches		Category
1	Boudh Central Co-operative Bank	I	Boudh	Co-operative Banks
		Ii	Mahila Branch	
		Iii	Manamunda	
		Iv	Purunakatak	

		v	Kantamala	
2	Utakl Grameen Bank	I	Boudh	Regional Rural Banks
		Ii	Birnarasinghpur	
		iii	Ghantapada	
		Iv	Kantamal	
		v	Madhapur	
		vi	Manamunda	
		vii	Sagada	
		viii	Sahajpal	
3	State Bank of India	i	Boudh	PSU Commercial Banks
		ii	Bausuni	
		iii	Dahya	
		iv	Harabhanga	
		v	Manupali	
		vi	Janhapank	
		vii	Kantamal	
		viii	Palsagura	
		ix	Purunakatak	
		x	Charrichhak	
		xi	Butupali ADB	
		xii	Baghiapada	
4	Indian Bank	i	Boudh	Pvt. Commercial Banks
		ii	Dhalpur	
		iii	Badhigaon	
		iv	Kusanga	
		v	Manamunda	
5	United Bank of India	i	Boudh	
6	Union bank of India	i	Boudh	
7	Punjab National Bank	i	Boudh	
8	Syndicate Bank	i	Boudh	
9	UCO Bank	i	Boudh	
10	Bank of India	i	Boudh	
11	Central Bank of India	i	Boudh	
12	Bank of Baroda	i	Boudh	
13	Allahabad Bank	i	Boudh	
14	Canara Bank	i	Boudh	
15	AXIS Bank	i	Boudh	
16	HDFC Bank	i	Boudh	
17	ICICI bank	I	Boudh	

Table-3.5-Electrical Infrastructure Vulnerable to Disaster

Sl. No.	Name of the Block/ ULB	No. Of Grid Stations	No. Of 33/11 KV Substations	No. Of Distributing Transformers			Conductor/ Electrical lines-11KV or less (length in Kms.)	No. Of Poles	No. Of High-Tension Towers	High Tension lines above 11KV (length in Kms.)
				11 KV Or Less	11 KV < and <60KV	60 KV And above				
1	NAC Boudhgarh	1	1	5	0	0	4	58	0	2
2	Boudh	3	3	178	0	0	231	3302	0	8
3	Harabhanga	2	2	206	0	0	297	4243	0	20
4	Kantamal	3	3	267	0	0	388	5547	2	18

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	Boudh	2408	60	46	142000	26	700	0
2	Harabhanga	2208	55	61	234200	37	1032	0
3	Kantamal	2112	530	54	167000	18	675	0
	TOTAL	6728	645	161	543200	81	2407	0

2. Tsunami: NA (Brief description on the Tsunami vulnerability of the district and past incidents if any)

Table-3.7-Tsunami 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 Nos.	Milch and Draught animals	Houses	Vulnerable Infrastructure			
							School Buildings/ Anganwadi	Hospitals	Roads(in Km)	Other critical Infrastructure
NIL										

(Note: all villages within 1.5 Km. Of the coastline to be include and based on information available tables to be filled up. Only concerned blocks to be mentioned)

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

3. Earthquake NA

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

- The _____ District is coming under Zone-II(low damage risk zone)
- The total District is under Zone-III(Moderated damage risk zone)/

(Note:Based on historical the tables to be filled up. Only relevant blocks to be mentioned. The causing agents outside District boundary, having vulnerability should also be mentioned)

Table- 3.11-Agriculture and Flood Vulnerability

Sl. No.	Name of the Block	Cultivable Area(Hectares)		Area susceptible to Flood(Hectares)	
		Paddy	Non-Paddy	Paddy	Non-Paddy
1	Boudh	23620	8930	15543	6032
2	Harabhanga	15695	9605	10535	4279
3	Kantamal	19993	7337	10898	6646

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- 11KV or less (length in Kms.)	No. Of Poles	No. Of High-Tension Towers	High Tension lines above 11KV (length in Kms.)
			11KV or Less	11KV <and <60 KV	60KV and above				
1	NAC Boudhgarh	1	5	0	0	4	58	0	2
2	Boudh	3	178	0	0	231	3302	0	8
3	Harabhanga	2	206	0	0	297	4243	0	20
4	Kantamal	3	267	0	0	388	5547	2	18

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	
1	Boudh	2408	60	39	46	142000	26	700	0
2	Harabhanga	2208	55	16	61	234200	37	1032	0
3	Kantamal	2112	530	101	54	167000	18	675	0
	TOTAL	6728	645	156	161	543200	81	2407	0

5. Events/Festivals/Functions organized in the district where mass gathering occurs:

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(A pprox)Per day	Remarks (other vulnerabilities associated with the place/event,if any to The mentioned)
1	Rathayatra	BoudhNAC	9days	June/July	35000	
2	Boudha Mohotsav	Kacheri Padia , Boudh NAC	5days	January	30000	

3	DhanuYatra & Banijya Mela	Bhairabi Padia/ Boudh NAC	8 days	February	20000	
4	Ramalila	Ramalila Padia, Boudh NAC	15 days	April	15000	

6. Boat Operation points

The B.D.O.s/Executive Officer, NAC, Boudhgarh will display Country Boats on past experience in advance at strategic points and keep in readiness in order to take effective steps in mobilizing boats at the appropriate time. Like last year undertakings from the boat men regarding the detail of their boats should be obtained by the concerned Block Development Officers immediately. SRC Odisha provided to plying boats to Boudh district & deployment of 4nos of staff for this purpose. Both the boats are functional one is at Keutsahi & another is at Marjakud Ghat.

The detailed information .with regard to deployment of country boats on past experience is to be submitted by the B.D.O.s/Executive Officer, NAC, Boudhgarh.

Emphasis is being given on enforcement measures in order to detect Boats plying unauthorisedly without registration and license. During such enforcement operation, the Enforcement Authorities should particularly see that

- i). The Ferry-operations strictly adhere to all the provisions laid down in the Odisha Boat Rules, 2004.
- ii). The Boat owner paints on both sides of the Boat not only the Registration number and license number of the boat but the carrying capacity of the Boat in tonnage and in case of a passenger boat, the number of passengers it can carry and also the Load line symbol/water-line.
- iii) The Boat owner ensures adequate number of life saving equipments in the Boat.
- iv) In case the Ferry-Ghat is auctioned, the Auctioning authority ensures that the boat owner sign an agreement with the authority.
- v) Plying of unauthorized Boats in the Ferry-Ghats should be banned and the list of such unauthorized Boats should be reported to the Competent Authority immediately .If necessary the said enforcement work should be done with the help of local Police Officer.
- vi) Take up awareness creation activities to the Sarapanches as well as to the public regarding free and fair auction of Ferry-Ghats and plying of authorized registered Boats for safety of Passengers and only registered Boat owners shall be allowed to take part at the time of auction of Ferry-Ghats.

Boat operation points:

Table No. 13:

Sl. No.	Name of the Block	Name of the ghat/ boat operation point	Name of the water body	No. of Panchayat s/ villages connected	Daily to and fro movement of people in Nos. (Approx.)	Type of boats operating in Nos.	
						Mechanised	Non-Mechanised
1	Boudh	Amarda / Raxa	Mahanadi	2	16		Non-Mechanised
2		Baunsuni	Mahanadi	1	10		-do-
3		Kankala	Mahanadi	3	10		-do-
4		Jagati	Mahanadi	2	12		-do-
5		Jagati	Mahanadi	2	16		-do-
6		Baunsuni	Mahanadi	3	12		-do-
7	Boudh, NAC	Jagannath Mandir	Mahanadi	2	13		-do-
8	Boudh, NAC	Jagannath Mandir	Mahanadi	1	17		-do-
9	Boudh,	Kulipadaghat	Mahanadi	3	14		-do-

	NAC						
10	Boudh, NAC	Kulipadaghat	Mahanadi	2	15		-do-
11	Boudh, NAC	Marjakud	Mahanadi	3	200	2nos of Power boat Provided by SRC	-do-

Sl. No.	Name of the Block	Name of the ghat/ boat operation point	Name of the water body	No. of Panchayat s/ villages connected	Daily to and fro movement of people in Nos. (Approx.)	Type of boats operating in Nos.	
						Mechanised	Non-Mechanised
1	Harabhanga	Atalsar	Mahanadi	3	12		Non-Mechanised
2		Tikerpada	Mahanadi	2	18		-do-
3		Karadi	Mahanadi	1	20		-do-
4		Uanla	Mahanadi	2	20		-do-
5		Ramgarh	Mahanadi	2	16		-do-
6		Panighara	Mahanadi	3	21		-do-
7		Dhalpur	Mahanadi	2	25		-do-
8		Harabhanga	Mahanadi	4	17		-do-
9	Kantamal	Guabahal	Tel	2	12		Non-Mechanised
10		Kamghat	Tel	2	10		-do-
11		Gambharipadar	Tel	3	16		-do-
12		Deogaon / Nuapali	Tel	1	13		-do-
13		Barapadar	Tel	2	20		-do-
14		Phased	Tel	2	19		-do-
15		Kantamal	Tel	3	13		-do-

7. Land Slide Vulnerability NA

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 Infrastructure	
Nil										

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

8. Lightning**Table-3.17-Details Lighting Incidents**

Sl. No.	Name of the Block/ULB	Identifiable incidents of Lightning hit in last 5years		No. Of Lightning events	No. fatality/ Deaths	Injured Persons
		No. GPs	No. of Villages/ Wards			
1	Boudh	5	32			
2	Harabhanaga	7	41			
3	Kantamal	8	53			

(List of villages is at TableNo. 3.2 of Volume II of the DDMP)

Major Industrial Establishments/ Chemical & Other hazardous material storage points: NA

There are 11 Rice Mills in the district of Boudh. The list of which are given below.

Sl No	Name of the Unit	Address	No. of Workers
1.	M/s. MaaArnapurna Rice Mill	Kultajore, Block-Kantamal	20
2.	M/s. Om Shanti Paddy Products (P)Ltd.	Majipada, Block-Kantamal	47
3.	M/s. Balaji rice Industries	Tubuda, Block-Kantamal	18
4.	M/s. Sherawali Rice Mills (P) Ltd	Biswanathpur, Block-Harabhanga	30
5.	M/s.Bhabani Rice Mill	Biramchandrapur,Block-Harabhanga	23
6.	M/s. MaaBhairabi Rice Industries	Landibandha,Block-Harabhanga	49
7.	M/s.Ranisati Paddy Processing (P) Ltd	Purunakatak,Block-Harabhanga	38
8.	M/s.Maa Paddy Industries	Laigaon,Block-Harabhanga	40
9.	M/s.Shree Krishna Rice Industries	Rambhikata,Block-Harabhanga	14
10.	M/s.Maa Pahadiwali Rice Mill	Kamaplpur,Block-Boudh	18
11	Gopinath Rice Industries,	Chandan Nagar-Harabha	20

BAKERY:

There is only one small bakery unit in the urban area of Boudh district engaging 3 persons and the unit is running only seasonally for his business.

FLY ASH BRICKS MANUFACTURING:

There are 5 numbers of fly ash brick manufacturing units presently functioning in the district by providing employment to 60 persons. Depending on demand of fly ash bricks, some more units will come up in future.

FABRICATION:

24 numbers of fabrication units functioning in and around of all Blocks and NAC area of the district by engaging 94 persons employment in the said units. There is a huge demand for setting up of such

units in the district and District Industries Centre, Boudh is creating awareness among the peoples of the district for use of iron based furniture, small agricultural implements, desk, benches, shutters, trusses etc. The income of the existing unit is satisfactory.

Besides the above occupations, there are persons who render useful services by engaging themselves in the following occupations.

9. Drought

Table- 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	
				Rainfed Area	Irrigated area	Rainfed Area	Irrigated area
1	Boudh	1043.80		106496	32396	32396	16416
2	Harabhanga	1029.90		125076	250207	250207	18376
3	Kantamal	1418.80		126770	27577	27577	18167
	Total	3492.50		358292	85180	85180	52959

10. Drinking Water Crisis

Table -3.21 –Details of Drinking Water Crisis

Sl. No	Name of the Block/ 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	Boudh	404	53625			0	0	0
2	Harabhanga	347	46983			1	900	0
3	Kantamal	425	56897			1	307	0
		1176	157505			2	1207	0

11. Railway Line Exposed to Different Hazards

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

Sl. No.	Hazard	Length of Railwayline exposed (in Km.)	Location
1	Flood	26km	Harbhanga & kantamal Block area
2	Land Slide	2km	Harbhanga
3	Storm Surge		NA
4	Tsunami		NA

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)
1	Charisambhu	At- Jagati Post- LaxmiPrasad Block- Boudh Dist-Boudh	Centrally Protected	ASI Bhubaneswar		
2	Dambrugada	At- Jagati Post- LaxmiPrasad Block- Boudh Dist-Boudh	Unprotected	District Adm		
3	Nayakpada Gumph	At- Jagati Post- LaxmiPrasad Block- Boudh Dist-Boudh	Unprotected	District Adm		
4	Rameswar Temple	At- Jagati Post- LaxmiPrasad Block- Boudh Dist-Boudh	Centrally Protected	ASI Bhubaneswar		
5	Buddha park	At- Jagati Post- LaxmiPrasad Block- Boudh Dist-Boudh	Unprotected	District Adm		

Table-3.37- Details of Museums in the District

S.No.	Name of the Museum	Location and Address	Type	Category/ Controlling Body (ASI/ Central Government /State Government / Private/ Public Trust/ Privately Managed/ University/ College)	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)
1	District Museum, Boudh	Kacheri Chhak	Small	State Govt.	DM & Collector, Boudh	No such	5000	Good

Chapter-4

Institutional Arrangement

4.1 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.

4.2 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, defence, drinking water supply, environment and forest finance ,health ,Power and rural development ,Science and technology ,space ,telecommunication ,urban development ,water resources and chief of the integrated defence staff are other member of NEC.

4.3 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.

4.4 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

4.5 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.

4.6 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.

4.7 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-74/99-51779/F dated the 28th 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.

4.8 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.

4.9 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*

c) The Chief Executive of the District Authority, *ex officio*;

d) The Superintendent of Police, *ex officio*;

e) The Chief Medical Officer of the district, *ex officio*;

f) 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 DDMA 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.

Figure-4.1-Organogram of District Disaster Management Authority

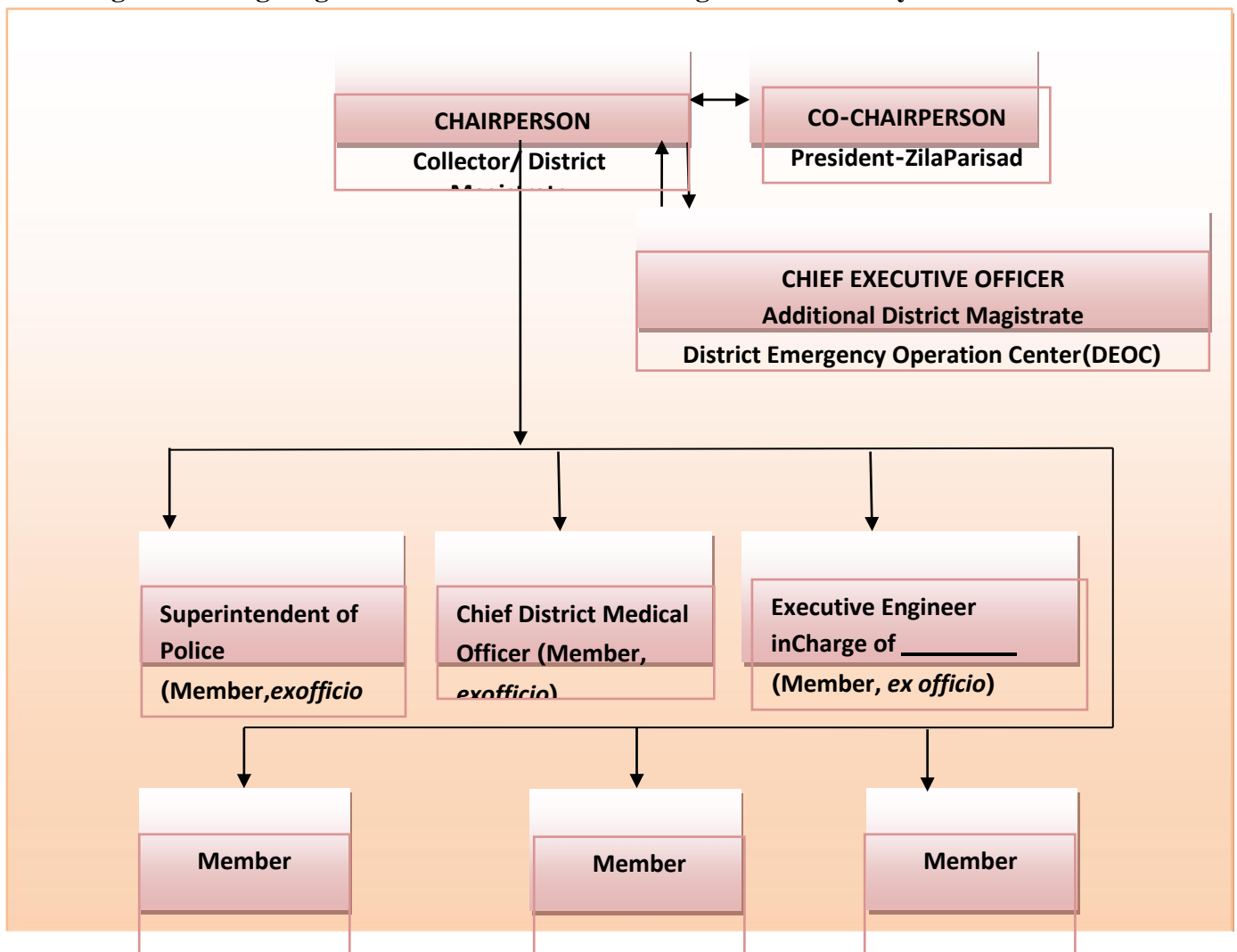


Table-4.1-Structure of District Disaster Management Authority, Boudh as the notification of 12th Nov 2010 by Order of Governor

Sl No.	Name of the Officer	Designation	Position in DDMA	Office	Mobile
1	Sri Lalatendu Mishra	Collector & DM , Boudh	Chairman Ex-Officio	222203	9437965778
2	Smt. Prabhasini Dash	President, ZillaParisad	Co-Chairperson, Ex-Officio	222187	8018342293
3	Sri Gyan Ranjan Mohanty	Supdt. of Police, Boudh	Member, Ex- Officio	222205	9438916690
4	Dr. Abhaya Kumar Dash	C.D.M & PHO., Boudh	Member, Ex- Officio	222478	9439990996
5	Er Khirod Chandra Swain	E.E, Irrigation, Boudh	Member	222096	8249166005
6	Mrs Babitarani Dalabehera	A.D.M., Boudh	Chief Executive Officer	222144	9439401784
7	Dillip Sahu	E.E., R.D., Boudh	Member	222051	9437255317
8	Sri Aswini Kumar Meher	P.D., DRDA,Boudh	Member	222186	9437240669
9	Sri Debaraj Mohanty	CDAO ,Boudh	Member	222056	9437060857

DDMA members with orther invitees member

Sl No.	Name of the Officer	Designation	Position in DDMA	Office	Mobile
1	Sri Lalatendu Mishra	Collector, Boudh	Chairman	222203	9437965778
2	Smt. Prabhasini Dash	President, ZillaParisad	Co-Chairperson, Ex-Officio	222187	8018342293
3	Sri GyanRanjan Mohanty	Supdt. of Police, Boudh	Member, Ex- Officio	222205	9438916690
4	Mrs Babitarani Dalabehera	A.D.M., Boudh	Chief Executive Officer	222144	9439401784
5	Sri Aswini Kumar Meher	P.D., DRDA,Boudh	Member	222186	9437240669
6	Sri Sanat Kumar Nayak	Sub-Collector, Boudh	Member	222030	9439182740
7	Sri Abanikanta Sahoo	District Emergency Officer,	Member Convenor	222023 1077	9861142773
8	Dr. Abhaya Kumar Dash	C.D.M & PHO., Boudh	Member, Ex- Officio	222478	9439990996
9	Dr. Pradeepta Kumar Rah	C.D.V.O, Boudh	Member	223563	9937023370
10	Mr Bibhu Prasan Acharya	C.S.O., Boudh	Member	211151	8018211388

DDMP-2022-2023, Boudh

				222251	
11	Dr.Udaynath Majhi	D.E.O., Boudh	Member	222059	7978238911
12	Mr.Jitendra Kumar Das	Asst.Fire Officer, Boudh	Member	101	9178159005
13	Mr.Debapriya Kampa	D.F.O. (T), Boudh	Member	222073	9437062073
14	Mr. Lachhaman Oram	IC, D.P.O., Boudh	Member	222227	9861142773
15	Rita Baliarsingh	D.I.P.R.O., Boudh	Member	222326	7978960541
16	Amares Patra	R.T.O., Boudh	Member	223586	9437555151
17	Er Brahmeswar Dash	A.E.E, PHD	Member	222880	9853334085
18	Manoranjan Panda	Ex. Officer, NAC, Boudh	Member	222024	9437179577
19	Er. Pravat Kumar Das	S.E., R&B, Boudh	Member	222028	9861290417
20	Dillip Sahu	E.E., R.D., Boudh	Member	222051	9437255317
21	ER Bhanja Kishore Manohari	E.E., RWS&S	Member	223515	8280408035
22	Er Khirod Chandra Swain	E.E, Irrigation, Boudh	Member	222096	8249166005
23	Er.Saroj Kumar Sathua	E.E, M.Irrigation, Boudh	Member	06841 222014	9438518505

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 laid 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 therefore;

- 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 canters or camps in the event of any disaster or disaster like situation and make arrangements for water supply
- n) And sanitation in such buildings and places.
- o) Establish stock piles of relief and rescue materials or ensure preparedness to make such materials available at short notice;
- p) Encourage the involvement of Non Government Organization and Voluntary social –welfare institutions working at the grass root level in the district for disaster management.
- q) Ensure communication systems are in order and disaster management drills are carried out periodically.
- r) Perform such other functions as the State Government or State Authority may assign to

Specific task assigned to members of DDMA by the Chairperson

No such specific task has been assigned to the members of the DDMA. However, at the time of any emergency situation, the Chairperson, DDMA take stock of the severity and importance and accordingly assign tasks to specific members.

4.10 District Level Committee on Natural Calamity (DLCNC)

The provision of Odisha Relief Code envisages the constitution 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

SI No	Name of the Member	Designation	Contact No.
1	Sri Lalatendu Mishra	Collector & D.M., Boudh	9437965778
2	Sri Gyan Ranjan Mohanty	Superintendent of Police, Boudh	9438916690
3	Sri Aswini Kumar Meher	PD DRDA, Boudh	9437240669
4	Smt Babita Rani Dalabehera	A.D.M., Boudh	9439401784
5	Sri Abanikanta Sahoo	Dy. Collector Emergency, Boudh	9861142773
6	Sri Sanat Kuamr Nayak	Sub Collector ,Boudh	9439182740
7	Dr.Abhaya Kuamr Dash	CDM & PH Officer Boudh	9439990996
8	Dr. Praddepta Kumar Rath	CDVO, Boudh	9937023370
9	Sri Pravat Kumar Das	S E (R& B Div), Boudh	9861290417
10	Sri Jogendra Mohapatra	Asst. Director , Horticulture, Boudh	7978410701
11	Sri Debaraj Mohanty	Chief District Agriculture Officer,Boudh	9437060857
12	Er Khirod Chandra Swain	EE Irrigation Division, Boudh	8249166005
13	Sri Prasanta Kumar Tripathy	PD Watersheds, Boudh	9437239611
14	Mr. Nawal Kishore Singh	GM DIC(I/C), Boudh	8763578506
15	Binod Kumar Nayak	District welfare Officer	9438033112 8249886993
16	Dr.Udaynath Majhi	District Education Officer	7978238911
17	Jitendra Kumar Das	A F O, Boudh	9178159005
18	Mr. Lachhaman Oram	DPO,Boudh(I/C)	9861142773
19	Sri Amaresh Patra	RTO, Boudh	9437555151
20	Sri Bibhu Prasan Acharya	CSO, Boudh	9438200036
21	Sudhansu Shekhar Pujhari	DSSO Boudh & DSWO(i/c) Boudh	9437707052

4.11 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 No -4.3 Location of National Disaster Response Forces

SI No.	Battalion, Location	State	Man power drawn from	Contact Person	Contact No.
1	01 Bn, NDRF, Guwahati	Assam	BSF	Mr. S. K. Shastri	0361-2840284 09401048790 09435117246
2	02 Bn, NDRF, Kolkata	West Bengal	BSF	Mr. Nitish Upadhyay	033-25875032 09474061104 09474116775
3	03 Bn, NDRF, Munduli	Odisha	CISF	Mr. M.K. Yadav	0671-2879711 09437581614 9437964571
4	04 Bn, NDRF, Arakkonam	Tamil Nadu	CISF	Ms. Rekha Nambiyar	04177-246594 09442140269 09442105169
5	Bn, NDRF, Pune	Maharashtra	CRPF	Mr. Anupam Srivastava	02114-247000 09422315628 09423506765
6	06 Bn, NDRF, Gandhinagar	Gujrat	CRPF	Mr. R. SJoon	079-23201551 09723632166 09428826445
7	07 Bn, NDRF, Ghaziabad	Uttar Pradesh	ITBP	Mr. P.K. Srivastava	0120-2766618 09412221035 09968610014
8	08 Bn, NDRF, Bhatinda	Punjab	ITBP	Mr. Ravi Kumar Pandita	0164-2246193 0164-2246570 09417802032
9	09 Bn, NDRF, Patna	Bihar	BSF	Mr. Vijay Sinha	06115-253939 08544415050 07762884444
10	10 Bn, NDRF, Vijayawada	Andhra Pradesh	CRPF	NA	0863-2293050 08333068559 0863-2293178
11	11 Bn, NDRF, Varanasi	Uttar Pradesh	SSB	Mr. A.K. Singh	0542-2501101 08004931410 09455511107
12	12 Bn, NDRF, Itanagar	Arunachal Pradesh	SSB	Mr. Angom Kiran Chand Singh	0360-2277106 0360-2277104 09485236141

4.13. 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 through out Orissa. Locations of these units are identified on the basis of vulnerability profile to cut down the response 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 proposed to set up at different locations like

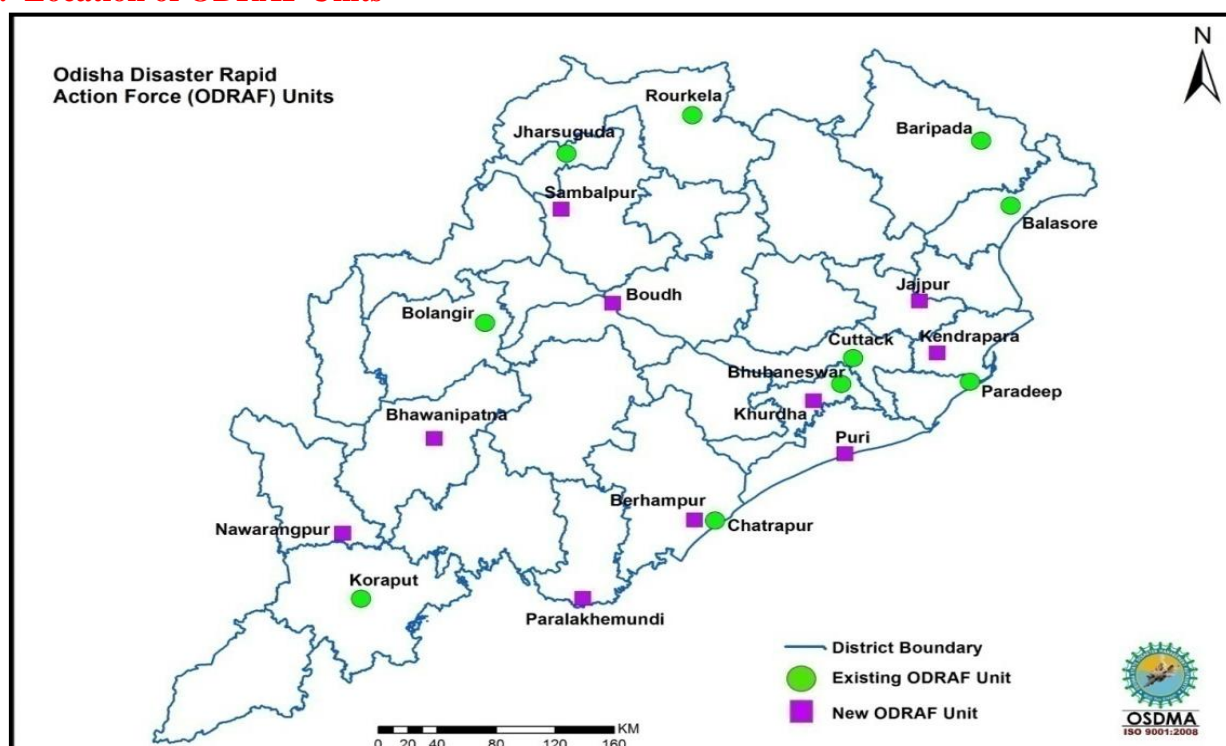
Sambalpur, Boudh, Kalahandi, Nawarangpur, Gajapati, Berhampur, Puri, Khorda, Kendrapada and Jajpur.

Table no -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	4 th IR Battalion, Deogarh	2015-2016	Deogarh	52	Phone: 0664-3242130 (O),comdt4thirbn.odpol@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, Kalanganagar	2015-2016	Jajpur	49	Phone: 0672-6244602 (O)0672- 6244610 (CR) Fax: 0672- 6244610 comdt3rdirbn.odpol@nic.in
16	8th Special IR Battalion, Boudh	2015-2016	Boudh	43	Phone: 06842-2533017 (O),8763616282 (M) comdt8thsplirbn.odpol@nic.in
17	6th IR Battalion, Khurda	2015-2016	Khurda	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

Map: Location of ODRAF Units



4.1 Other Disaster Response Teams in the district

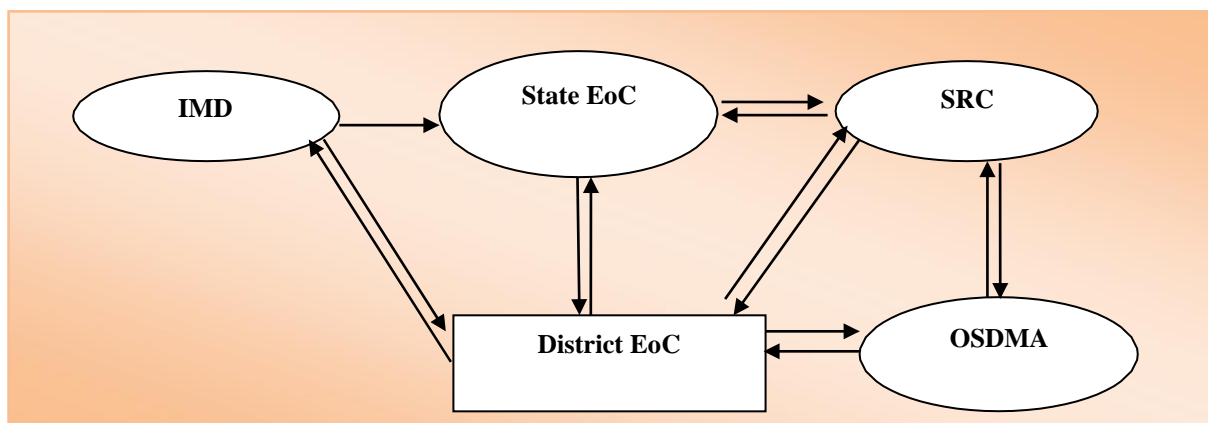
Table-4.5-List of other Disaster Response Teams in the District

Sl. No.	Name of the Institutions	Name of the Chief Coordinator of the Organization	Designation	Contact Number	Alternate Contact Number	Number of Volunteers
	Civil Defense					
2	Home Guards	GyanRanjan Mohanty	S.P.,Boudh	9437192616		215
3	National Service Scheme (NSS)	Mr.Pratap Kumar Rath	ogramme Officer			30
4	National CadetCrops (NCC)	Dr Mahendra Nath Debta	NCC Officer	9437243245		25
5	NehruYuva Kendra(N YK)	Marianus Bailung	Coordinator	9437992855		8
6	Indian RedCross	Abinash Pandia	Dy. Collector cum Emergency Officer	8917201036		30
7	NGOs	Mr. Prabirkumar Das	Secretary, YRCS, Boudh	9437243263		25
8	VOs	Rajendra Meher	YCDA, Dist Level Nodal NGO	9437194954		38
9.	Aapda Mitra	NA				

4.2 Emergency Communication System

4.15.1 State Emergency Operation Centre (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.



4.15.1 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	Operational	NIL	
2	Laser Printer	2	Operational	NIL	
3	UPS	2	Operational	NIL	
4	Scanner	0	Operational	NIL	
5	Fax	0	Operational	NIL	
6	InkJetPrinter	0	Operational	NIL	
7	Multi Utility Machine (Printer,Scanner,Fax, copy)	2	Operational	NIL	
8	Laptop	1	Operational	NIL	
10	LCD Projector	0	Operational	NIL	
11	Photo copier	0	Operational	NIL	
12	GPS Unit	2	Operational	NIL	
13	Satellite Phone	1	Operational	NIL	
14	VHF Sets	1	Operational	NIL	
15	VHF Mobile Station	1	Operational	NIL	
16	Walkie-Talkie(VHF hand Set)	1	Operational	NIL	
17	Portable Diesel Generator	1	Operational	NIL	
18	Inverter with Battery	1	Operational	NIL	
19	Inflatable Tower Light	1	Operational	NIL	
20	Power Saw	4	Operational	NIL	
21	Life Jacket	2	Operational	NIL	

22	Life Buoy	2	Operational	NIL	
23	Aluminum Ladder	0	Operational	NIL	
24	Fire Extinguisher	4	Operational	NIL	
25	Siren	0	Operational	NIL	
26	Megaphone	0	Operational	NIL	
27	Colour TV/Stand	1	Operational	NIL	
28	Mobile Phone	1	Operational	NIL	
29	Display Board	0	Operational	NIL	
30	White Broad	0	Operational	NIL	
31	Computer Table/Chair	2	Operational	NIL	
32	Rack	1	Operational	NIL	
33	Book Case	0	Operational	NIL	
34	GI Trunk	0	Operational	NIL	
35	Commando Search Light	1	Operational	NIL	
36	Steel Almirah	1	Operational	NIL	

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

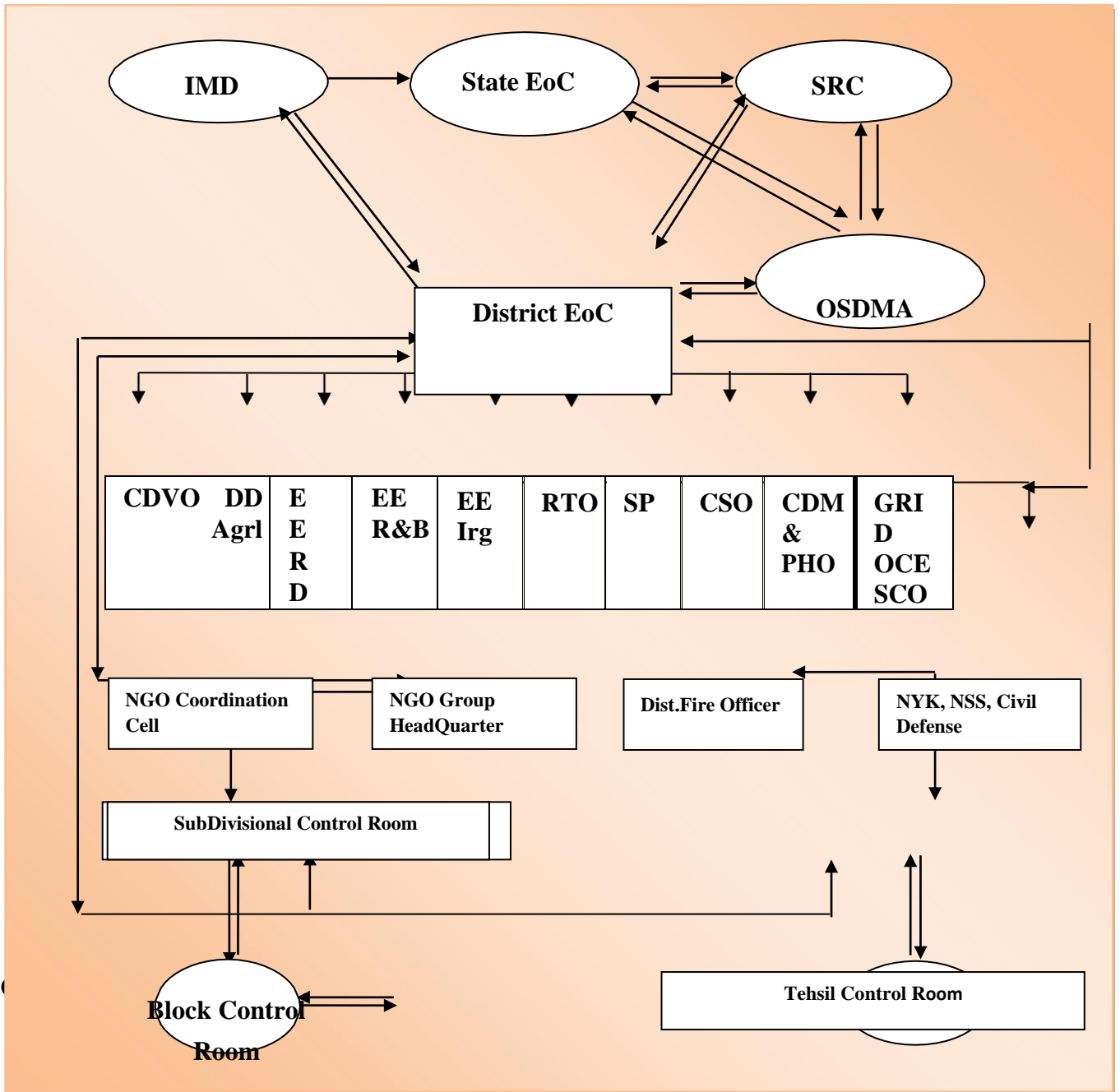
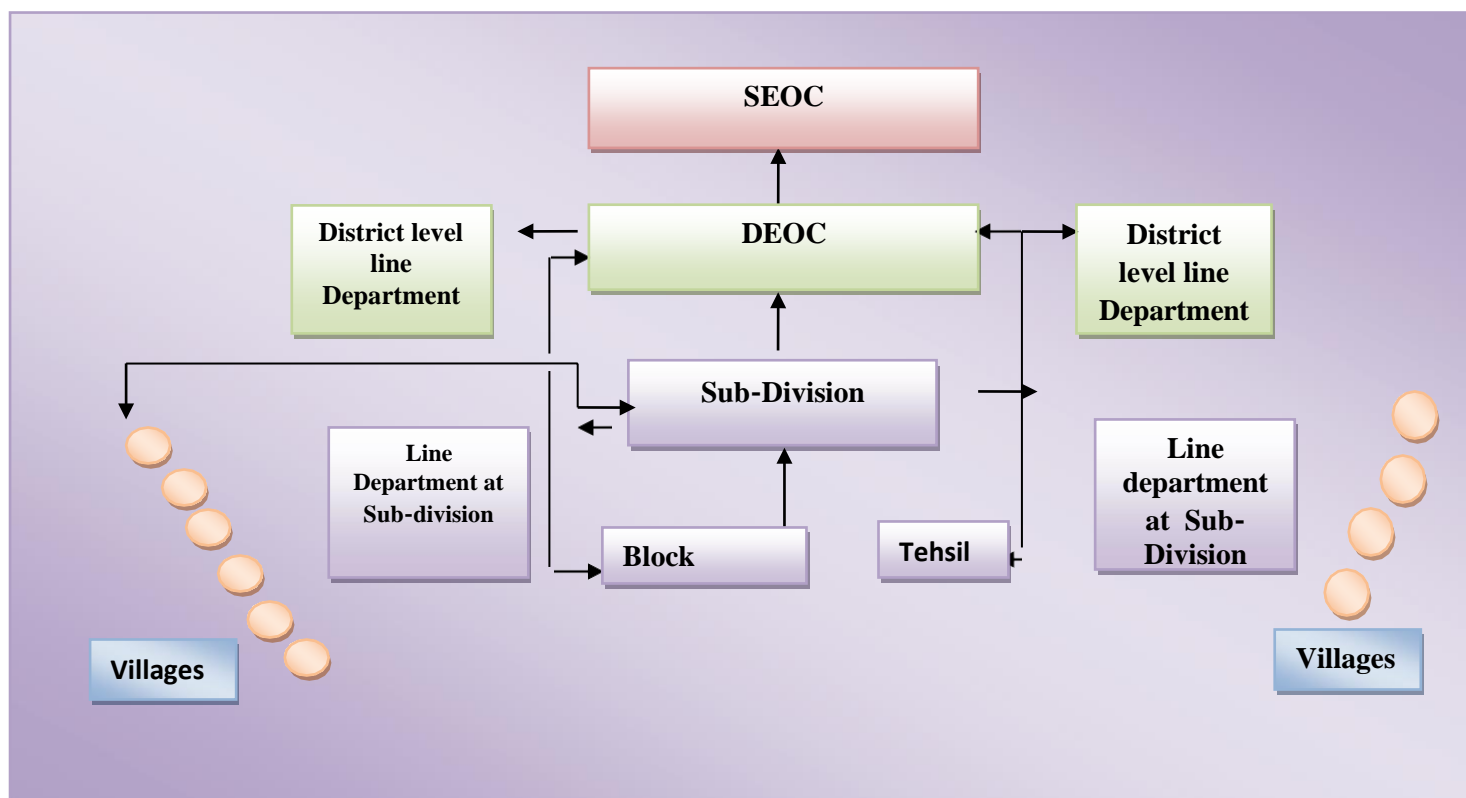


Table-4.7- Important Line Departments at the District.

Control Room Contact Number		
Sl No	Office Name	Control Room Number
1	DEOC, Collectorate, Boudh	06841-222023
2	BDO,Kantamal	9937112128
3	Tahasildar,Kantamal	9178639160
4	BDO,Boudh	06841-222061
5	Tahasildar,Boudh	9040670638
6	BDO.Harabhanga	9438019139
7	Tahasildar,Harabhanga	9439011638
9	E.O,NAC Boudhgarh	06841-222024
10	Irrigation.Estimator	9777795934
11	MI Division	9937206699
12	RWSS	8280408210
13	PHED,AEE	7978943036
14	RD	9438289680 9668274361
15	Assistant Commandant,ODRAF Boudh	6370055324
16	Southco,TPSODL,Boudh	7205350807
17	Boudh Fire Station	06841-222377
18	Baunsuni Fire Station	06841-228400
19	Kantamal Fire Station	06844-277233
20	Charichhak Fire Station	06843-265022
21	R &B Boudh	7609945048
22	IIC Boudh Fire Station	7008031494

Figure-4.5-Information flow chart from Villages to District Emergency Operation Center (DEOC)with out early warning



4.15.2 Block Emergency Operation Center (Boudh)

Control Room Contact Number		
Sl No	Office Name	Control Room Number
1	BDO,Boudh	06841-222061
2	Tahasildar,Boudh	9040670638
3	Irrigation.Estimator	9777795934
4	MI Division	9937206699
5	RWSS	8280408210
6	PHED,AEE	7978943036
7	RD	9438289680 9668274361
8	Assistant Commandant,ODRAF Boudh	6370055324
9	Southco,TPSODL,Boudh	7205350807
10	Boudh Fire Station	06841-222377
11	Charichhak Fire Station	06843-265022

12	R &B Boudh	7609945048
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4.15.1 Block Emergency Operation Center (Harbhanga)

Control Room Contact Number		
Sl No	Office Name	Control Room Number
1	BDO.Harabhanga	9438019139
2	Tahasildar,Harabhanga	9439011638
3	IIC Purunakatak Police Station	9439134686
4	Charichhak Fire Station	06843-265022

4.15.1 Block Emergency Operation Center (Kantamal)

Control Room Contact Number		
Sl No	Office Name	Control Room Number
1	BDO,Kantamal	9937112128
2	Tahasildar,Kantamal	9178639160
3	IIC Kantamal Police Station	7735993650
4	Kantamal Fire Station	06844-277233

Any other Alternative Emergency Operation Center in the district**4.16 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.

- The State Crisis Group shall meet at least once in three months and follow such procedure for transaction of business as it deems fit.
- 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.

4.16.1 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

SI 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

4.16.2 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.

4.17 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

4.17.1 Composition of the District Crisis Group

Table-4.10-Composition of District Crisis Group

Sl No.	Member	Designation
1	Collector & District Magistrate, Boudh	Chairman)
2	Superintendent of Police, Boudh	Member
3	Commandant 5 th IRBN, Boudh	Member

4	Additional District Magistrate, Boudh	Member
5	Superintendent of Excise, Boudh	Member
6	CDM & PH Officer, Boudh	Member
7	GM DIC, Boudh	Member
8	Fire Officer, Boudh.	Member
9	Tahasildar, Harabhanga	Member
10	District Emergency Officer, Boud	Member Convener

4.3 Local Crisis Group

4.18 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.

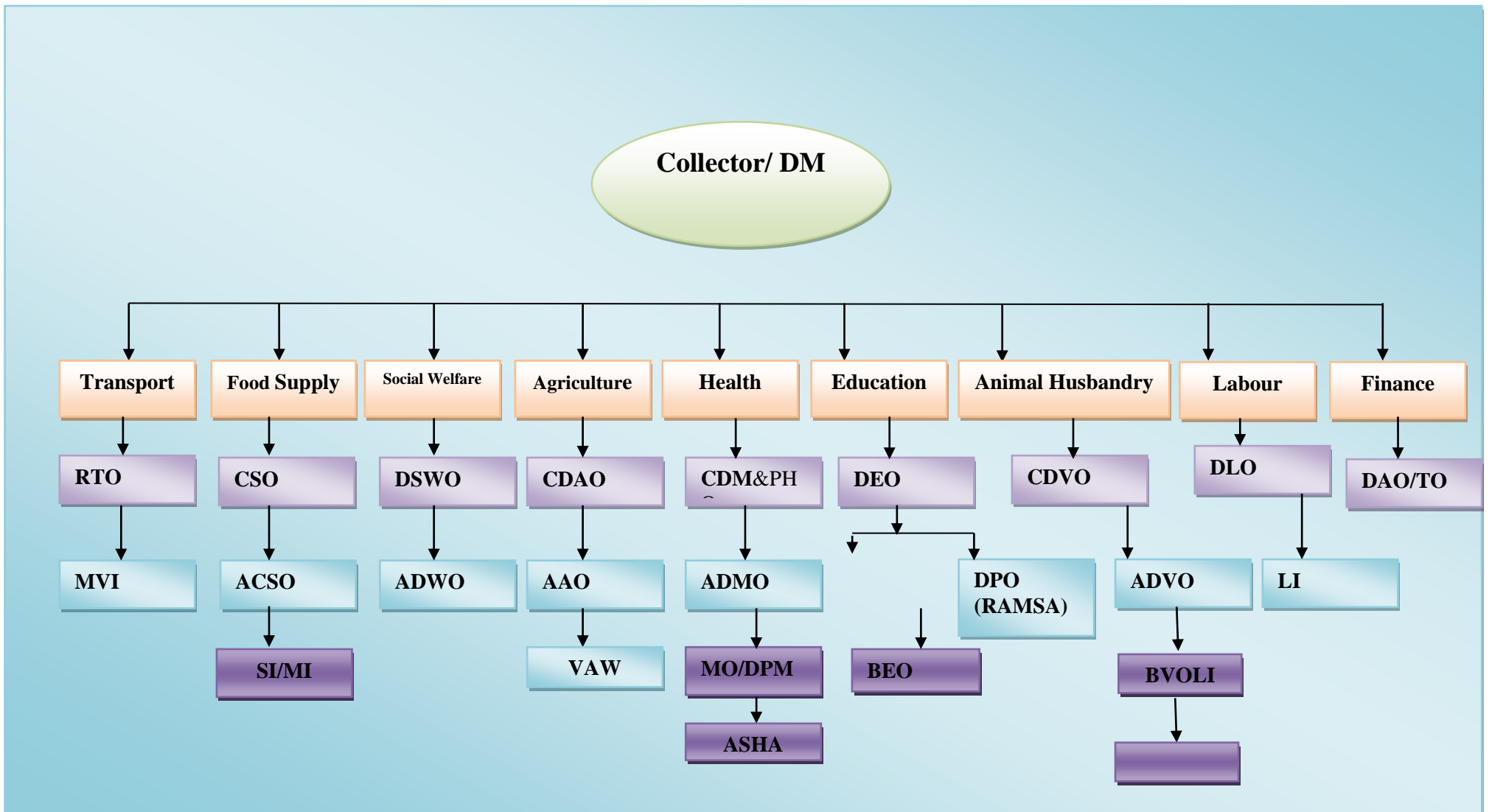
Without prejudice to the functions specified under sub-rule (1), the Local Crisis Group shall,

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.

4.18.1 Composition of the Local Crisis Group

Table-4.11-Composition Local Crisis Group

SI No.	Member	Designation
1	Concern BDO	Chairman)
2	Concern Tahasildar	Member
3	IICof Police station	Member
4	Station Officer ,Fire service	Member
5	SEO Block	Member
6	MI Civil Supply	Member
7	Block level Nodal NGO	Member



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

List of major Bonafide NGO Working in Disaster Managemet and Pandemic Management,Boudh

SI No	Name	Office situated at	Contact Number	Email Id
1	UTSARGA	Jagannath Temple,Boudh	9437188237	utsargaboudh@gmail.com
2	JEEVAN JYOTI	Boudh	9438710924	jeevanjyotiboudh@gmail.com
3	PRANAM	Near BSNL Office,Boudh	9853366605	artpranam@gmail.com
4	LOK KALA BIKAS KENDRA	Sarasara	9437645706	lkbkboudh@yahoo.com
5	PRAGATI	Near Kntamal Police station	7978242533	dbrou60@gmail.com
6	YCDA-Youth council for Development Alternatives	Tikirapada,Baunsuni	9437194954	ycdaboudh@yahoo.co.in
7	Youth Association for Regional Awareness(YARA)	Baghiapada,Boudh	9438710387	chitaranjan.yara@gmail.com
8	Society for Human Resources and Ecological Development(SHED)	Rundimahul,Boudh	8338825825	shedorissa79@gmail.com
9	Bharat swabhiman Trust,Boudh	Chandrachud Temple,Boudh	9178454704	pyorissa.khurda.boudh@gmail.com
10	Mahila Patanjali Yog Samiti	Bagichasahi,Boudh	8917390819	pysmbdh@gmail.com
11	PALLI VIKASH PARISAD(PVP)	Sagada,Boudh	8456956312	pvp_boudh@yahoo.in
12	SURABHI	Baunsuni,Boudh	7978860687	surabhinvo@gmail.com
13	Animal Wealfare forum,Boudh	Butupali,Boudh	9178727156	
14	Gram Vikash Parisad	Amathapada,Boudh	9692032067	gvkboudh@gmail.com
15	Peaceful society	Kusanga,Boudh	9439327197	peaceful2012@reddiffmail.com
16	Palli Seva Sansad	Telibandh,Boudh	9938580723	psstelibandh@gmail.com
17	Gangadhar Meher Society	Boudh	9078443434	indramanimeher1985@gmail.com
18	Marawari Yuba Mancha	Boudh	9178053451	kkagrawalla.atc@gmail.com
19	Biswajivan Seba sangha	Boudh	9938126986	yjss_khurda@yahoo.co.in
20	Youth Red Cross	Boudh	9437243263	ecoprabir1970@gmail.com
21	Association for social work & Social Research in Orrssa(ASWASRO)	Boudh	9439688809	aswasro@rediffmail.com
22	Friendship club	Boudh	9439685876	odishafriendshipclub@gmail.com
23	CHANDRAMA	Jamatangi ,Baunsuni,Boudh	7077084610	chandramabdh1@gmail.com
24	Ambedkar Seva Parisad	Jayadpur JogindraPur.Boudh	9777882171	ambedkarsebaparisad@gmail.com
25	Gram Vikas Kendra	Kantaha,AinlaPali,Baunsuni,Boudh	7077250582	gvkboudh@gmail.com

4.18 Multi-Purpose Flood & Cyclone Shelters (MCS) in the district

Sl. No.	Name of the Block	Name of the GP	Name of the location
1	Kantamal	Kultajore	Kultajore
2	Harabhanga	Harbhanga	Dharmanagar
3	Boudh	Bahira	Bahira
4	Kantamal	Ghantapada	Ghantapada
5	Boudh NAC	Boudh NAC	Boudh NAC

MFCs Ghantapada

Sl.No	Name & Address	Whether ST/SC/GEN/Minor Community(MC)	Occupation	Designation in the Committee
1	Rita Kahar	ST	Sarapancha	Ex-office president
2	Kanhu Ch.Swain	Gen	Ass.AE/JE Block-Kantamal	
3	Debendra Pradhan	OBC	JE RD Sec-2	
4	Dillip ku.Pattanayak	Gen		
5	Radharani ANM	OBC	Govt Representative	
6	Ladu kishor sahu,PEO,Ghantapda	OBC	Govt Representative	Ex-office vice-president
7	Pitabas Panda HM.SSHS	Gen	Govt Representative	Member
8	Jyoshna Sahu,AW	obc	Govt Representative	Member
9	Suryakantai Rana,ASHA	OBC	ASHA	Member
10	Tapana Mahala	OBC	WM	Member
11	Sini Dehury	OBC	WM	Member
12	Champeswar Naga	SC	WM	Member
13	Surakanti Majhi	SC	WM	Member
14	Santoshini Dehury	OBC	V.W.R	Member
15	Fakir Rana	OBC	V.Y.C.R	Member
16	Sesha Mahalik	SC	V.R	Member
16	Birendra ps.Dehury	OBC	V.R	Secretary
17	Amrasingh Rana	OBC	V.R	Member
18	Sarat Barik	OBC	P.D	Member
19	Champeswar Saha	SC	VR	Member
20	Giridhari Kanhar	ST	VR	Member
21	Ahalya Thanapati	OBC	VR	Member
22	Bijayini Mishra	Gen	WVR	Member
23	Kusle Mahala	OBC	VR	Member

MFCS Bahira

Sl.No	Name	Designation	Address and Contact Number
1	Jajatikeshari Mahalik	President & Sarapancha(Bahira)	At-GP.Office,Bahira,Mob-8658118636
2	Alladin Bhoi	Vice-President,J.E.Bahira	At-GP.Office,Bahira,Mob-7751050355
3	Prafulla Kishan	J.E,Rural Development section	DRDA,Boudh,Mob-9438289684
4	Sujit kumar Sahu	R.I,Baunsuni	Vill/Po-Baunsuni,Mob-7681006663
5	Deshbandhu Mahakul	Head Master,Bahira High School	Vill/Po-Bahira,Mob-9778006459
6	Hemalata Kalsai	A.N.M,Bahira	Vill/Po-Bahira,Mob-9439991039
7	Gurubari Sethy	ASHA,Tentulipali	Vill-Tentulipali,Po-Bahira,Mob-9556679924
8	Sana Jagadala	Anganwadi Worker,old Bahira	At/Po-Bahira,Mob-7684897191
9	Banita Sahu	Ward Member,Bahira	At-Old Bahira,Po-Bahira,Mob-8658360445
10	Bedabyas Jhankar	Ward Member,Bahira	At-Old Bahira,Po-Bahira,Mob-7735228806
11	Lokanath Mahananda	Member	Vil-Tentulipali Po-Bahira,Mob-7894034254
12	Manaranjan Sethy	Member	Vil-Tentulipali Po-Bahira,Mob-7077370069
13	Sarad Urma	Member	Vil-Tentulipali Po-Bahira,Mob-9668807658
14	Ashok Sethy	Member	Vil-Tentulipali Po-Bahira,Mob-9777189371
15	Chittaranjan Khatua	Member, Youth Club,Bahira	Vill/Po-Bahira,Mob-9937085052
16	Namita Rana	Member,SHG	Vill-Old Bahira,Po-Bahira,Mob-8455038440
17	Priyatama Sethy	Member	Vill-Tentulipali,Po-Bahira,Mob-7077370069
18	Bhagirathi Bhukta	Member,Sc & ST	Vill-Tentulipali,Po-Bahira,Mob-7735980089
19	Shesadeba Sahu	Member	Vill-Old Bahira,Po-Bahira,Mob-8658360445
20	Biswamitra Garada	Member	Vill-Tentulipali,Po-Bahira,Mob-7684873570
21	Pramod Barik	Member	Vill-Old Bahira,Po-Bahira,Mob-9937877495
22	Prasant Banchhor	Member	Vill-Tentulipali,Po-Bahira,Mob-6372225406
23	Jeet Naik	Member	Vill-Old Bahira,Po-Bahira,Mob-7077681433
24	Brahma Mahanandia	Member	Vill-Tentulipali,Po-Bahira,Mob-9178866120

25	Nilakara Behera	Secretary	Vill-Tentulipali,Po-Bahira,Mob-9178866120
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MFCS Kultajore

Sl.No	Name & Address	Whether ST/SC/GEN/Minor Community(MC)	Occupation	Designation in the Committee
1	Chumki Bhoi	SC	Sarapancha,Kulatajore	Ex-office president
2	Lalita Majhi,JE,Kantamal	ST	Govt Representative	Member
3	Hemanta Rana	OBC	Govt Representative	Member
4	Bhimsen Nag,Amin	SC	Govt Representative	Member
5	Nandini Pradhan,ANM	ST	Govt Representative	Member
6	Nabaghana Pradhan,PEO,Kultajore	ST	Govt Representative	Ex-office vice-president
7	Barun Putel,HM,Chapara school	OBC	Govt Representative	Member
8	Sukanti Putel,AWW	OBC	Govt Representative	Member
9	Pramila Rana,ASHA	OBC	Govt Representative	Member
10	Bijeram Kalse	OBC	Ward Member	Member
11	Nabaghan Putel	OBC	Ward Member	Member
12	Rama Rana	OBC	Ward Member	Member
13	Gyanabanti Thela	OBC	SHG Representative	Member
14	Renuka Rana	OBC	VW	Member
15	Fakir Tadi	OBC	Village youth club representative	Member
16	Mahendra Rana	OBC	VR	Member
17	Sudhanshu Rana	OBC	VR	Member
18	Bhibe Rana	OBC	VR	Member
19	Makunda Rana	OBC	People with Disability	Member
20	Keshab Dehury	SC	Village SC Representative	Member
21	Lingaraj Dharua	ST	Village ST Representative	Member
22	Golaphula Rana	OBC	Village Women Representative	Member
23	Jayanti Rana	OBC	Village Women Representative	Member
24	Premraj Rana	OBC	Village Representative	Member

MFCS Dharam Nagar

Sl no	Name		Designation
1	Sakuntala Behera		President/Sarapanch
2	SambhuPrasad Mishra		Tahasildar

3	Shyam Prasad meher		MO
4	Arjun Gadnayak		Asst Engineer/Block
5			Asst Engineer/DRDA
6			Revenue Inspector
7			ANM
8	Jagdish Mallik		PEO
9	Muralidhar Rana		HM
10	kanchan behera		AWW
11	Amar Nayak		W member
12	Soudamini Majhi		W member
13	Labakishore pallia		Secretary
14	Pratap Kumar Singh		Member
15	Saroj Kuar bhokta		Member
16	pradeep kumar Bhoi		Member
17	Bhikari Parta		Member
18	Satya Prasad trpathy		Member
19	Prasanta sahu		Member
20	Abhimanyu Singh		Member
21	Aruna Khatua		Member

Table-4.13-Details of CSMMC

Sl No.	Name of the MCS	Location	Name of President	Contact No.	Name of Secretary	Contact No.
1	Kultajore	Taparna	Chumki Bhoi	7978299697	Sudhanshu Rana	
2	Dharmanagar	Dharmanagar	Sakuntala Behera	9938170570	Labakishore Palia	9668013726
3	Bahira	Bahira	Jajatikeshari Mahalik	9178060389	Nilakara Behera	9178866120
4	Ghantapada	Ghantapada	Rita Kanhar	7749985501	Birendra ps.Dehury	

Table-4.14-Details of Equipment provided to MCS

Sl No.	Name of the MCS	Location	Equipment Provided	Status		Remarks
				Operational	Non-Operational	
1	Kultajore Dharmanagar Bahira Ghantapada	Taparna	Generator Set- 1 Set	✓		
2			AskaLight	✓		
3			Chain Saw	✓		
4		Dharmanagar	Life Jackets (MMD & SOLAS Approved)	✓		
5		Bahira	Life Buoy (MMD & SOLAS Approved)	✓		
6		Ghantapada	Nylon Rope- 12 mm Dia	✓		
7		Ghantapada	Manila Rope – 6 mm Dia	✓		

8		Sisal Rope (Cord)- 6 mm Dia	✓		
9		Telescopic Aluminum Ladder- 30 ft	✓		
10		Florescent Jackets	✓		
11		Mass Kitchen Utensils- 22 items	✓		
12		Notice Board with chicken Net covering and Locking	✓		
13		Dari	✓		
14		Black Board	✓		
15		Plastic Chair	✓		
16		Solar Lantern with Charger	✓		
17		Siren	✓		
18		Hand Held Megaphone	✓		
19		Black Board	✓		
20		Plastic Chair	✓		
21		Solar Lantern with Charger	✓		
22		Siren	✓		
23		Hand Held Megaphone	✓		
24		Black Board	✓		
25		Plastic Chair	✓		

Chapter-5

Prevention & Mitigation Measures:-

Ways & Means to reduce the impact of various disasters:

Early warnings can be issued for the disasters like; floods, heatwave and sometimes for whirlwind. But it is always advisable to take preventive & mitigation measures in taking the vulnerability conditions to different kinds of hazards. The concepts of prevention, mitigation and preparedness are often used interchangeably. However, these three concepts and their practices are very different.

Prevention consists of actions that reduce risk from natural or manmade disaster incidents. It is a measure to lower the probability of a scenario from happening. Preventive action plan measures has been prepared & discussed in DDMA meeting before heatwave situation and before occurrence of monsoons to prevent flood situations. As per Para 27 of Odisha relief code the district level committee on natural calamities held in May & November of each year. Instructions also issued to various departments at the District level to take preventive measures and follow the disaster wise action plans.

Mitigation measures lower the severity of the consequence. Any action taken to minimize the extent of a disaster or potential disaster is known as Mitigation measures. Mitigation embraces all measures taken to reduce both the effect of the hazard itself and the vulnerable conditions to it in order to reduce the scale of a future disaster. Therefore mitigation activities can be focused on the hazard itself or the elements exposed to the threat. So Mitigation can take place before, during or after a disaster, but the term is most often used to refer to actions against potential disasters. Mitigation measures are both structural & non-structural.

The District Administration has already taken steps in providing instructions to the line departments and Block Administrations to take adequate and emergent action at all levels as mitigation measures. They also have been instructed to ensure the completion of the related activities by the stipulated time frame, before disaster season. Also every department has been advised to take development action plans with following the DRR measures. A proper preparedness, Prevention and mitigation measure instantly helps to respond a disaster in time.

Floods

From the Past history it is seen that flooding frequency is quite frequent in three Blocks of this district. So enforcement of flood zone regulations need to be done to prevent any type of constructions within 200m of river banks following the DRR principles. Engineering solutions like

building of flood embankments, small dams, channels may be considered for specific localities.

Persons living in the low-lying parts of flood areas are more vulnerable to flood hazards. So their safety & security and evacuation at the time flood times should be prioritie

Some aspects of flood planning and preventive measures to be taken:-

- Strengthening coordination mechanism of different line departments of this district.
- Issuing warnings to the community level and receiving the status back for prompt action.
- Focus on capacity building of local youths on preventive & rescue measures.
- Embankments or clear debris from drainage areas, pile sand bags
- Stock pile needed materials
- Facilitating agricultural recovery
- Planning emergency supplies of flood and clean drinking water
- To conduct trainings on search and rescue for Search and Rescue
- Teams formed at District, Taluka and Village level from time to time.
- There is need for trained full time fire brigade personnel in each municipality who will help in search and rescue.
- The health department needs to be equipped with more water quality monitoring centres for effective surveillance of water quality during flood events & stock of lave saving medicines and snake bite medicines.
- Provision of wireless communication equipment to all Tehsil offices so that
- Information about approaching cyclone can be relayed immediately.
- Involving NGOs supports to cooperate in taking preventive measures
- Ensuring the maintenance of Flood shelter centres and readiness of materials before disaster situations.
- Reviewing the Height of the embankment points identified for repair of the vulnerable/ affected points.

Heat Wave situations

Day by day the Heat wave situations are going to alarming in the District. The temperature goes up to 46 degree in Boudh. Hence, preventive measures are inevitable otherwise the situations will become worse. Keeping on view of Heat wave situations & water crisis the following preventive measures has **taken at District level.**

Conducting preparatory meeting of DDMA before begging of Heat wave situations to tackle any kind of unforeseen situations.

Separate Staffs Deployed to monitor complaints / grievances & News Paper Clippings relating to Water Scarcity and Heat wave problems.

DDMP-2022-2023, Boudh

- Review on News Paper Clippings on Drinking Water Issues & Heat wave Situation of the District & Asked to Concerned officers / authorities for submission of Action Taken Reports.
- The positions reviews in GP, Block & District level MIS meetings & instructed to supply water through tankers where necessary.
- Heat wave action Plan of Govt of Odisha circulated to all BDOs & Tahasildars for follow up & reviews.
- Daily Reporting system is being operational from O/O CDMO regarding heat wave situations & treatment of patients.
- The department of RWSS is taking care of the repairing, restoration and installation of tube-wells to avoid any water shortage. They are also providing water through tanker to those villages where water shortage is reported.

Instructions also issued

- To EE, RWSS for Immediately Repair Non functional Tube wells & non functional Pipe water Schemes of the District.
- To SE ,WESCO regarding solve the Electricity problems relating to Pipe water supply & ensure uninterrupted power supply for the Drinking water supply units, School hostels & uninterrupted power supply to people aside the reason of non-payment of dues specially in the Heat wave periods.
- Opening of Jalachhatras in public gathering places by the BDOs & EO of ULBs
- Keeping ready of Heat wave beds for Sun stroke patients and stock & supply for life saving medicines and ORS packets till ASHA and AWC level by the CDMO.
- Instructed to the CDVO for taking necessary arrangement for construction of vats near tube wells and sanitary wells for drinking water of animals.
- Instructed to Fire Officer to keep more alert to address any unforeseen situations during summer
- Instructed to RTO, DEO, DPC SSA, DWO, DSWO, and DLO for change of timings of schools, working hours etc & keep ready of sufficient drinking water & ORS packets in public transport services.
- Requested to DIPRO for publicity of Awareness messages of Do & Don't and submission of news in any news papers relating to Water scarcity & heat wave situation for compilation & action taken report at our level.

Drought

- Kharif season is from April to September, the district experienced rainy season from June to September. The rainfall is normally uniform throughout the district except Kantamal Block which usually gets low rainfall compared to other Blocks of the district. The district has

received 1164.17mm rainfall during the year 2016. There are no major irrigation projects in the district. Only medium irrigation projects, minor irrigation projects & some lift points and some small irrigation structures provide irrigation facilities to cultivated area during Kharif season. In most of the years, the district has experienced temporary/ long dry spell or flood situation in some parts of the district due to inadequate/heavy rainfall. So the agricultural operation mostly depends on the behaviour of monsoon. The quantum of the rainfall along with its distribution spreading over the district influences the cropping pattern.

- The farmers used to cultivate paddy in all categories of land that is up, medium and low land in the Kharif season. As the result of inadequate rainfall and its erratic in nature, the crop raised in the sloppy and unbounded upland suffers moisture stress temporarily during different stages of crop growing periods. Under prolonged dry spell situation, there is no possibility to take up second alternate crops in those lands. Depending upon the situation the Agricultural Deptts taken some mitigation measures like
- Conducting Planning meeting before the beginning of agricultural situations.
- Reviewing the functioning of irrigation facilities
- Providing instructions for adopting the suitable cropping patterns fore casting the drought situations.
- Drought control rooms also being operational in the office of DDA & DAO offices as a preventive measure to provide support to the farmers.
- Provisioning alternative water source like; lift and minor irrigation to provide life saving irrigation to avoid draught like situation due to crop loss.

Fires:

- Fires services should be remain more alert in all the periods and especially in summer & rainy seasons so as reach in time to prevent the severe disaster situations.
- Land line number of all the Fire offices circulated to all the Block & Tahasils for direct contact during emergencies instead of dialling the number 101 to save time.

Lighting:

- Community awareness to be done so as to avoid outside visits during lighting times. Agricultural workers are more vulnerable to lighting and they should be remaining more alert in the time of lighting.

Common Preventive measures could be:

- Apart from the Disaster wise situations there are some of the preventive measures taken by the District administration in each year.
- Establishment of Control Rooms at District, Blocks level in Various Departments & line department offices

- Plan updating in each years
- Strengthening Communication system
- Formation of Team members & their capacity Building
- Organising mock Drill
- Community awareness on Various Disasters
- The following are the some of the categories of Structural & Non structural measures taken in the Districts towards Prevention & mitigation measures.

Non-structural Measures:

Sl. No.	Name of the Department/ Office	Activity/ Project	Starting date	Date of completion	Cost	Funding source
1	Dist. Administration	District level Meeting on precautionary measures Heat wave	30.05.20	30.05.19	--	--
2	Dist. Administration	Organising meeting for NGO selection for VDMP preparation	04.06.20	04.06.19	--	--
3	Dist. Administration	Dist. Level Meeting on COVID-19	March 2021			
4	BDOs/ ULBs	Opening of Jalachhatra centres	April	June	--	
5	Dist. Administration	Dist. Level Meeting & Heat Wave	April			
6	Dist. Administration	Dist. Level Natural Calamity Committee Meeting	28.05.2020			
7	Dist. Administration	Dist. Level Meeting for preparation of Dist. Disaster Management Plan 2020	30.05.2020			
8	Dist. Administration	Dist. Level Meeting for Locust Attack	June 2020			
9	Dist. Administration	Dist. Level Meeting for Preparation of Mock Drill 2020	18.06.2021			
10	Dist. Administration	Block Level Meeting for Preparation of Mock Drill 2020 (Table talk Exercise)	19.06.2021			
11	Dist/ Block/Shelter	Organizing Mock Drill (virtual mode)	19.06.2021		0	

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 closeto localities and critical infrastructure
- Public safety norms and constructions in places of worship and mass gathering
- Soil erosion control and river bank stabilization
- Road and Highway Stabilization

- *Bridge abutment stabilization*
- *Protection of Roads, Culverts and Bridges against flood- grassplantation*
- *Repair and Maintenance of Embankments against flooding and erosion. Retro fitting of vulnerable spots to prevent embankment breaches*
- *Cross Drainage Works: - Construction of cause ways and culverts sufficient for carrying water more than historical records to prevent flashfloods in downstream villages*
- *Drinking Water:*
 - *Habitations to be covered under pipe water supply scheme*
 - *Water supply inscarcy areas in during summer season*
 - *Raising of hand pumps in floodprone areas*
 - *Repair/Replacement of non-functional handpumps*
- *Sanitation:*
 - *Community Mobilization*
 - *Construction of Toilets*
 - *Municipal Waste Management*
 - *Sewerage System in ULBs*
- *Plantation: Riverbank 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/live stock insurance*
- *Measures against animal depredation- Trenching/Fencing*
- *Awareness generation programmes on disaster prevention and mitigation*
- *Main streaming Disaster Risk Reduction(DRR) in development activities*

Chapter–6

6.1 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, oceanwarming, ocean acidification, sealevelrise, decreasing seaice, 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.

Green House Gases (GHGs) are trace gases in the atmosphere that absorb and emit long wave radiation. They naturally blanket the earth and hapter keep it at about 33° C warmer than it would be without these gases in the atmosphere. The table features the seven most important green house 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. CO₂, CH₄ and N₂O) 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, SF₆ and NF₃).

Table: 6.1

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

6.2 Important Green house Gases: Carbon Dioxide(CO₂)

Most important greenhouse gas (contributes ~64% to total radiative forcing by long-lived GHGs). Half of CO₂ 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 (CO₂). 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. CO₂ 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 sequesters of carbon i.e. sinks that can absorb CO₂ 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 *CO₂ equivalent emissions*.

6.3 Important Green house Gases: Methane(CH₄)

7 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.

8 The second most significant anthropogenic GHG is methane (CH₄) 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, land fills 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.

8.1 Important Green house Gases: Nitrous Oxide(N₂O)

. 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 N₂O are fertilizer production and use in agriculture and various industrial processes. It is estimated that N₂O 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	Fertilizer /Industrial processes	Annual Usage (In tonnes)	Ranking as per N2O Emission (PPM)	Other Major Pollutants emitted (PPM)	Action Taken for cutting down émission
NIL						

8.2 Important Green house 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), per fluoro carbons (PFCs), and sulfur hexa fluoride (SF₆). 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 (SF₆).

- Hydro fluoro carbons (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.
- Per fluoro carbons (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 (SF₆) is used mainly as an insulating gas, in high voltage switch gear and in the production of magnesium and aluminium.

- Hydro fluoro carbons (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 aerosolsprays.
- Per fluoro carbons (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 hexa fluoride (SF₆) is used mainly as an insulating gas, in high voltage switch gear 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)
1	Boudh Distillery Private Limited	Titerikata, Rambhikata, Harabhanga, Boudh, Odisha	Co ₂ -10.7 So ₂ -180 Nox-147 Co-68	

8.3 Important Green House Gases: Chloro fluoro Carbons (CFCs)

Chloro fluoro carbons (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, chloro fluoro carbons (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
1	Boudh Distillery Private Limited	Titerikata, Rambhikata, Harabhanga, Boudh, Odisha	Co ₂ -10.7 So ₂ -180 Nox-147 Co-68		

8.4 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 Green house Gases Contributors (Anthropogenic) to Climate

ChangeTable: 6.7

Green house Gas	Human Source(Examples)	% of Total Global GHG Emissions (2010)
Carbon dioxide (CO ₂)	Fossil fuel combustion, land use changes, Cement production, etc	76%
Methane(CH ₄)	Fossil fuel mining/distribution, livestock, Rice agriculture, land fills, etc	16%
Nitrous oxide(N ₂ O)	Agriculture(fertilisers) and associated Land use change, etc	6%
Hydro fluoro carbons (e.g. HFCs)	Liquid coolants, etc	<2%
Per fluoro carbons (e.g. PFCs)	Refrigerant, electronics industry and Aluminium industry, etc	<2%
Sulphur hexa fluoride (SF ₆)	Insulator in electronics and magnesium industry, etc	<2%
Nitrogen trifluoride (NF ₃)	Electronics and photo voltaic 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 CO₂ 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 CO₂ 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 CO₂ 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

8.5 Details of forest as a major Carbon sink (District) Table:6.8

Reserved Forest /Protected Forest(inSq.KM)	Revenue/Village Forest (inSq.KM)	Private owned Forests (inSq.KM)	Others (If any) (in Sq.KM)	Total (in Sq.KM)
Reserved forest(42nos)-924.77 Prposed reserved forest (6nos)-24.7511 Un-demarceated protected Forest(UNPF)9893Nos)-249.3362	Revenue Forest-12.66 Village Forest(135nos)-11.925	NIL	Unclassed forest1.02	1224.623

8.6 Sectors with High Mitigation

Potential Table :6.9

Sl No	Sectors	Mitigation Options
1	Energy	<ul style="list-style-type: none"> • Use of renewable heat and power(hydropower,solar, wind,geothermal and bio-energy) • Improved supply and distribution efficiency • Carbon capture storage (CCS) • Combined heat and power
2	Transport	<ul style="list-style-type: none"> • More fuel-efficient vehicles • Use of alternative energy sources(biofuels, cleaner diesel,etc.) • Better land-use and transport planning • Shift from individual transport to public ransport systems • More efficient driving practices • Non-motorized transport (cycling,walking)
3	Industry	<ul style="list-style-type: none"> • Process-specific technologies that improve efficiency and reduce emissions • Material recycling and substitution • Heat and power recovery/cogeneration • Control of green house gas emissions
4	Agriculture	<ul style="list-style-type: none"> • Manure and livestock management to reduce CH₄ emissions • Improved fertilizer application techniques to reduce N₂O emissions • Improved crop and grazing land management to increases oil carbon storage • Restoration of cultivated peaty soils and degraded lands • Agro-forestry practices
5	Forestry	<ul style="list-style-type: none"> • Reduced deforestation • Afforestation/reforestation • Forest management • Tree species improvement to increase biomass productivity and carbon sequestration

6	Waste	<ul style="list-style-type: none"> • Landfill methane recovery • Waste incineration with energy recovery • Composting of organic waste • Controlled waste water treatment • Recycling and waste minimization • Biocover sand biofilters to optimize CH₄ oxidation
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8.7 Sector Specific Climate Change mitigation Projects:

Table: 6.10

Sl No	Sector	Project Title	Period		Mitigation Targets
			From	To	
1	State sector	Afforestation activities	2017	2018	168
		The afforestation drive has been carried out in this division to sequestered maximum quantum of atmospheric carbon. Thus helping increases in the carbon pool as trees are the best source of carbon sink. The figure for the last five years is furnished herewith.	2018	2019	2444.63
			2019	2020	1206.25
			2020	2021	1895.99
			2021	2022	1413
Total afforestation (in Ha)		7127.87			
2		Forest fire fighting	2017	2018	694.5
		Massive fire fighting measures have been initiated to minimize the carbon release to the atmosphere through forest fire. The figure for the last five years is furnished.	2018	2019	318
			2019	2020	260
			2020	2021	629
			2021	2022	700
Total forest fire fighting by creation & maintenance of firelines (in km)		2601.5			

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

Chapter7

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.

7.2 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 is 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

7.3 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.

7.4 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.

7.5 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, and 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

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 Institutions:-

Implementation of School Safety Policy Guidelines 2016()

8.1 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

State & District Level	School Level:
<ul style="list-style-type: none"> • Policy for safety audits in all schools • 'Stability certificate' by Government-certified engineer. • Manual for fire safety procedures and other safety precautions • The National Building Code of India, 2005, to construct fire-safe buildings. (Revised 2016) 	<ul style="list-style-type: none"> • 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. • Fire insurance coverage should be made mandatory for all schools. • Ensuring that the kitchen in the precincts of the school has adequate safety mechanisms.

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*

8.2 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.

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 well being 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 approach.
- 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 approach

- School Safety efforts needs to take cognizance of all kinds of hazards that may affect the well being 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, and 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 equipments 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).
- Non structural 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).

8.1 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				
Boudh NAC	0	7	0	2	0	1	8	4

Boudh	203	0	13	0	2	8	20	6
Harabhanga	183	0	15	0	1	7	13	2
kantamal	221	0	16	0	5	11	22	5
	607	7	44	2	8	27	63	17

8.2 School Safety Advisory Committee(District)

1. Date of Formation:-04.07.2018
2. Institutional Architecture

Table-8.2

Sl No	Name & Designation	Contact No.	Email ID	Remarks
1	Collector & District Magistrate Boudh ,Chairperson	9437965778	dm-boudh@nic.in	
2	Superintendent of Police, Boudh Co-Chairperson	9437192616	Spboudh.orpol@nic.in	
3	District Education Officer ,Boudh Member Convener	9583987151	deoboudh06@gmail.com	
4	District Project Coordinator SS, Boudh Member	9583987151	dpcssaboudh@nic.in	
5	District fire Officer, Boudh, Member	7978734820	boudhfirestation@gmail.com	
6	District welfare Officer, Boudh, Member	8249886993	dwboudh@gmail.com	
7	District Social welfare Officer, Boudh, Member	9437367001	dswoboudh@nic.in	
8	CDM & PHO Boudh member	9439990996	dsuboudh@gmail.com	
9	Executive Engineer, RWSS/PHD ,Boudh Member	9439990996	rwssboudh@gmail.com	
10	District Emergency Officer, Boudh,Member	8917201036	emergencyboudh@gmail.com	
11	PanchayatRaj Officer, Boudh ,Member	9861142773	dpo.od-bou@nic.in	
12	Principal ,DIET,Boudh, Member			
13	Block education Officer ,Boudh, Member,	9437978466	beoboudh01@gmail.com	

8.3 Details of School Safety in the district Table-8.3

Sl No	Activity	Total School	Achieved				
			Boudh	Harabhanga	Kantamal	NAC	Total
1.	Schools having School Safety Advisory Committee(Number)	775	252	221	280	22	775
2.	Schools having Scholl Disaster management Plan(Number)	775	252	221	280	22	775
3.	Schools having conducted Safety Audits(Structural) (Number)	775	145	123	173	22	463
B .	Safety Audits (Non-Structural)(Number)	775	211	197	237	22	667
4.	Schools having conducted Annual Mock Drills(Number)	775	184	132	143	13	472

5.	Schools Having Fire Extinguisher(Number)	775	252	221	280	22	775
6.	Schools Adhering to safety norms in storing inflammable & Toxic Material(Number)	775	252	221	280	22	775
7.	Schools confirming safety standards as per local building bye-laws (Latest)(Number)	775	252	221	280	22	775
8.	Schools having issued Recognition certificate under sub-Rule(4)-Rule15 of RTE rules 2010(only to schools that comply with Structural safety norms) (Number)	80	13	12	15	4	44
9.	Schools where students & teachers under go regular training on School Safety & Disaster Preparedness (Number)	775	216	198	237	9	660
10	Schools where disaster management is being taught as part of the curriculum(Number)	775	216	198	237	9	660

8.4 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.]]Disa

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 mockdrills for fire/earthquake etc.	775	July 2021 to August 2021	
2.	Preparation of School disaster management plan	775	Completed	

8.5 Details of Child Care Institutions Table-8.5

Sl No	Block /ULB	Name and Address of the Organization	Boys	Girls	Total NoofChildren	Name and Contact no. of the Shift-in-Charge	Fire Safety Equipment (Fire Extinguisher, Alarm)	Staff Trainingon Fire Safety Equipment	Near by open space forevacuation	Alternative Shelter/sI identified
1	NAC Boudh	0								
2	Boudh	0								
3	Harabhanga	Ramkrushna balashram	29	36	65	Sri Nabin Baghar	Yes	No		NA

DDMP-2022-2023, Boudh

		,Birnarsinghpur								
		Harvest blessing Home ,Sabagbar,Butupali,Boudh	8	0	08	Sri Ananta Suna	yes	No		NA
4	Kantamal	0	0	0	0					
			37	36	73					

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. Levels 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, Jhasruguda, 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 essentials 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 is required to be fulfilled and be updated every year in the District Disaster Management Plan of the District.

9.1 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
Boudh Distillery Private Limited	Large.	Extra Neutral Alcohol & 60 KLPD .	Titerakata , Rambhakata , Harabhanga, Boudh, Odisha.	Latitude : 20°41'51.23"N; Longitude : 84°23'17.38"E	Mr. Sanjay Rathi	Unit Head.	Sanjay.rathi@boudhdistillery.com	7328834900

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
Boudh Distillery Private Limited	Extra Neutral Alcohol (ENA)	Flammable	60 KL	Above Ground	Cylindrical	Vertical	Fire /explosive	YES	230 meter	35 meter	
1	Ethanol	Flammable	15 KL	Above Ground	Cylindrical	Vertical	Fire /Explosive	YES	300 meter	60 meter	
2	CO2	Toxic	20 Ton	Above Ground	Cylindrical	Vertical	Toxic	YES	590 meter	0 meter	
3	High Speed	Flammable	600L	Above Ground	Plastic	Vertical	Fire /Explosive	YES	3 meter	-	

	Diesel				Barrel Drum						
4	Transformer Oil	Flammable	150L	Above Ground	Plastic Barrel Drum	Vertical	Fire /Explosive	YES	3 meter	-	
5	Used Oil	Flammable	500L	Above Ground	Plastic Barrel Drum	Vertical	Fire /Explosive	YES	3 meter	-	
6	HCL	Toxic	2000kg	Above Ground	Container	Vertical	Toxic release	YES	1.5 meter		
7	Sodium HypoChlorite	Toxic	1000kg	Above Ground	Container	Vertical	Toxic release	YES	1.5 meter		
8	pH Booster	Toxic	150kg	Above Ground	Container	Vertical	Toxic release	YES	1.5 meter		
9	TSP	Toxic	50kg	Above Ground	Container	Vertical	Toxic release	YES	1.5 meter		
10	Hydrazine	Toxic	50kg	Above Ground	Container	Vertical	Toxic release	YES	1.5 meter		
11	Alum	Toxic	500kg	Above Ground	Container	Vertical	Toxic release	YES	1.5 meter		
12	Polyelectrolyte	Toxic	300kg	Above Ground	Container	Vertical	Toxic release	YES	1.5 meter		
13	H ₂ SO ₄	Toxic	600kg	Above Ground	Container	Vertical	Toxic release	YES	1.5 meter		
14	NaOH	Toxic	6000kg	Above Ground	Container	Vertical	Toxic release	YES	1.5 meter		
15	NALCO Chemical	Toxic	2000kg	Above Ground	Container	Vertical	Toxic release	YES	1.5 meter		
16	Ammonia	Toxic	400kg	Above Ground	Above ground	horizontalMS Tank	Explosion	YES	ø 600 meter	0 meter	
17	Potassium Permanganate	Toxic	150L	Above Ground	Above ground	Vertical SSTank	Toxic release	YES	5 meter		
18	Enzymes	Toxic	2500kg	Above Ground	Storage room(Airconditio ner)	Vertical	Toxic release	YES	5 meter		

19	Yeast	Toxic	800kg	Above Ground	Storage room (Airconditioner)	Vertical	Toxic release	YES	5 meter		
20	Caustic SodaFlakes	Toxic	6000kg	Above Ground	Container	Vertical	Toxic release	YES	5 meter		
21	Formalin	Toxic	250kg	Above Ground	Container	Vertical	Toxic release	YES	5 meter		
22	Antifoam	Toxic	500kg	Above Ground	Container	Vertical	Toxic release	YES	5 meter		
23	Urea	Toxic	7000kg	Above Ground	Container	Vertical	Toxic release	YES	5 meter		
24	DAP	Toxic	500kg	Above Ground	Container	Vertical	Toxic release	YES	5 meter		
25	Sulphomic Acid	Toxic	600kg	Above Ground	Container	Vertical	Toxic release	YES	5 meter		
26	Resin	Toxic	200kg	Above Ground	Container	Vertical	Toxic release	YES	5 meter		
27	Bleaching Powder	Toxic	50kg	Above Ground	Container	Vertical	Toxic release	YES	5 meter		

9.2 Critical Facilities/Infrastructure situated within close proximity of the Factories/Industries or Chemical Storage

PointsTable-9.3

Factories/ Industries Name	Critical Facilities(within Close Proximity)Name	Facility Type (School, AWC,Hospitals etc)	Location Address	Lat-Long	Facility in-charge Name	Facility incharge email	Facility incharge mobile number	Total Population in the Close Proximity
Boudh Distillery Private Limited	Internal dispensary - 01	School- 1) Titerikata , 2) Rambhikata, 3) Bharatpur Hospital Puranakatak Govt. Hospital	Titerikata, Rambhaka, Boudh, Odisha CHC Puranakatak	Latitude : 20°41'51.23"N; Longitude : 84°23'17.38"E	Mr. Sunil Kumar Mohanty. Dr. Mishra	dispensary@boudhdistillery.com	7328834891	135

9.3 Statutory Compliance of the Factories/IndustriesTable-9.4

											AMBULANCE

9.5 Nearest Fire Station of the

9.6 Factories/Industries Table-9.6

Fire Stations Details											
Organisation Name	Area fire station name	Hospital address	District Name	City	Pincode	Lat-long	Fire Officer Name	Fire Officer Designation	Fire Officer Email-id	Fire Officer Mobile Number	Facilities Available
Boudh Distiliary pvt.ltd	Boudh Fire Stataion	DHH Boudh	Boudh	Boudh	762014		Mr.Jitendra Kumar Das	Asst.Fire Officer, Boudh	boudhfirestation@gmail.com	9178159005	Fire Tender/Capacity
Rista water supply	Boudh Fire Stataion	DHH Boudh	Boudh	Boudh	762014		Mr.Jitendra Kumar Das	Asst.Fire Officer, Boudh	boudhfirestation@gmail.com	9178159005	FoamMaterials Hoods

9.7 Stakeholders to be informed incase of an Industrial Accident

Table-9.7

Designation	Organisation/ Department name	Name	Mobile Number	Office Phone	Email
Nodal Officer, Controlling Officer, Supervising Officer	SRC				
	OSDMA				
	District Administration (Collector, Emergency Officer, ADM)	Babitarani Dalabehera	9439401784	06841222023	emergencyboudh@gmail.com
	Home department				
	State pollution control board				
	RTO	Sri Amaresh Patra	9437555151		rto_boudh@yahoo.co.in
	Department of Factories and Boiler				
	CSO	Bibhuprasan Acharya	9437156020		Cso.boudh@gmail.com

	NDRF				
	ODRAF	Gyanranjan Mohanty	9437192616		Spbdh.orpol@nic.in
	NGO	Rajendra Meher	9437194954		ycdaboudh@yahoo.co.in
	FIRE	Jitendra Ku Das	9178159005		boudhfirestation@gmail.com
	OIL INDUSTRIES (HPCL,BPCL, IOCL)				

A. Nuclear & Radiological Disaster:

India has traditionally been vulnerable to natural disasters on account of its unique geo climatic 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 radio isotopes 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

9.8 (Hospital

Preparedness Table-9.7

Sl 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

9.9 Specialized Response

Forces Table-9.8

Sl No.	Name of the Response Forces	No. of Personnel trained on CBRN	No. Of Personnel trained On MFR	Name and Designation of The Commandin Charge	Contact No. Of the Command inCharge

9.10 Mock Exercises on Nuclear/Radiological

Disaster Table-9.9

SIN o.	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 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 be main 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)	
2	Bio Terrorism/War	Home Department	SP	
3	Animal Health Disaster	F&ARD Department	CDVO (District)	
4	Agro -Terrorism	A&FE Department	DAO	

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 movement so 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

Table10.2- Crisis Management Committee

SL	Member	Dept./ Instt.	Contact Details
1			

Table10.3 Task Force Not available

SL	Member	Dept./Instt.	Contact Details

Table10.4 Technical Experts- Not available

SL	Member	Dept./Instt.	Contact Details

- 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 out break investigations and manage out breaks.
 - Hospitals will develop capabilities to attend to mass casualties and public health emergencies with isolation facilities. In the districts, DDMA's will provide there 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.

10.5 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

10.6 Collaborative Institutions

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

10.4 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/ BTattack;
- 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 over crowding 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.

10.5 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

10.6 Collaborative Institutions

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

Table 10.7 Important/Critical Infrastructure

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

10.8 Infrastructure that can be used as quarantine centres

SI	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 are 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, epidemiologists, clinical microbiologists and virologists will be fulfilled 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/ Biodisaster.
- 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 under take 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 specialized 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. 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 on coming 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 counseling 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 to 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 characterize 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 hospitals planning, and for hospitals being part of there gional plan form an aging casualty 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 tri age area and emergency treatment facilities for atleast 50 patients and critical care management facilit for at least 10 patients.
- Equality 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 the ircapabilities 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 mockdrills.
- 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 mockdrills.
- The registration and accreditation policy mustmake it mandatory to have a hospital DM plans.

- The existing infectious diseases hospitals will be remodelled to manage diseases with microorganism's 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.
 - 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 SOP to prevent over crowding 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 identification 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 utilized 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 bases 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

Sl	Facility	Unit	Existing Capacity	Extension Capacity	Remarks
1	Medical Staff				
2	Paramedical Staff				
3	Specialists				
4	Technical experts				
5	Casualty Section				
6	Isolation wards				
7	Security arrangement				
8	Diagnostics Services				
9	Medical Supplies				
10	BloodBank Services				
11	Mortuary				
12	Otherlogistics				

- **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 mobilized to the disaster site for management of cases at time so many 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. Stock 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 & 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 them at short notice.

Table-10.11-Stockpile of Medicines

Sl	Medicine/Drugs	Actual Requirement	Present availability

- **Public Health Issues.**

- 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 use ful for disseminating proper information and educating the community during a disaster.

- **Emergency Medical Response**

A biological disaster can lead to mass casualty incidences, either 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 shortspan of time may require prompt establishment to 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 areas 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 mockdrills for checking response time and reducing it to minimum. Periodic training and refresher training schedules will also be prepared.
- The medical posts shall provide evacuation services, specialized health care, food, shelter, sanitation, etc. These will coordinate with other functionaries involved in search, rescue, help lines and in formation 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.

10.5 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 group store store social cohesion and infrastructure along with maintaining their independence and dignity in the after math 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 well being, the mental health services will comprise of intervention 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 intervention 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
NA				

Table-10.13-Collaborative Institutions

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

13 Community Based Disaster Psycho social 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 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 psycho social 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/ Organization	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
»Place of occurrence »Magnitude »Suddenness »Type	»Level of preparedness »Social support network »Leadership »Past disaster experience	» Age/Sex »Level of education /exposure »Marital status » Physical health / »Disability »Personality/»Copings skills »Magnitude of losses »Social support available

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"> Adaptive responses allow individuals to overcome the difficulties caused by the disaster. For instance, obtaining information or developing effective survival skills. 	<ul style="list-style-type: none"> Maladaptive reactions can include denial, ineffective actions etc. Reactions can be prevented from occurring and if they do occur then they can be treated. The incident of young girls can be considered here from Orissa cyclone. The rescue team's a wherhanging 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 Flood water and committed suicide.

After a disaster there are four phases in phases, which the survivors go through. The first phase is considered as rescue which is upto 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 two years and the last phase is rebuilding, or reconstruction, which extends over a 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	Upto1-2weeks	Feeling strong, Direct feeling of saviour, eroism,Solidarity,Optimism
Honeymoon	2weeks to 3to6 months	Greatsolidarity,Eagernes storebuild,Sharing Of common experience
Disillusionment	2 months to 2years	Withdrawal, Loneliness, Anger, frustration,Community disorganization,Negativity,Hostility, Impulsiveness, Violence, Alcohol and drugabuse
Reconstruction	2-5 years and Lifetime	Acceptance of losses Realistic assessment of The situation ,Search for alternative store buildlives

14. Coping with Loss & Circles of Support

- 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 with in the affected community ,i.e .people with special needs 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 interms of vulnerabilities as detailed below

Table-10.18

Category	Exposure/ Vulnerability
Children	<ul style="list-style-type: none"> • Children who were physically, neurologically, mentally and sensory challenged in the pre-disaster period and those who became disabled after th edisaster • Children who need critical medical care facilities.e.g.children suffering from cancer, diabetic, asthma, poor heart condition,bloodborne diseases, HIV-AIDS,etc. • The children with special needs, who become orphans after a disaster, are most vulnerable to different types of exploitation. • Orphaned and unaccompanied Adolescent children,especially girls Children whose parents are missing or remarried
Women	<ul style="list-style-type: none"> • Pregnant and lactating women • Disabled women • Women on critical health carefacility • Women who lost their children and plant oundergore can alizations urgency • Elderly women • Women with prior history of psychiatricillness

Elderly	<ul style="list-style-type: none"> • Reduced physical & mental capabilities, delayed response syndrome,
	<ul style="list-style-type: none"> • Increased transfer trauma & the array of emotional difficulties, • dementia, and rigidity

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 a 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 a 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

14. 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

15. 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, where by there is a possibility of verbal/nonverbal expression of feeling/emotions and thus, making the survivor more peaceful in mind.

16. 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 remains in understanding the occurrence and modification of stress response.

Table 10.19

Emotional	Interpersoal	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 Bad time management	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 relax and take care of personal issues » Not able to contact the family members » The weather in the area etc

Diverse Stress Responses Table

10.20

Cognitive Responses:	Emotional Responses:	Self-image	Psychosomatic/Physiological Responses
Low awareness of the environment » Restricted scope of perception » Lowered ability to concentrate » Disturbed memory functions	» 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

<ul style="list-style-type: none"> » Hesitation in decision making » Change in content of thinking » Low creativity and change in performance » Less ability to utilise relevant information 		»	<ul style="list-style-type: none"> » Increased heart beat & palpitation » Sweating in palms and feet » Shaking of the body & Fatigue » Butterfly sensation in the stomach
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Relaxation Exercises Table 10.21

Abdominal breathing	<ul style="list-style-type: none"> » 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
Count breathing	<ul style="list-style-type: none"> Sit comfortably » Close your eyes » Count 1-2 two as you inhale » Release your breath slowly counting 1-2-3-4 (double the count of your inhalation) » Practice this till you feel relaxed
Nostril breathing	<ul style="list-style-type: none"> » Inhale naturally and then let out with a whooshing sound. Hold for some time and then let out again » Breathe through one nostril and breathe out through the other one » Combine breathing with visualization that you are getting energy and refreshment » Listening to some music while practicing these will enhance positive impact of the techniques
Free Meditation	<ul style="list-style-type: none"> » Sit comfortably or lie down and close your eyes » Put on some music and listen to the music » Do not try to think of anything, just concentrate on your breathing » 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

	<ul style="list-style-type: none"> » 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
Candle meditation	<ul style="list-style-type: none"> » Sit comfortably » Light a candle or a lamp in front of you » Concentrate on the flame » Spend time just looking at the flame glowing and flickering » If you feel after some time close your eyes and look at the image in your mind » Slowly open your eyes after you are completely at ease » 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
Relaxation	<ul style="list-style-type: none"> » Lie down on the ground » Slowly move from your feet to your head saying the following to yourself

Disaster Psychosocial Referrals
Table-10.22

<p>Within Caregiver's Control if the Survivor:</p> <ul style="list-style-type: none"> » Is aware of who s/he is, where s/he is, and what has happened with him/her. » Is only slightly confused or dazed or show Slight difficulty in thinking and decision making or Finding difficulty in concentrating 	<p>Referral if the Survivor:</p> <ul style="list-style-type: none"> » Is unable to tell/recall his/her name of the place and what has happened to him/her in past Z4 hours » Complains about what is happening with him/her
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Behaviour	
<p>Is restless, mildly agitated and excited</p> <ul style="list-style-type: none"> » Has sleep difficulty and decreased appetite » Sad, rigid, clenches the fists 	<p>Is apathetic, immobile and unable to move around</p> <ul style="list-style-type: none"> » Is withdrawn and mutilates himself/herself, does not take care of self » Violent and causes harm to others » Uses alcohol or drugs » Repeats ritualistic acts as compulsions
Emotions	

<p>Within Care giver's Control if the Survivor</p> <ul style="list-style-type: none"> » Is crying and weeping consistently by reiterating about the incident » Has blunt emotions, is numb and hardly reacts correctly to his/her environment » Easily irritated and angered over trivial issues » Shows high spirits or laugh excessively » Very quiet with no emotions 	<p>Consider Referral if the Survivor</p> <ul style="list-style-type: none"> » Is unable to be aroused and is completely withdrawn » Is excessively emotional and shows inappropriate emotions » Is excessively happy, or sad and depressed
Perception	
<p>Has all senses intact and has no perceptual disturbance, like seeing the ghosts of those Expired</p>	<p>Hears voices in absence of the actual living organism</p> <ul style="list-style-type: none"> » Sees things in absence of any living organisms' existence » Has complaints about vague bodily sensations » Takes a constant peculiar body position for days together
Thought	
<p>Within Care giver's Control if the Survivor</p> <ul style="list-style-type: none"> » Talks excessively about the disaster » Refuse to talk much » Has rapid or stammered speech 	<p>Consider Referral if the Survivor</p> <ul style="list-style-type: none"> » Is talking irrelevant » Shows overflowing of incoherent speech » Does not talk at all for days together
<p>Has a feeling of despair and worthlessness</p> <ul style="list-style-type: none"> » Has a doubt on his/her own recovery » Is over concerned about unimportant things and neglects important things » Denies what happened to him/her and blames Others 	<p>Is excessively preoccupied with one idea or thought</p> <ul style="list-style-type: none"> » Has bizarre thoughts, which have no answerable reason in that situation » Has a false but extremely firm and strong belief of something that is going to happen to him/her » Is attempted suicide or has suicidal thoughts
<p>14. Ethics & Confidentiality</p> <ul style="list-style-type: none"> • 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 amust.
- Keep smiling and spread smiling among other

Chapter-11

FOREST FIRE: CAUSE AND IMPACT

4.1 Introduction

The word “fire” evolved from the Greek word “*pyra*” meaning growing embers. Fire is actually the heat and the light that results when three elements i.e.fuel, oxygen and the source are combined. The other elements, which determine the behaviour of the fire, are weather, the landscape and the presence of the fuel. As far as the birth of fire is concerned, fire emerged on the earth with its origin only. From the time our planet came into existence, lightening has sparked landscape. Artificial or the human induced fire began when the earlier human being first rubbed two stones.

Forest fire may be defined as an unclosed and freely spreading combustion that consumes the natural fuels. Combustion is another word for fire. When a fire burns out of control it is known as **Wild Fire**. Fire consists of four parts i.e.**gas, flame, heat and smoke**.

Fire Gas: These are the gases created by the combustion process.They are invisible to the naked eye,but they exist and include such poisonous substancesas Carbon monoxide.

Flame: This is theight given off by the burning gas.As long as the three essential ingredients, fuel, oxygen, and heat are there, it can be seen.

Heat: This is the part of the fire that on efeels as warmth.A normal fire usually burns at around 1,100°C.

Smoke: Smoke is a harmful vapour cloud mixed with a fine powder of solid particle sand some gases. The slid particles in smoke create breathing and viewing problem during fire.

4.2 Fuels for forest Fire

Among the three components required for fire, the basic necessity to initiate and continue a forest fire is the presence of suitable fuel. Forest fire has different kind of fuels. The important among them are as follows:

a) Ground fuels

Ground fuel involves all the combustible material below the loose litter of the surface. The materials which constitutes the ground fuels can be summarized as follows-

- Various decayed stages of the humus, trees, shrubs and roots,muck and peat.
- Ground fuel always supports the glowing combustion and not the flame. They don't ignite till the moisture content drops very low (less than 20 percent). The combustion becomes very persistent on cetheground fuel signite.

b) Surface fuels

All the combustible material on the forest floor is included in surface fuels. This type of fuel is the most common type of fire fuels.This may include-

- Tree leaves and the fine litter, grasses, weeds, ferns and the other herbaceous plants,seedlings and saplings of trees, fine deadwood on the forest floor, large logs and stumps,and roots of trees.
- These fuels ignite very readily and provide the basic combustible material for the forest fires.

c) Aerial fuels

All the combustible dead or live material located in the under storey and above the forest canopy is included in this type of fuels. These fuels are separated from the ground by more than a meter.The main aerial fuels include:

- Branches and foliage of trees, trees and shrubs of the under storey
- Standing dead trees, and
- Mosses,lichens and epiphytic plant sontrees.

The aerial fuels provide much needed combustible material for the spread of forest fire. The in fernoin case of crown fires spreads by consuming aerial fuels. The primary factor that helps in the spread of forest fire is the continuity of fuels. Fuel continuity is also one of the most important factors in controlling forest fire. This is due to the fact that they transfer heat by radiation, conduction and convection. Continuity, a relative term denotes both the forms of continuity i.e. vertical and horizontal. These are very essential for the fire spread and are taken into account while planning forest fire control.

4.3 Fire Behaviour

Besides these, the fire may further be categorized based on their peculiar behaviour. There is specialized vocabulary used by the wild fire community for describing different types of fire behaviour.

- A fire is said to be **running** when it is spreading rapidly It is **creeping** when it is spreading slowly with low flames
- A fire is **smouldering** when it burns with out a flame and is barely spreading.
- A fire is said to be **spotting** when it is producing sparks or embers that are carried by the wind or by the combustion column caused by the fire and start new fires beyond the main fire. The new ignition points are called spot fires.
- A fire is **torching** when it moves from one crown to another fire into the crowns of individual trees, but not necessary from one crown to another.
- It is **crowning** when it spreads from tree to tree usually in conjunction with, but sometimes completely independent of the surface fire.
- A **flare-up** is a sudden acceleration of fire spread or intensity, of relatively short duration for a portion of the fire.
- A **blow-up**, on the other hand is a dramatic change in the behaviour of the whole fire, the point of rapid transition to a severe fire.

4.4 Causes of Forest Fire:

Out of three essential components of fire triangle, two components i.e. fuel and oxygen are naturally available in forest. It is the third component i.e. heat that really initiates fire in the forest. Heat may be supplied by either natural or artificial reasons. Depending upon the source of the heat, the causes for forest fire may be classified as natural or artificial. While lightening, volcanic explosion, friction of rolling stone etc. are the natural causes for forest fire; the anthropogenic causes may be subdivided into two categories i.e. deliberate causes and unintentional or accidental causes.

Natural causes	Anthropogenic causes	
	Deliberate Cause	Accidental Cause
Lightening	Shifting Cultivation	Collection of NonTimber Forest Produce
Friction of Rolling Stones	To flush growth of kenduleaves And MahulaFlower	Burning farmresi dues
Rubbing of dry Bamboo clumps	To have good growth of grass& fodder	Driving a way wild animals
Volcanic Explosio n	To settle score with Forest Department or personal rivalry	Throwing burning bidi/cigarettes
	To clear path by villagers	Camp fires by picnickers
	To encroached upon Forestland	Sparks from vehicle exhaust
	For concealing illicit felling	Sparks from transformers
	Tribal tradition/ custom	Uncontrolled prescribed burning
		Resintapping
		Making charcoal in forests
		Extracting wine in forest
	Sparks from cooking near the forest	
	Heating coal tar for road construction in forest	

4.5 Adverse impacts of ForestFire

- I. **Loss of valuable timber resources:** Valuable timber species like *teak*, *sal*, *sheesam*, rose wood etc. are adversely affected by fire. However, the adhesive impact of forest fire varies from species to species, depending upon its susceptibility.
- II. **Degradation of water catchments areas resulting into loss of water:** After forest fire, soil moisture is decreased and litter decomposition becomes almost negligible, which creates a possibility of forest fire in future. Just after fire, the chemical and physical changes in upper layer of soil make it impervious and thus reduce water in filtration. The removal of litter also decreases water holding capacity of soil and most of the rainwater is washed away removing top fertile soil of the forest resulting into loss of soil fertility.
- III. **Loss of wildlife habitat and depletion of wild life:** Forest fire dramatically impacts the animal life. Animals are first to lose their lives due to heat generated. Eggs of birds and insects are destroyed due to fire impact. Some animals have a natural threat warning system and usually migrate from the danger areas. The birds also save themselves by migration, but their eggs are usually destroyed.
- IV. **Loss of natural vegetation and reduction of forest cover:** As a result of fires, millions of hectares of the forest area turn to ashes and remains of nouse.
- V. **Micro climate change:** The changed microclimate caused by removal of litter and duff, opening of the canopy by killing over storey shrubs and trees and darkening of the soil surface by residual soot and charcoal can increase insulation causing temperature increase. As a result, the changed area becomes unhealthy for living of both wild habitats and local people.

FOREST FIRE PREVENTION & MANAGEMENT PLAN – 2022(Boudh)

➤ Forest Distribution & status

1. Boudh Forest Division was created on 23rd December, 1979 vide

(Notification no. 25782/FFAH dt. 10.11.1979).

2. Geographical location :- N 20⁰ 22' 23" N 20⁰ 54' 33"
E 83⁰ 34' 20" E 84⁰ 47' 44"
3. Geographical Area :- 3098 Sq Km.
4. Forest Area :- 1290.94 Sq Km.
5. % of Forest Area :- **41.67%** (ISFR-2019 Report)

6. Category of Forest Area :-

	RF	PRF	UDPF	VF	Un-classed Forest	Revenue Forest	Total
Nos.	42	6	893 (villages)	133 (villages)			
Area (in Ha.)	92477	2475.11	24933.62	1192.50	102.00	1266.00	122446.23
Boundary Length (in km)	905.80	64.341					970.141
Boundary Pillars (in Nos.)	6063	569					6632

7. Forest Types:-

Type I-3C/C0 _{2e} (iii)	Sal Forests	North Indian Tropical Moist Deciduous Forests. Moist Peninsular Low level Sal.
Type-II - 5A/C _{1(b)}	Dry Teak Forests	Southern Tropical Dry Deciduous Forests Dry Teak Bearing Forests Dry Teak Forests
Type-III- 5B/C ₂	Mixed Deciduous Forests	Northern Tropical Dry Deciduous Forests Northern Dry Mixed Deciduous Forests

8. Forest Cover as per FSI

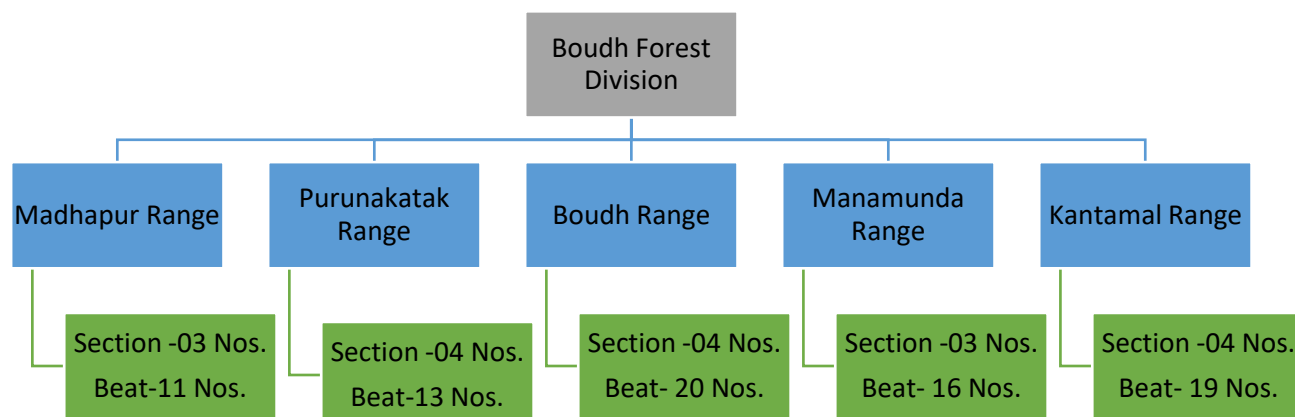
<i>(Area in Sq.Km.)</i>									
District	Assessment Year	Geographical Area (GA)	Very Dense Forest	Mod. Dense Forest	Open Forest	Total	% of GA	Change	Scrub
Boudh	2019	3098	262.91	562.04	465.99	1290.94	51.53	1.94	57.39
	2017	3098	263	546	480	1289	41.61	27	57
	2015	3098	268	548	450	1262	40.74	-1	82
	2013	3098	264	548	451	1263	40.77	8	82

Name of the Range	Sl. No.	Name of the Forest Block	DDMP, 2022-2023, Boudh Area (in ha)
Boudh	1	Bankamundi	4649.00
	2	Damargarh	150.00
	3	Goudadei	1015.00
	4	Jamukhol	3971.00
	5	Nagarjuna	851.00
	6	Putuna	1451.00
	7	Subarnagiri	2457.50
Kantamal	8	Andharipat	7.00
	9	Badadanda	923.00
	10	Baghad 'A'	8.00
	11	Baghad 'B'	3.00
	12	Dapala	7.00
	13	Gambharipadar	4.00
	14	Kirla	25.00
	15	Lukapada	1.00
		Matakupa	3681.50
	16	Padhel	4460.00
		Penajore	3023.00
	17	Putputigarh	3624.00
	18	Rengali	396.00
	19	Sanadanda	475.00
	20	Sirmal 'A'	25.00
	21	Sirmal 'B'	1.00
	22	Sulia	321.00
23	Sunadei	755.00	
24	Udeipur	40.00	
Madhapur		Hatidhara	6277.50
		Karadakutha	730.50
		Mundeswar	9620.00
	25	Podhal	7004.00
Manamunda	26	Bahawalkhol	1539.00
	27	Bramhani	77.00
	28	Dhingiapadar	6.00
	29	Kankali	207.00
	30	Mankadakesa	69.00
	Sl. No.	Name of the Forest Block	Area (in ha)
	31	Matakupa	3451.50
	32	Panchara	2409.00
	33	Penajore	2323.00
		Putuna	298.00
	34	Ravaneswar	498.00
35	Sindurbhadi	1043.00	
	Subarnagiri	7357.50	
Purunakatak	36	Aragarh	4355.00
	37	Arakhapadar	1907.00
	38	Hatidhara	149.50

39	Jajpur	2906.00
40	Karadakutha	107.50
41	Mundeswar	6421.00
42	Parapit	1397.00

➤ **Administrative set up in the Division (Range, Section, Beat, G.P, Villages)**

Boudh Forest Division jurisdiction comprising of a total of 05 Nos. Range, 18 Nos. Section and 79 Nos. Beat.



Sl. No.	Name of the Range	Sections Sl. No.	Name of the Section	Beat Sl. No.	Name of the Beat
1	Boudh	1	Boudh	1	Butupalli
				2	Debagarh
				3	Nuapada
				4	Biranarsinghpur
				5	Harekrushnapur
		2	Baghiapada	6	Baghiapada
				7	Beredabari
				8	Jamukhol
				9	Malikpada
				10	Panikimal
		3	Khajuripada	11	Rambhikata
				12	Babada
				13	Brahmanipalli
				14	Jhankarpada
				15	Khajuripada Spl. F.G.
				16	Deobandh
		4	Bohira	17	Dambarugarh
				18	Nagapalli
				19	Usmilika
				20	Baunsuni

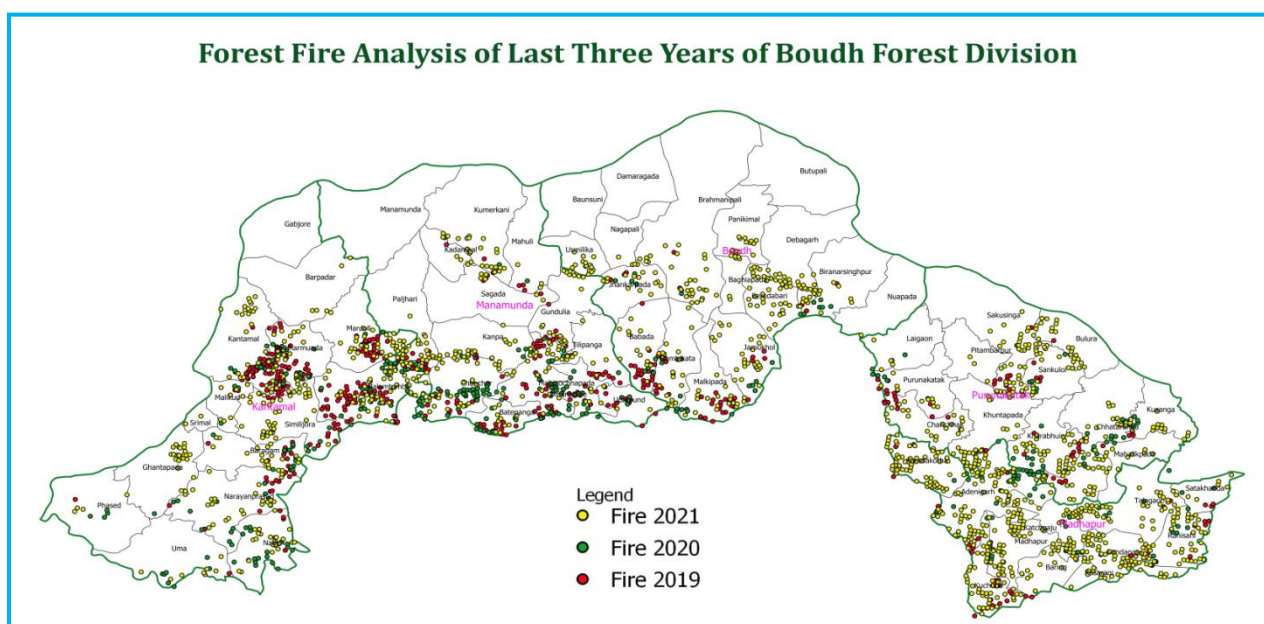
2	Manamunda	5	Manamunda	21	Manamunda		
				22	Mahuli		
				23	Kumarkani		
				24	Kadampal		
		6	Sagada	25	Sagada		
				26	Palijhari		
				27	Kanpa		
				28	Chancher		
		7	Gundulia	29	Gundulia		
				30	Udamund		
				31	Tilpanga		
				32	Badangi		
				33	Maltigochhapada 'A'		
				34	Maltigochhapada ' B '		
				35	Betepanga		
				36	Dimirikhol		
				3	Kantamal	8	Narayanprasad
		38	Baragaon				
		39	Ringapada				
		40	Naden				
		9	Ghantapada			41	Ghantapada
						42	Phased
						43	Uma
						44	Gunjermal
		10	Kantamal			45	Kantamal
						46	Badakusanga
						47	Similijora
						48	Mallikud
						49	Srimal
		11	Barapadar			50	Mardol
						51	Barapadar
						52	Balamtumba
						53	Badajharmunda
						54	Pindapadar
						55	Gabjore
		4	Purunakatak			12	Purunakatak
57	Laigaon						
58	Pitambarpur						
59	Dhalpur						
60	Sakusinga						
13	Charichhak					61	Charichhak
						62	Khuntapada
						63	Kharbhun
14	Kusanga					64	Kusanga
						65	Mahalikpada
15	Harabhanga					66	Chhatranga
						67	Bulura

				68	Sankulei
5	Madhapur	16	Adenigarh	69	Adenigarh
				70	Karadakotha
				71	Kandra Kachhapaju
		17	Baring	72	Baring
				73	Baring Teak spl. F.G.
				74	Kuchuda
				75	Madhapur
		18	Talagaon	76	Talagaon
				77	Gandapaju
				78	Satakhanda
				79	Ranisahi

❖ SITUATION ANALYSIS

➤ Forest Fire Alerts in last 3 years

Beat wise forest fire map of last 3 years are being prepared with the QGIS mapping software, considering the occurrences of forest fire in the beats in a fire season. According to the intensity of forest fire occurrence in the particular beat area during last 3 years' different zones are also being created i.e. High sensitive zone to moderate zones. As the total no. of Beats is 79, Range wise one beat map is enclosed

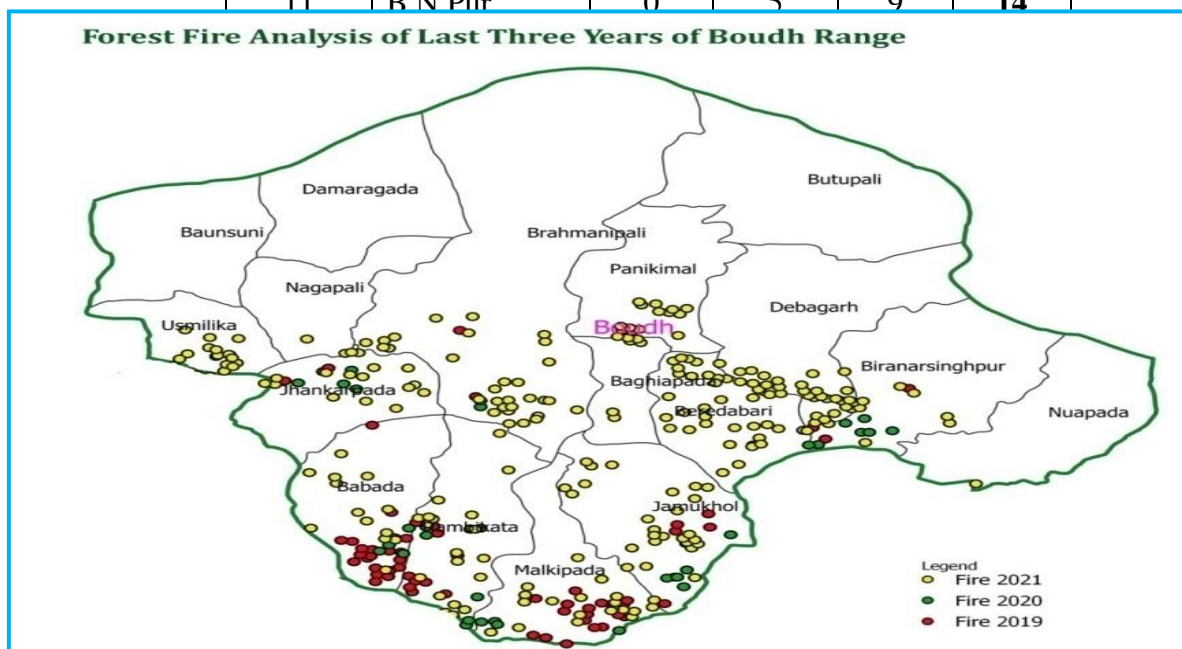


having highest fire point herewith to analyze the zones. Further diagrammatic analysis has also been prepared for all 5 Ranges by taking the Beat as unit to analyze the number of forest fire points occurred in last three years

- **Boudh Range**

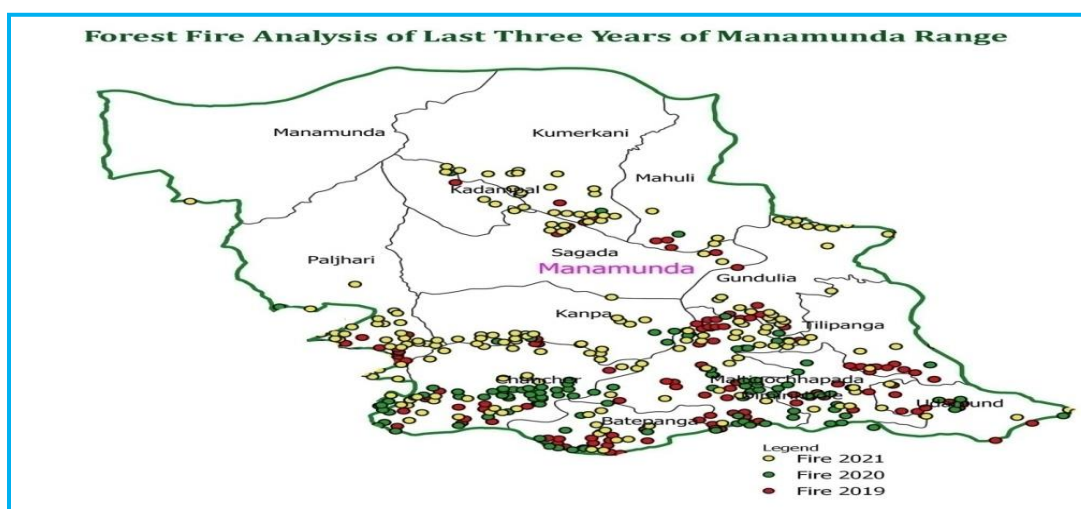
Sl. No.	Beat	2019	2020	2021	Total
1	Mallikpada	18	23	19	60
2	Babada	23	4	18	45
3	Beredabari	0	2	40	42
4	Jamukhol	6	5	26	37

5	Brahmanipali	2	1	32	35
6	Rambhikata	8	5	17	30
7	Debgarh	0	0	29	29
8	Jhankarpada	3	2	15	20
9	Usmilka	0	0	18	18
10	Pankimal	0	0	16	16
11	B N Pur	0	5	9	14



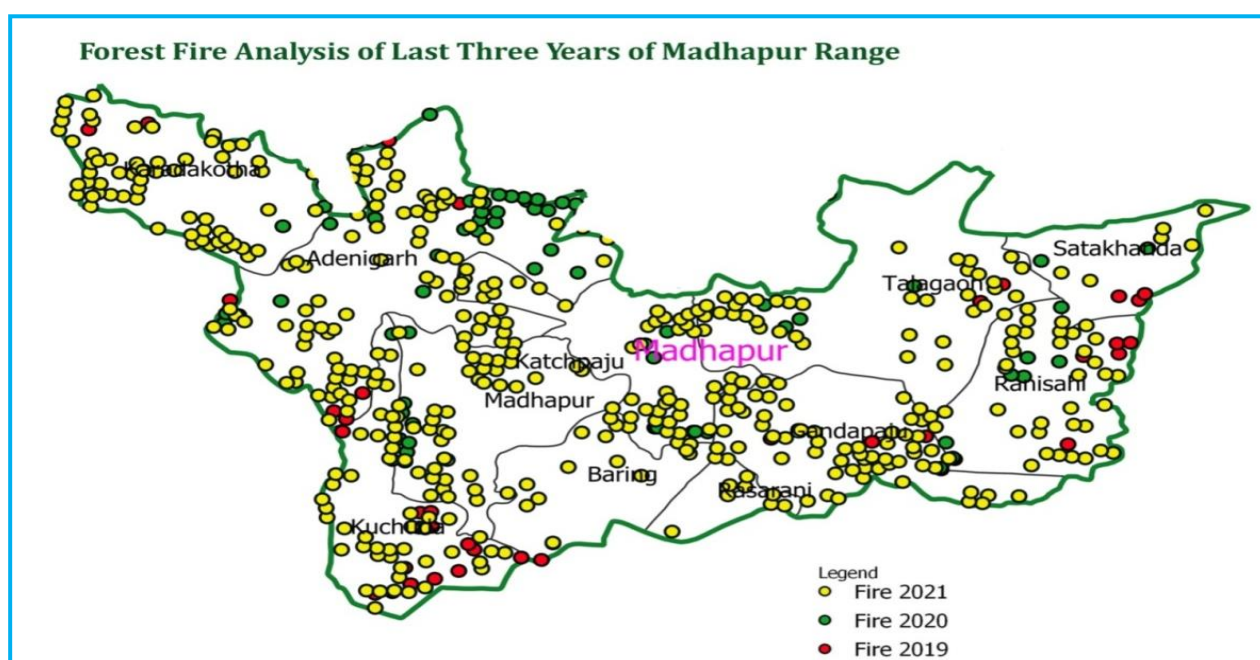
- **Purunakatak Range**

Sl. No.	Beat	2019	2020	2021	Total
1	Chhataranga	7	18	53	78
2	Sakusinga & Dhalpur	9	4	48	61
3	Kharabhuin	7	7	33	47
4	Charichhak	8	1	25	34
5	Khuntapada	3	1	29	33
6	Purunakatak	6	6	11	23
7	Bulura	1	0	20	21
8	Sankulei	4	2	13	19
9	Kusang	2	4	13	19
10	Mahallickpada	1	0	11	12
11	Laigaon	0	2	5	7
12	Pitambarpur	0	0	4	4
	Total	48	45	265	358



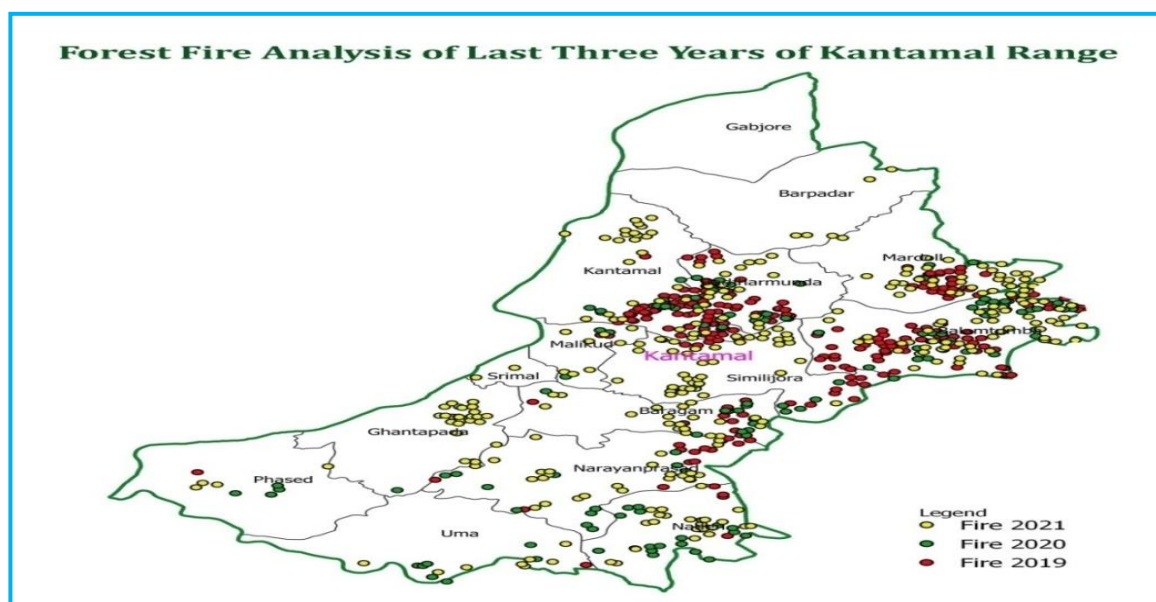
Madhapur Range

Sl. No.	Beat	2019	2020	2021	Total
1	Adenigarh	4	29	81	114
2	Gandapaju	3	7	58	68
3	Karadakothe	2	2	60	64
4	Kuchuda	0	0	49	49
5	Talagaon	2	2	41	45
6	Madhapur	0	0	43	43
7	Ranisahi	5	1	36	42
8	Satakhanda	2	7	8	17
9	Baring	0	0	17	17
10	Kachapaju	0	7	7	14
	Total	107	85	199	391



- **Kantamal Range**

Sl. No.	Beat	2019	2020	2021	Total
1	Balamtumba	57	30	65	152
2	Kantamal	52	14	36	102
3	Mardol	33	19	35	87
4	Badjharmunda	32	17	26	75
5	Similijora	13	4	42	59
6	Narayanprasad	14	17	26	57
7	Baragaon	13	9	26	48
8	Ghantapada	0	10	27	37
9	Naden	4	1	26	31
10	Malikud	2	5	8	15
11	Uma	1	0	11	12
12	Barpadar	0	0	7	7
13	Phased	1	0	5	6
14	Srimal	0	0	2	2
	Total	222	126	342	690



➤ **Anticipated forest fire villages/ spots in 2022**

To find out the anticipated forest fire villages in 2022, last 3 years' fire points has been analyzed with the help of QGIS mapping software. The total points in the beat area are being located on different forest blocks, accordingly the forest blocks has been categorized as per intensity. The Beat Guards have identified the possible villages which are the prone to forest fire. They are also identifying the possible causes of fire; accordingly, the meeting regime and the other preventive

measures are chalked out in the preventive part. The role of several officers in the forest department has been assigned in line with forest fire management SOP, for monitoring and effective implementation of the plan.

Sl. No.	Range	Section	Beat	G.P	Village	
1	Boudh	Baghiapada	Pankimal	Baghiapada	Kanakpur	
2					Nuagada	
3			Beredabari		Palsadadar	
4					Rengali	
5					Beredabari	
6			Jamukhol	Tikarpada	Bhurukipada	
7					Karadamunda	
8					Meniapaju	
9					Birigada	
10					Samapaju	
11					Malikpada	Barpadar
12			Lekadpaju			
13		Khajuripada	Brahamanipali		Brahamanipali	Bijapadar
14				Bakapali		
15				Dhrumal		
16				Tarva		
17			Rambhikata	Ambajhari	Bijamari	
18		Babada	Jhankarpada			
19			Sunajhari			
20		Boudh		Debgarh	Radhanagar	Raipur
21				B.N.Pur	Mathura	Pankual
22				Debgarh	Bamanda	Khandbara
23				Debgarh	Bamanda	Karunapali
24				Nuapada	Sampoch	Chandipur
25		Bohira	Usmilka	Gochhapda	Usmilka	
26					Bijapadar	
27			Nagapali	Brahamanipali	Santum	
28					Tarva	
1	Purunakatak	Purunakatak	Purunakatak	Purunakatak	Jajpur	
2			Purunakatak	Purunakatak	Manipur	
3			Laigan	Lunibahal	Barabani	
4			Sakusinga	Dhalpur	Nuakhara sankulei	
5		Harabhanga	Bulura	Dhalpur	Tentulipadar	
6			Sankulei	Sankulei	Hariharpur	
7			Sankulei	Sankulei	Kambhunathpur	
8			Chhatarang	Chhatarang	Kanthipadar	
9			Chhatarang	Chhatarang	Damanda	
10			Chhatarang	Chhatarang	Dhungiamunda	
11			Charichhak	Kharabhuin	Chhatarang	Kharabhuin
12		Kharabhuin		Chhatarang	Kutigadu	
13		Kharabhuin		Chhatarang	Saradikhole	
14		Kharabhuin		Chhatarang	Adipadar	
15		Khuntapada		Karanjakata	Khuntapada	
16		Kusang	Mahallickpada	Mahallickpada	Jabara	

17			Mahallickpada	Mahallickpada	Bahali
1	Manamunda	Gundulia	Maltigochhapada	Sagada	Maltigochhapada
2			Gundulia	Gundulia	Tilpanga
3			Dimirikhole	Gundulia	Dimirikhole
4			Udamund	Gundulia	Udamunda
5		Sagada	Sagada	Sagada	Sagada
6			Paljhir	Sundipadar	Manoharpur
7			Kanpa	Sagada	Kanpa
8			Chancher	Sagada	Chancher
9		Manamunda	Mahuli	Khaliapali	Kuaghara
10			Kumarkani	Khaliapali	Kumarkani
11			Kadampal	Bilaspur	Junani
1	Madhapur	Baring	Baring	Adenigarh	Madhapur, Raniganja, Gorasahi, Baring, Badala, Gochhasahi, Dhipasahi, Kuchuda, Lengerpaju, Sulugaon, Rahasahi, Saberi, Chatrapada
2	Madhapur	Adenigarh	Adenigarh	Adenigarh	Adenigarh, Kakharuphal, Nuagaon, Gochhabari, Surtaganda, Gundurisahi, Kalimati, Kuchupaju, Karadakotha, Kachapaju, Kandara,
3	Madhapur	Talagaon	Talagaon Gandapaju Ranisahi Satakhanda	Talagaon, Kusanga, Mahalickpada	Talagaon, Goradamunda, Gandapaju, Ranisahi, Gotibida, Satakhanda, Satakhanda , Dhadiamba, Sitikabari
1	Kantamal	Kantamal	Similijora	Baragaon	Similijora
2			Srimal	Ghantapada	Srimal
3			Malikud	Baragaon	Malikud
4		Barpadar	Badjarmunda	Lambasari	Badjarmunda
5			Balamtumba	Lambasari	Balamtumba
6			Barpadar	Rundimahul	Barpadar
7		Narayanprasad	Narayanprasad	Narayanprasad	Narayanprasad
8			Naden	Narayanprasad	Naden
9			Baragaon	Baragaon	Baragaon
10		Ghantapada	Phased	Kultajore	Phased
11			Uma	Uma	Uma
12			Ghantapada	Ghantapada	Ghantapada

ACTION PLAN FOR 2022

❖ **Preventive Measures :**

Preventive measure plays vital role in any kind of disaster preparedness the same applies to forest fire also. Prevention is more effective and it provides a long term solution to the focused issue. Several preventive methodologies have been proposed under this plan; which will follow vigorous monitoring in which responsibility has been fixed on personnel for effective implementation of the plan.

➤ **Awareness meetings**

Awareness meetings will be organized at forest fringe villages with an aim to reduce forest fire incidences and to reduce the impacts of forest fire on the environment i.e. with the theme of loss of valuable timber resources, impact of forest fire on ecosystem, degradation of water catchment area, resulting into loss of water, loss of wild life habitat and depletion of wildlife, loss of natural vegetation and reduction of forest cover, global warming, micro climate change, soil erosion and impact on ecosystem, forest fire and floods, deteriorating biological environment, adverse impact on health system, socio-economic impact, carbon sequestration potential, threat to life & property, reducing value of ecosystem services. The list of forest fringe village is enclosed as **Annexure-III**.

➤ **Mahua Tree Cleaning**

Collection of Mahua flower is a prime practice of the local tribes as well as forest dependent people for their livelihood. Mainly the mahua flower comes in the tree during March and April of each year. In this period generally the leave shading of mahua tree along with other species forests have occurred completely. During collection of mahua flowers, most of the collectors clear the mahua tree floor by setting fire to the fallen leaves and twigs etc and in very few the collectors are sweeping the mahua tree floor, many a times such fire spread to forest areas.

For addressing such issues, Mahua trees are identified **as per Annexure-I** which are standing adjoining to R.F, P.R.F etc. with GPS location for cleaning of the periphery of the Mahua tree during collection of Mahua by using leaf blowers.

➤ **Kendu leaf collection**

Kendu leaf collection is a traditional practice in many parts of this division area. Instead of bush cutting some collectors apply easy method of burning for getting good quality thin leaves. This practice gives less labour utilization as well as less effort. So these practices are one of the major causes of forest fire in dry deciduous forest areas. To address these issues it is proposed the Territorial staff will attend the Phadi Committee Meeting with KL staffs. It is also proposed to identify the command areas having threat of fire for adopting control burning which will in turn check the forest fire from spreading to the forest

areas. Further, bush cutting will be carried in forest areas in presence of the Territorial staff. The VSS members including SHG are to be engaged well in advance by the department staffs by organizing the awareness campaign for the damages caused by putting fire in forest areas for coming of good Kendu shoots. All the KL operational staffs will be added to division fire control room group so that they can receive the instant fire locations depicted in topo images. The list Phadi house is enclosed **Annexure-II**.

➤ **Grazing**

Grazing is also a major concern of forest fire as many tribal villages are located in close proximity to different forest blocks. All animals depend mainly on forest for grazing throughout the Division. Availability of grasses and fodder for their cattle being scanty in villages, forest is the only alternative source. The forests close to human habitation are most prone to heavy grazing. And fire as there is a belief that good sprouts will be available in the burnt area with higher palatability quotient. To mitigate this, it is proposed to create several awareness meeting, by the department in village level by taking the VSS members, SHGs, local representatives and environment lovers in loop.

➤ **For cleaning forest paths by the villagers**

The villagers set small fires to clear off path from dry litter i.e. tree twigs, branches, leaves etc. This fire, when becomes uncontrollable, turns disastrous. These cases are one of the major causes of forest fire in this division. To such issues, it is proposed to control burn the possible routes inside the forests and to create awareness among the villagers on the impacts of such type of incidences.

➤ **For Protecting crops/livestock from the wild animals**

The Villagers residing in or near the forest fringes, many times light up fire in the forest to keep the wild animals away from their crop and cattle. Sometimes when this fire is not put off completely, it may result in a disastrous forest fire. To avoid such types of incidences it is proposed to create awareness among the forest fringe villagers by means of regular meeting.

➤ **Careless throwing of cigarettes, bidi stubs, match sticks by grazers/ travelers**

It has been noticed that, the travelers, picnickers, grazers, villagers or even forest laborers some time throw un-extinguished cigarettes, bidis, and match sticks in the forest areas. When accompanied by little/ strong winds, this may result in fires capable of destroying valuable timber worth millions of rupees. To avoid such types of incidences it is proposed to create awareness among the society by announcing with public address system in public gathering places.

➤ **Charcoal making and wine extracting in the forest**

Tribal peoples are making charcoals in order to sell the charcoals for their livelihood. Sparks from these activities may lead to fires in the forest. To minimize such type of issues posters will be displayed on different locations mentioning the punishments imposed there for.

➤ **Hunting by tribal**

To search wild animals and their nests/ homes, tribal often sets fire inside the forest and during summer, to hunt the animals they set fire inside forest, in order to make easier the hunting process. They also put wild grasses on fire to preventing growth of leeches. To avoid such type of issues posters will be displayed on different locations mentioning the punishments imposed there for.

➤ **Approaching Religious leaders/ Priests**

Tribal or Religious leaders will be approached to appeal people for not kindling fire in the forest areas

➤ **Inter-departmental co-ordination**

- Different departments will be approached to assist forest department in playing one or another role in mitigating forest fire.
- Field staffs / Representatives from ST & SC Development, Minorities & Backward Classes Welfare Department, and Government of Odisha will be requested to approach local people for this noble cause.
- Representatives of Panchayati-Raj department will be asked to motivate the PRI members for the noble cause.
- Personnel from Odisha Fire service will be approached for helping in combating fire in approachable areas.
- Police personnel from home department will be asked for help in applying coercive force to control vandalism or in any kind of untoward situation.
- Help from other departments of the government will be sought for, as and when required for saving the forest resources of Odisha.

➤ **Developmental works for Risk Reduction**

- Different programs will be taken up under various schemes for expanding and enhancing the forest fire risk reduction as below:
- Large no. of water bodies as per the budget is being created over the forest blocks in the division which will be useful for making water availability.
- Adequate afforestation measures are being taken up to supplement the recovery plan in cases where regeneration has been affected and the forest area has become barren.
- Regular salvage of timber and firewood is being carried out which is useful for reducing forest fire.

- Subsidiary Silvicultural Operations are being taken up to remove the dead, dying trees, creepers which restrict the spreading of forest fire.
- Vehicular access is augmented for immediate action in case where measures are required to extinguish forest fire.
- NGOs and the staffs are actively involved in mobilizing the VSS and EDC through different schemes.

➤ **Rallies, Padayatras, Posters and videos**

It is proposed to conduct awareness meetings on forest fires at different level starting from village level to block level by involving villagers, VSS members, SHG members, youth clubs, PRI members, educational institutions, civil societies etc. Different types of posters like impact of forest fire to the environment and the punishments imposed to the offences will be displayed during such rallies. It is proposed to compose video clips on forest fire and its impact to the environment and to play those in the weekly hats, public gathering locations etc.

➤ **Street Dance, Act and Vernacular Song**

It is proposed to identify the dance groups, composers to compose the songs on the impacts of forest fire in local languages from local areas in order to perform the dance in the public places such as in weekly hats, public gathering places etc. Apart from these vernacular songs will be played in vehicles with loud speakers to aware people.

➤ **Youth club activities plan**

Youth Clubs functioning on the forest fringe villages will be approached, the members will be made aware about the need of reducing forest fire incidents in their area, if they will be able to reduce forest fire incidences in their area, they will be incentivized.

➤ **VSS activities plan**

VSSs formed in the fire prone villages will be approached, the members will be made aware about the need of reducing forest fire incidents in their area, if they will be able to reduce forest fire incidences in their area, and they will be incentivized. VSS members will be trained to teach other person about ill effects of fire. VSS members will be a part of awareness team.

➤ **NGOs activities plan**

Support of different NGOs and other civil societies will be sought for conducting mass awareness drives and other innovative programs to reduce forest fire incidences in the targeted area. The partner NGO of OFSDP-II scheme will also be a stakeholder in this process.

➤ **SHGs activities plan**

Different SHGs will be sensitized to reduce forest fire incidences in their area, Support from Mission Shakti department will be sought for the said purpose.

➤ **NSS/NCC camps meeting in villages**

NCC/ NSS/ Eco-Clubs and other student bodies will be approached for supporting the noble cause and to work in a co-ordination for reducing the forest fire incidences.

➤ **GP meeting on 3Fs (Forest Fire Free Panchayat)**

Forest Fire Free (3F) Panchayats will be a motto of the whole program, the Sarpanches and other PRI members of each Panchayat will be made aware about the motto. Panchayati Raj department will also be taken as a coordinating partner for achieving this motto. Sarpanches/ Other PRI members of 3F GP will be awarded by the DFO and their names will be nominated for their exemplary work to Panchayati-Raj department for awards and recognition.

➤ **Dos and Don't List in Odia**

Signages of Do's, Don'ts and other awareness messages will be displayed in the prominent places of villages in vernacular languages for awareness of the people.

➤ **Registering Mobile number of Stakeholders**

It is proposed to register mobile number of stakeholders in FSI portal. The field staffs will be assigned the duty for completing this task.

❖ **Mitigative measures**

➤ **Functioning of 24 x 7 control room and channel of communication**

Existing Control Room in Division Office as well as in Range Offices are functioning 24 hours to communicate the fire incidence data received from SNPP/ MODIS satellite report/ PCCF Office/ local informer through Whatsapp group of this Division and Control Room Mobile No. 7682942345. A register at each Control Room shall be maintained with updated entry.

• **Use of QGIS in Control Room at Division Office**

During Fire Season Rapid Fire alert System is adopted in this Division. Data Entry operators from control room, download the CSV file from the NASA web site (https://firms.modaps.eosdis.nasa.gov/active_fire/#firms) and FSI Website (<http://fsi.nic.in>) for every 30 minutes. These CSV files were fed into the QGIS software, to identify the Range, Section, Beat and location detail and the shortest road or route possible. The topo sheet images are shared through Whatsapp group and text messages along with this they are also informed via phone calls. Excel sheet and topo sheet image is also shared with the concern Range office which, helps the field staffs to reach the required

location and to extinguish the forest fire as soon as possible. This has reduced time gap to extinguish fire from 4-5 hour to 30 minutes in the field.

➤ **Man power and equipment deployment plan**

- Range will be considered as a unit; in case of severity in any part of the beat the Range officer will have the liberty to mobilize resources to the disaster zone.
- Youths of forest fire anticipated villages will be given more priority for selection as forest fire squad.
- Resources will be allocated properly basing on the severity of forest fire, Bike squads will be formed with the available government bikes or own bikes of the staff, for which fuel will be provided.
- Steps are being taken to allocate at least two fire blower for a Beat. The Range officers will access their functioning of fire blower and repair them before January. Apart from this adequate safety gears will be provided for the squads and other people associated with mitigation of forest fire.

➤ **Training of squads and VSS members on operation of fire blowers and observation of safety measures.**

- Handhold trainings will be provided to VSS members and squads regarding procedures adopted for mitigating forest fire, Dos and Don'ts inside forest area and other related information will be perused to them for effective forest fire management.
- Safety adoption, basic first aid training will be provided to the personnel to handle any kind of untoward situation.

➤ **Police support in booking cases.**

Support of police personnel will be requested for booking vandalizers or groups resisting in forest fire control and management.

➤ **Fire service support for combating forest fire**

Help and support from Odisha Fire Service Personnel will be sought to combat fire hazards in the approachable less terrain patches for immediate control.

➤ **Sarpanches may delegate powers to apprehend persons causing forest fire**

- Local Sarpanch will be delegated power of retaining people, involved in forest fire for taking further action by Forest Officers.
- Sarpanch will be requested to aware locals about consequences of kindling fire in forest areas.

➤ **Division to procure sufficient blowers and kits (jackets, shoes etc.) for squads**

It is proposed to procure and repair the equipment and other accessories for the said purpose before 15th of January.

➤ **SMS alert.**

All Forest staffs and locals will be requested for registering in Forest Fire alert Programme of FSI for getting instant information about forest fire occurrence in their locality. The SMS alert will help in quick action on the fire affected area.

➤ **Dealing with repeated fire points**

Area having repetitive fire incidences will be treated with utmost priority. Awareness will be created in the dwelling and fringe villages involving other departments of the government. Support from district administration and all their machineries for dealing with these areas. A combination of preventive and mitigative measures will be implied to deal with the same.

➤ **District Support Allocations (DRDA, PRI)**

The fund available with the District administration, DRDA and other departments will be ventured upon for aided financial support to this plan as and when required. The DRDA will be requested to allow fire line tracing and inspection path as a MGNREGA activity.

➤ **Concomitant monitoring:**

AT DIVISION LEVEL

The Divisional Forest Officer / In-charge of the Forest Division will be responsible for following works:

- i) Organising Coordination meetings with District level fire officers, DFO, Kenduleaves, DM, OFDC Ltd. and other concerned departments.
- ii) Preparation of fire prevention & reclamation Plan and supervise the implementation of the approved plan.
- iii) Action for filling of vacant positions in fire risk forest Beats & Sections before onset of fire season.
- iv) Procurement of fire fighting equipments and tools required for strengthening the base level.
- v) Notification of prohibited activities and display on conspicuous place for public as per section 3(2) of Orissa Forest (Fire Protection) Rules, 1979.
- vi) 24 X7 fire prevention control room at division headquarters in charge of an officer of Deputy Ranger/ Forester rank with staffs and equipments. Ensure Registration of official Mobile number with FSI website (<http://www.fsi.org.in>) for getting fire alert message and setup effective two way communication network. Contact number of control room should be displayed at Beat, Section and Range offices.
- vii) Make Incentive provision for VSS & public informants.
- viii) Monitor & review fire control operation on weekly basis in the Division.
- ix) Ensure timely submission of fire occurrence report.

➤ **AT RANGE LEVEL**

The Range Officer / In-charge of the Range will be responsible for following works:

- i) Monitor and supervise the works like maintenance of fireline, selection of fire fighting squads members well in advance of the fire season.

- ii) Repair to forest roads, maintenance of boundary & compartment lines, select site to set up camps, construction of Machans and decide on fire fighting squad members well in advance of fire season
- iii) Organising monthly meetings of VSS during fire season, organise public awareness programmes, proper display of signboards/ banners on proper places. He must have regular interaction with VSSs.
- iv) Deploy staff and squad members on strategic points with specific duty and chalkout the irmovement to cover fire sensitive forest areas.
- v) Organising mock drill training for Foresters, Forest Guards, Squads and VSS members with assistance of fire service personnel for effective fire control. Maintain Duty Register and log Book for fire squads and staff.

- vi) Conduct enquiry into each fire affected forest area, assess the loss, verify the action taken by the staff to control fire and submit report.
- vii) Recommend names of VSS, informants and squad members for incentives and awards.

➤ **AT SECTION LEVEL**

The Section Forester /Section in charge will be responsible for the following works:

- i) Prepare detail map showing fire prone area, route chart to those sites and available water sources
- ii) Execution and supervision of fire control measure works (maintenance and creation of Fire Line, compartment and boundary line) in fire prone areas well in advance.
- iii) Organising VSS meetings on regular basis and encourage members to take appropriate steps for control of fire as a Convenor.
- iv) Safe custody of fire fighting equipments and kits from Range Office.
- v) Receiving fire alert messages from VSS, Range office & Division Control Room on a day to day basis, ensure entry into a register and pass on to Beat Guard.
- vi) Arrange labour, hire of vehicle and provide logistic support to fire fighting squads.
- vii) Action taken report with details of area fire affected with GPS survey and damage to flora and fauna (photographs) to be submitted within 48 hours.
- viii) Keeping close contact with local Fire Service Station for information and technical guidance.
- ix) Expeditious steps to initiate legal action against culprits with due procedure and adequate evidence.
- x) Ensure all equipments required for fire fighting have been supplied to all Forest Guards, VSS members, fire fighting squads and are in working condition.

➤ **AT BEAT LEVEL**

Beat Forest Guard / In charge of the Beat will be responsible for following works:

- i) Well acquainted with area, map, topography, routes and fire risk areas of his jurisdiction.
- ii) Make regular patrolling in forest areas and interaction with locals. He will provide his mobile number to local ward member/ Sarpanch/ Important local villagers and request them for providing the information about forest fire promptly.

- iii) Receive messages from Control Room, Range Office, Section Forester and VSS on fire occurrence, record in log book/register.
- iv) Submit weekly report ensuring forest area not affected by fire due to his effort.
- v) Submit the area affected by forest fire on daily basis to Section Forester and Range Officer.
- vi) Make frequent night halts in interior pockets of his jurisdiction.
- vii) Reactivation of dormant VSSs and creation of new VSSs in all forest fringe villages within 10th December and report compliance to Range Officer through concerned Forester.
- viii) Inventorisation of all mahua trees along with GPS coordinates within 01.00 Kms of the forest areas within 10th December and report compliance to Range Officer through concerned Forester.

❖ **Expected outcome**

The preventive measures and mitigative measures are prepared for the coming fire season by taking the field challenges. All the staffs have insured to follow the preventive measures as well as mitigative measures meticulously and discharge their duties and responsibilities in an effective way so that this division is expecting 30% less fire points and affected areas comparison to last year.

Forest Fire Hand Tools

Successful forest fire suppression depends on a well balanced combination of people, equipment, tools, and training. For any forest fire control organization to be effective it is important that they are provided with appropriate fire control tools and equipment. These are necessary in the prevention and suppression of any forest fires.

These are five basic work function in forest fire control where hand tools are used.

These are:

- (i) Line location;
- (ii) Clearing and construction of trails;
- (iii) Grubbing, trimming, trenching;
- (iv) Burning off; and
- (v) Suppression/mop-up

In fire suppression the purpose of using the tool is to reduce combustion, in any one of several ways or combinations of ways.

Firstly, the person / tool combination may reduce combustion by removing potential fuel from the path of the fire. For example, the uses of a fire rake to remove forest litter of dry leaves.

Secondly, a tool can be used to cool the burning fuels directly in front of the fire to a temperature that will no longer support combustion. An example of this is the application of water or sand to be burning fuel.

Thirdly, a tool can be used to smother a fire to prevent it from obtaining the amount of oxygen it needs to sustain combustion. Fire swatters of various kinds are used in this way.



In the course of fighting a fire a good fire fighter uses a fire shovel, for instance, in three ways: to remove the fuel, to cool-off the burning fuel, and to smother a fire to prevent it from getting the oxygen it needs to sustain combustion.

6.3.5.2 Basic consideration in choosing fire accessories and tools

Since the fire fighting job varies, there is considerable variation in the relative importance of each criterion in a particular environment.

- (i) **Effectiveness**- This is the capability of the accessories and tools to accomplish a desired task to an acceptable standard. The emphasis is on the quality of the result.
- (ii) **Efficiency or Productivity**–Whether hand or motor-driven,an item of equipment should permit or produce a maximum amount of effective work of a given kind for a minimum energy requirement. For handtools this is strongly influenced by the experience and training of the individual worker.
- (iii) **Versatility** – The wider the range of use of a specific piece of equipment or tool the better, although efficiency also has to be considered.
- (iv) **Portability**- Some fire equipment must be transported over long distances under difficult conditions, sometimes by aircraft. Under these conditions, heavy or bulky equipment will increase transport difficulty and increase the frustration level of these responsible for forest fire control. Especially for fires in high altitudes (and inecologically sensitive areas such as Mt. Kilimanjaroin Tanzania) light, portable tools are required.
- (v) **Durability**-Fire tools must be strong and not prone to breaking when most needed. The breakage of a personal tool may even result in the death of the fire fighter, such as in the event of a sudden change in wind direction.
- (vi) **Maintenance and replace ability**-Minimum maintenance requirement are essential. Aslo essential is that key parts and assemblies can be readily detached and replaced(e.g blades, flaps, and handles).
- (vii) **Standardization**- It is desirable to use the same items as widely as possible, both within and between protection organizations. Standardized can be readily pooled, traded and effectively used, with less time consumed on servicing and maintenance.

The conditions under which wildfires are often fought will place a heavy stain on both the equipment and the fire-fighter. Failure of accessories and tools at crucial times during suppression operation can have disastrous effects on the success of the effort and the safety of fire-fighters.

SIN o	Name	Usage	Technical Specification	Photo
1	Chain Saw	Cutlarge material and felling Timber	Weight:5Kg Guide Bar Length:13” Engine:49 cc,2stroke	
2	Fire Swatter	Extinguis h grass fire Flame	Weight: 2.7Kg Length of Handle:1520 mm Length of Flap: 300mm Width of Flap:50mm	

3	Fire Rake	For Fireline Construction	Weight: 2.2Kg Length of Handle:1200mm Width of Handle: 305mm	
4	Improved Grass Cutting Bolo	Cutting Grass	Weight: 0.5Kg Length of Blade:300mm Length of Handle: 560mm	
5	Fire Fighting Shovel	Throwing Soil to extinguish Fire	Weight: 3.2Kg Length of Handle:1500mm Length of Blade:300mm Width of Blade:220mm	
6	Axe	For Blazing and Brushing	Weight: 2.4Kg Length of Handle:650mm Width of Head: 93mm	
7	Fire Pump and Hose	To draw water	Site specific requirement based on Friction loss and elevation loss.	

8	Back pack pump	To take water	Capacity:22Ltr Dry Weight:5Kg	
9	Fire Bucket	To spread/ carry water	Capacity:22Ltr Dry Weight:1Kg	
10	Fire Beater	To put off fire hidden under lump. Mostly used in post fire operation.	Weight: 900gm Length:24cm Breadth:24cm Thickness:3mm	
11	Torch	As Head lamp during Firefighting	Rechargeable 6Watt LED	

Chapter-12

Capacity Building:-

12.1 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.

12.2 Capacity Building of Govt. Officials, PRI Members etc.:

[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.

12.3 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,Warehouse In-charges	8
5.	Electronics and IT Department	District Data Managers,OSWAN	3
6.	Energy	EE/AEE/JE-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/ACCF/DFO,ACF/SDFO,Rangers	48

12.	HandloomTextile & Handicrafts	Primary weavers Cooperative Society, Mills &Looms	51
13.	Higher Education	Principals,NSS Coordinators	108
14.	Health & Family Welfare	CDMO, ADMO and MedicalOfficers	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 & PublicRelations	DIPRO	3
18.	Labour and ESI Department	District Labour & Employment Officer	3
19.	Law	Head of DLSSA & Juvenile JusticeBoards	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 & YouthServices	District Sports officer, Coaches	3
25.	ST & SC Development Department	PA,ITDA,DWO,DSWO,Special Officer, Micro Projects Heads, Cluster Heads	18
26.	Steeland Mines Department	.MO & DDM, JCA & 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,EENH-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)

12.2 Indicative list of Training Programmes for SubDistrict Level Officials of Government Departments as per the Capacity Building Frame work 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,Warehouse in charges	8
5.	Electronics and IT Department	Block Data Managers, OSWAN	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 Gu	48
11.	Handloom Textile & Handicrafts	Tasar&MulberrySo cieties	9
12.	HigherEducation	Universities/Colleg es	108
13.	Health&FamilyWelfare	MO-CHC,MO- PHC	681
14.	Housing and Urban Development Department	Chairman Executiv	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,Specia lised Adoption Agency & Open Centres	36
18.	Sports & Youth Services	Coaches	33
19.	ST & SC Development Department	Hostels,Schools	387
20.	Steel and Mines Department	Directorate of Geology; Directorate 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)

12.3 Community Capacity Building and CommunityBased DisasterManagement:

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

Table11.3

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	BOUDH	Boudh	11	43	43	387	1	SURABHI
2		Harabhang a	13	44	44	396	1	
3		Kantamal	7	22	22	189	1	YCDA

(GP wise village list for the first phase to be given in Volume II of the DDMP as per the

following Table/ Table 11.4

Sl	District	Block	GP	Village	Name of the VDMC	Name of President	Contact No.	No. Of Task Force Teams Formed	Name of the NGO	Contact Details
1	Boudh	Boudh	11	43				387	SURABHI	
2		Harabhanganga	13	44				396	SURABHI	
3		Kantamal	7	22				189	YCDA	

12.4 Training Programmes for Cyclone and Flood Shelter Maintenance & Management Committee (CSMMC & FSMMC) and Task Force members:

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/FSMMC/ 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

12.5 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 Mockdrill	4	28	19.06.2021
2.	Tsunami Mock drill	NA		
3.	Flood Mockdrill	4	37	10.06.2021

Table-11.7

Sl. No.	Type of Mock Drill	Officials/ Institutions to be involved	Month/Date	Remarks
1.	Tsunami	NA		
2.	Flood	AWW, ASHA, PRI members, Office of BDO. Tahasildars, CSOs ,Fire station, Police, NGOs, Volunteers, VDMC ,MFCS members	MAY	
3.	Cyclone		APRIL	
4.	Earthquake			
5.	Industrial Accidents/ Industry Specific Mockdrills			
6.	Crowd Management			

Chapter 13

Preparedness:-

13.1 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				

13.2 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

13.3 Resources Available:Response Forces & Volunteers

Table-12.3

Sl. No	Response Forces/	Capacity (InNos.)	No. Of trained person			Name of Nodal Person	Contact Details(Mobile/Phone)
			Search/Rescue	FirstAid	Relief line Clearance		
1	NDRF						
2	ODRAF						
3	Police						
4	Home Guards						
5	Civil Defense						
6	NCC						
7	NSS						
8	NYK						
9	Trained Task Force						
10	Apada Mitra Volunteers						

13.4 PROCEDURE FOR USING INMARSAT IS AT PHONE2

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 TelephoneNo
 - ii. From Satellite to mobile: Dial 00 + 91+ MobileNumber
 - 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.

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

Task	Activity
District Emergency operation Centre (DEOC)	<ul style="list-style-type: none"> • Test Checkup of all communication Interfaces in regular interval • Proper manning of the Control Room as per Para-10 of the Odisha Relief Code • A dedicated vehicle must be earmarked for Control Room
Upward & Downward Communication	<ul style="list-style-type: none"> • Have a list of Nodal person with contact details • Establish regular linkages with all important stakeholders • Contact SEOC regularly
Meeting of DDMA (Heads of the department & stakeholder)	<ul style="list-style-type: none"> • DDMA must meet twice every year & before any disaster • Fix time & venue for regular Preparedness meeting to Assess preparedness of District /Department /Civil Society /Block Community /Family /Individual level regularly • Circulate the minutes of the meeting with clear-cut role & responsibility
Capacity Building	<ul style="list-style-type: none"> • Identifying & designating Nodal Officer for different Dept. • Capacity building & skill upgradation of ODRAF/Fire services/ Police/Home Guard • Identify Volunteer like Civil Defence/Cyclone shelter Task Force/NCC/NSS/Scout & Guide & train them on Search & Rescue, First aid, evacuation etc. • Take stake of required materials for search & rescue, first aid, casualty management, evacuation, relief etc. & update IDRN portal regularly • Assess preparedness through Mock drill at District, Block & Community level
Shelter Management	<ul style="list-style-type: none"> • Take necessary steps for operation & maintenance of shelters • Test Check of various Equipment at shelter level & repair of the defective ones • Ensure regular meeting of Shelter committee • Assess Shelter level preparedness through Mock drill 1
Planning & Reporting	<ul style="list-style-type: none"> • Collect & transmit Rain fall data regularly • Collect & transmit weather report regularly • Ensure preparation of Disaster Management Plans & Safety plans at all levels • Capacity building of all Stake holders

	<ul style="list-style-type: none"> • Integrate the District plan with block & Village disaster management Plans • Develop healthy media partnership
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13.7 Preparedness at Community Level

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

13.8 Preparedness at Family Level (The list is Indicative & may be extended further as per need & requirement)

Task	Activity
Warning Communication	<ul style="list-style-type: none"> List the minimum Important requirements Keep all the important Documents in a water proof polythene Record the Safe & alternative routes to shelter Keep News update in Radio/TV
Preparedness	<ul style="list-style-type: none"> 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 & charger / radio Family must have a “Ready to go First Aid Kit” containing Iodine/ Band aids/ Cotton/ Medicines/ ORS/ ointments/ scissor/ halogens etc. Assess preparedness on a regular basis by checking Radio/Mobile/ Emergency Kit/First Aid Kit/Fuels & Kerosene (as per need) Replace the damaged outdated or expired materials with new ones.
Capacity Building	<ul style="list-style-type: none"> Participate & involve in the activities of village disaster Management plan, preparation of Safety plans, participate in Capacity building Programmes & involve in Mock Drills

13.9. Preparedness at Individual Level (The list is Indicative & may be extended further as per need & requirement)

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

	<ul style="list-style-type: none"> • Safety plans • Capacity building Programmes • Mock Drills & FAMEX
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13.10 Preparedness of Departments (The list is Indicative & may be extended as per need & requirement)

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

	<ul style="list-style-type: none">• Helping BDO during emergency• Supply of drinking water during emergency• Area wise deployment of staff, fitter, Mason, APD
EE- Irrigation	<ul style="list-style-type: none">• Holding of natural calamity meeting in the month of May and October• Awareness Generation• Formation of Zones/ Sub- Zones• Review Progress• Provision/ arrangement of sand bags in risk prone area• Equipments to be ready• Formation of team• Arrangement of vehicle• Delegation of areas
DAO- Agriculture	<ul style="list-style-type: none">• Information provided about the disaster and likely damages to crop and plantation• Organized transport, storage and distribution of seeds/fertilizers/pesticides• Cleaning operation carried out to avoid water-logging and salinity• Surveillance for pests and diseases being carried out.• Establishment of public information centres requirements for salvage or re-plantation assessed damage.• Identification of different areas to be affected by different hazard• Listing of irrigation sources with status.
EE- Public Works	<ul style="list-style-type: none">• Route strategy for evacuation and relief marked will be prepared• Clearance of blocked roads• Community assistance mobilized for road clearing.• All staff informed about the disasters, likely damages and effects
DTO-Telecom	<ul style="list-style-type: none">• Inspection and repair of poles etc.• Standby arrangements for temporary electric supply or generators• Identification of materials required for response operations• All staff informed about the disasters, likely damages and effects
CDVO	<ul style="list-style-type: none">• Arrangement of repairs/alternative arrangements in case the facilities related to animal husbandry and veterinary services is disrupted.• To make arrangements to necessary medicines, vaccines and other material, for treatment of animal

RTO/MVI	<ul style="list-style-type: none">• Designate one of the officers as nodal officer for management of the disaster in the district. ®• Prepare the Disaster Management Plan of the department at the District level.• To identify and designate the buses bunches which can be plied in response to the specific disasters.• Issue standing instructions to the private bus and truck operators and assign the responsibilities for them in case of disaster situation
DFO-	<ul style="list-style-type: none">• To take care of public shelters, other places to be used for evacuation with primary facilities like water• To prepare a list of public properties in the damage prone forest areas and will make advance arrangements to lessen the damage To take care of public shelters, other places to be used for evacuation with primary facilities like water• To prepare a list of public properties in the damage prone forest areas and will make advance arrangements to lessen the damage
EE- Electricity	<ul style="list-style-type: none">• Regular identification of faults• Regular checking and repair of weak points. Transformers• Stockpiling of equipments/ accessories• Skill development training / orientation• Precautions/ protections near high voltage electric equipments installed• Stopping illegal consumption of electricity
EE – PHED	<ul style="list-style-type: none">• Super chlorination of water sources• Sinking pump machines• Installation of water storage tanks• Installation of DG sets
DEO- School & Mass Education	<ul style="list-style-type: none">• Repairing of school buildings• Repairing of roads and approaches to school buildings• Creating awareness among the parents & students regarding different disasters
DEO - Higher Secondary Education	<ul style="list-style-type: none">• Repairing of college buildings• Repairing of roads and approaches to college buildings• Creating awareness among the parents & students regarding different disasters

NGOS & CBOS, Mahila Samitis, SHGS, Youth Clubs, religious Institution or Trust etc.

PREPAREDNESS	REMARKS
<ul style="list-style-type: none"> • IEC Campaign • Preparation of community Contingency Plan • Formation of Village Disaster Preparedness Community with assigning their particular responsibilities • Generation of Community Contingency Fund • Mock Drill in different levels • Training to the NGO/ Village Volunteers on Rescue & First Aid/ Ham/ VHF Etc. 	<p>Shall keep direct link with Block administration</p>

9.8 I.D.R.N. (India Disaster Resource Network):

It is a web based information system for managing the inventory of “Equipment, Skilled human resources and Critical Supplies” for emergency response. It is initiated by Ministry of Home Affairs (MHA), Government of India, who has been managing the IDRN portal since June, 2008. The District Authorities are authorized for uploading and updating the data after collecting it from various line departments of their respective districts.

The information available in I.D.R.N. portal can be effectively put to use at the time of emergency relating to various calamities/ exigencies. The portal Id is: <http://www.idrn.gov.in>. Authorized district official can access this information. Hence it is inevitable that all Govt. and non-Govt. stake holders have to constantly keep on providing information on quarterly basis regarding their equipments, manpower and critical supplies

13.5 Allotted Satellite Phone Numbers

Table 12.4

Sl	Districts	CallingNumbers	Sl	Districts	CallingNumbers
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 6 th Battalion	870776146961
6	Collector Boudh	870776146929	32		870776146962
7	Collector Cuttack	870776146932	33	ODRAF Bhubaneswar, OSAP 7 th Battalion	870776146959
8	Collector Deogarh	870776146931	34		870776146960
9	Collector Dhenkanal	870776146934	35	ODRAF Baripada, OSAP 5 th Battalion	870776146957
10	Collector Gajapati	870776146933	36		870776146958
11	Collector Ganjam	870776146949	37	ODRAF Rourkela, OSAP 4 th Battalion	870776146955
12	Collector Jagatsinghpur	870776146950	38		870776146956
13	Collector Jajpur	870776146947	39	ODRAF Koraput, OSAP 3 rd Battalion	870776146953
14	Collector Jharsuguda	870776146948	40		870776146954
15	Collector Kalahandi	870776146945	41	ODRAF Jharsuguda, OSAP 2 nd Battalion	870776146908
16	Collector Boudh	870776146946	42		870776146909
17	Collector Kendrapada	870776146943	43	ODRAF Chatrapur, OSAP 8 th 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

Chapter-14

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.

While local governments are primarily responsible for managing events in their area, the early and pre-emptive activation of support and resources from district and state levels ensures an integrated, active and effective response to disaster affected communities. This is particularly relevant for hazard specific arrangements and large scale disasters which may overwhelm local resources.

Activation of response arrangements occurs when there is a need to:

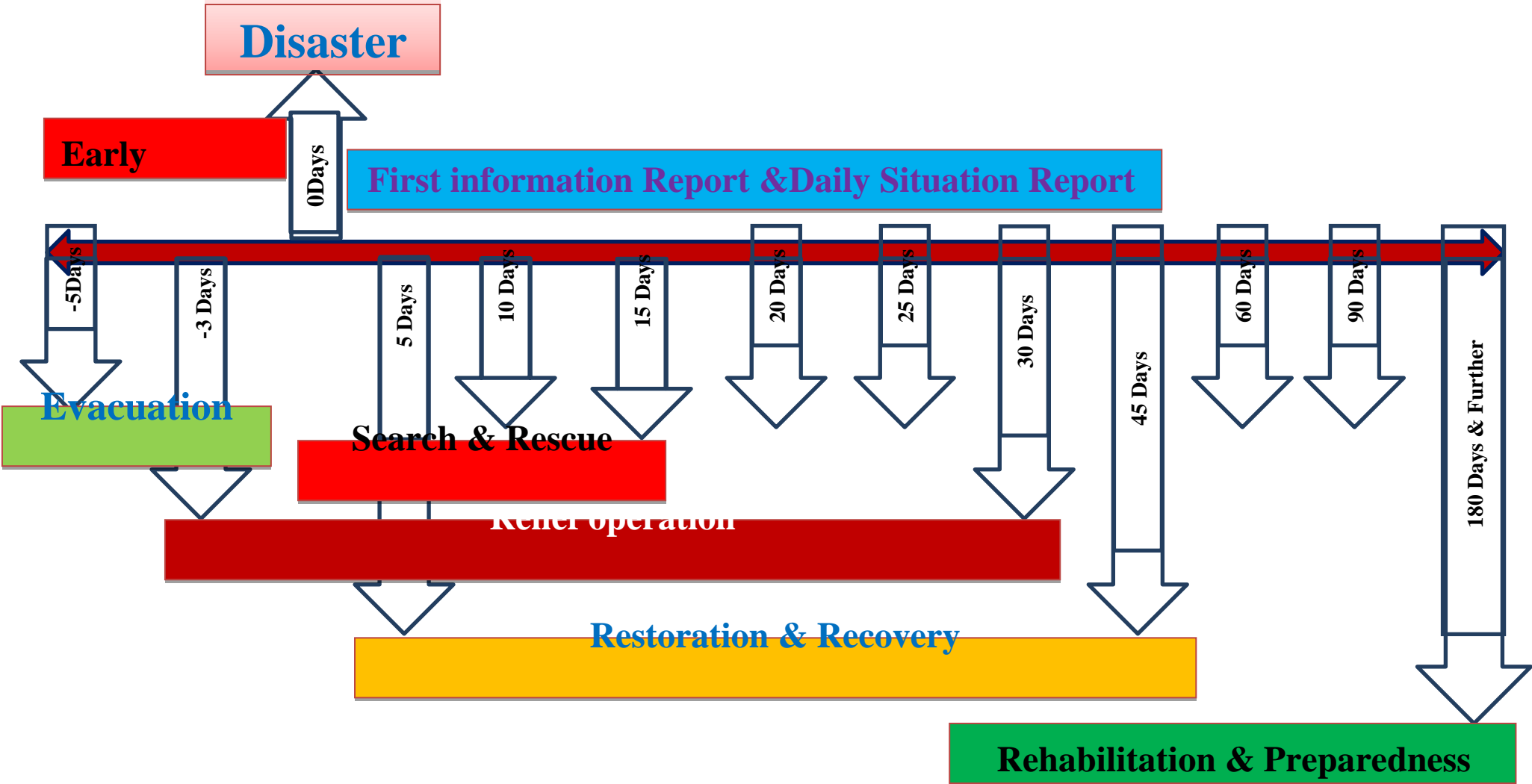
- monitor potential hazards or disaster operations
- support or coordinate disaster operations being conducted by a designated lead agency
- coordinate resources in support of disaster and recovery operations at local or district level
- Coordinate state-wide disaster response and recovery activities.

Activation does not necessarily mean disaster management groups must be convened but may entail providing information to members of those groups about the risks associated with a pending hazard impact.

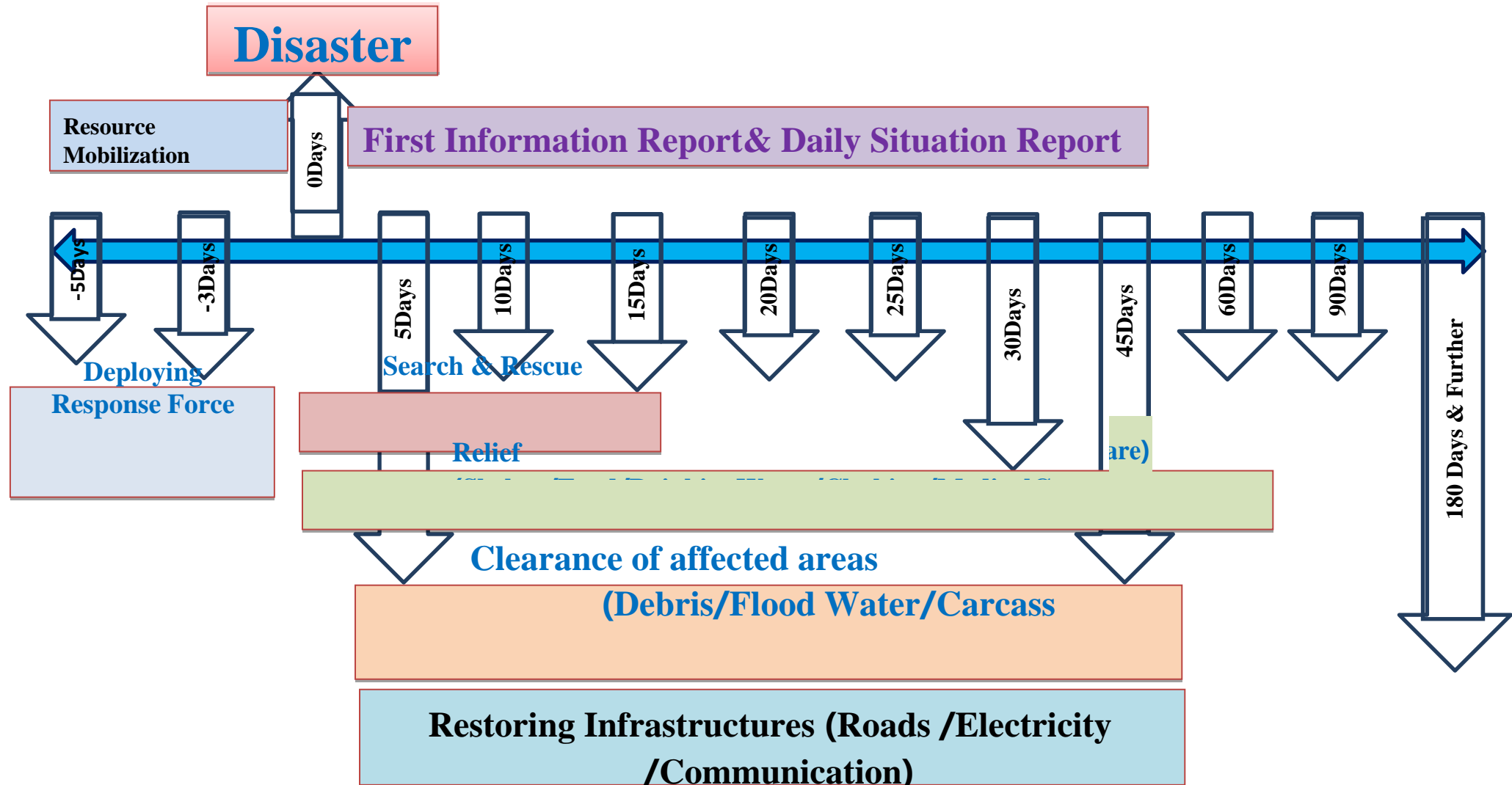
The decision to activate disaster management arrangements, including the disaster management groups and/or disaster coordination centres, depends on multiple factors including the perceived level of impact to the community.

Activation of response arrangements should occur in accordance with the activation processes detailed in the relevant plan.

14.1 Phases of Response: Time line
(Indicative) Figure-13.1



14.2 Relief Management : Time
line Figure-13.2



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

13.3 Response: District

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

	<ul style="list-style-type: none"> • Collector to submit requisition of vehicle/boat/ helicopters& list of support from state & Centre to all concerned authorities • CSO to store required relief materials (Chhuda. Gur, Dry Foods) in the nearby storage points • CDVO to store, transport & distribute required fodders for animals to the affected areas
	<ul style="list-style-type: none"> • Cyclone shelter committee & Village Disaster management committee to organize free kitchen in the shelters with help of revenue dept. • EE- RWSS & CDMO to ensure supply of drinking water, disinfection of water & maintain Health & hygiene in the shelters • CDMO to carry out First aid & casualty management • Collector to collect & transmit First Information Report (FIR) & Daily Situation Report as per requirement

13.4 Response: Community Level

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

13.5 Response: Family & Individual Level

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

13.6 Response: Standard Operating Procedures for Departments

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

	<ul style="list-style-type: none"> • Measures to dis –infect drinking water • Availability of Blood Banks/Ambulance 		
Superintendent of Police (SP)	<ul style="list-style-type: none"> • Facilitate shifts the people to the safer places • Arrange law and order against the probable theft in the disaster-affected area and co-ordinate with the search and rescue • It assists the authorities for evacuation of people to the safe places. • The home guards should be alerted. • Sufficient No. of vehicles should be reserved • Sufficient Qty. of petrol and oils to vehicles is ensured. • Communication of warnings through VHF to all police stations. 	<ul style="list-style-type: none"> • Activate Search & rescue • Maintain law & order , Response, Rescue & keep proper records of human loss • To arrest and take into custody the • Rumors mongrels 	<ul style="list-style-type: none"> • Look the communication problem & control the traffic jam on the roads. • Makes due arrangements for post mortem of dead persons, and legal procedure for speedy disposal. • Look specially for protects the children and the women at the shelter places • Maintain law & order situations for smooth management of all the post disaster activities
EE- RWSS	<ul style="list-style-type: none"> • Issue instruction to the Community level & create awareness not to drink of polluted water • Make ready of Tankers for immediate supply of drinking water to the affected areas • Formation of teams & nodal persons allotting Areas 	<ul style="list-style-type: none"> • Check the functionality status of Tube wells , Pipe water supply & its quality • Keep coordination with DOEC • Organize the teams to check the sources of water / drinking water. • Standby arrangements of 	<ul style="list-style-type: none"> • Steps to be taken for immediate restore of Drinking water supply • Arrangement of Drinking waters to Shelter centre& public gathering places • Steps to be taken for restoration of defunct tube wells & pipe water supply

	<ul style="list-style-type: none"> • Functioning of control room 	<p>tankers for drinking water through tankers or any other available source.</p> <ul style="list-style-type: none"> • Will make available chlorine tablets in sufficient quantity and arrange to distribute 	
EE- Irrigation	<ul style="list-style-type: none"> • Warning should be communicated to all the subordinate staffs & employees. • Ensure that communication equipments like telephone, mobile phone, wireless Set and siren etc. are in working conditions. • Keep the technical and non-technical staff under control, ready and alert. • Get status report of ponds, dam, canal and small dams through technical persons. • Will take decision to release the water in consultation with the competent authority and immediately warn the people living in low lying areas in case of increasing flow of water or over flow? • Keep the alternative arrangements ready in case of damage to the structure of dam / check dam to leakage or overflow in the reservoirs. 	<ul style="list-style-type: none"> • Look the functioning of deputed nodal officers to the areas. • Check the clearance & water logged areas. 	<ul style="list-style-type: none"> • Damages due to disasters immediately assessed & reported to Govt., Tahasildars, Sub-Collector concerned immediately. • Immediate implementation of restoration works

	<ul style="list-style-type: none"> • Make due arrangements to disseminate the information about the increasing and decreasing water level whatever it may be to the community, media etc • A senior office will remain and work accordingly at large storage reservoirs. 		
DAO- Agriculture	<ul style="list-style-type: none"> • Will ensure that the staff under this control is on duty at the headquarters. • Inform the farmers regarding dos and don'ts • Will assign the work to his subordinate officers and staff the work to be done regarding agriculture • Will receive instruction from the district liaison officer and will take necessary action. • Will make groups having vehicles for emergency work and will assign the areas to them. • Will set up a temporary Control Room for the dissemination of information for Emergency work and will appoint a nodal officer. 	<ul style="list-style-type: none"> • Contact with DEOC • Start field verification of crop & agricultural land losses • Report to the Govt & DEOC 	<ul style="list-style-type: none"> • Will collect the details of loss of crops to send it to the district administration. • Should have the details of village wise various crops in the district. • Will prepare a primary survey report of crop damage in the area and will send the same to district control room and also to the administrative head. • Will immediately put the action plan in real action during the emergency. • Depute one responsible officer for DEOC • Estimate the requirements of the seeds and material required to mitigate the loss.

EE- Rural Works	<ul style="list-style-type: none"> • Operate Control room in the office • Provide instruction to all his staffs to remain alert • Form teams & assigned areas and work • Cancel all leaves of all staffs after receiving warnings • Take status of Rural works, connectivity positions 	<ul style="list-style-type: none"> • Monitor the works of the teams • Provide necessary support for immediate rescue & restore of Rural works • Support the District administration & keep contact with DEOC 	<ul style="list-style-type: none"> • Carry out detailed survey assessment of affected rural work areas in the Disaster • Submit report to the govt • Implement repair & restoration activities
EE- Public Works	<ul style="list-style-type: none"> • Operate Control room in the office • Provide instruction to all his staffs to remain alert after receiving warnings • Form teams & assigned areas and work • Cancel all leaves of all staffs after receiving warnings • Take status of Rural works, connectivity positions • Keep vehicle ready for emergency 	<ul style="list-style-type: none"> • Monitor the Infrastructure restoration teams allotted in the affected areas so as to make the other teams reach the affected areas without any loss of time. • Assist the search and rescue teams in order to expedite the evacuation of the affected peoples. • To restore the roads to the motor able conditions 	<ul style="list-style-type: none"> • Carry out the detail technical assessment of the affected areas and prepare the recovery plan and implement it. • Construct the temporary shelters in the affected areas. • Repair the buildings and reconstruction of the buildings
DTO-Telecom	<ul style="list-style-type: none"> • Formation of teams • Cancel the leave of staffs • Operate Control room in his office • Keep vehicle ready for emergency repair 	<ul style="list-style-type: none"> • Immediately look the networks issues 	<ul style="list-style-type: none"> • Carry out the detailed technical assessment of the affected areas • Take steps for immediate restore of connectivity to establish communication

CDVO	<ul style="list-style-type: none"> • Alert all the veterinary health teams in the dispensary along with the resources. • Arrange the equipment in such a way to reach the sites at the shortest possible time. • Operate Control room • Take a stock of fodders for emergency works 	<ul style="list-style-type: none"> • Facilitate immediate rescue & restoration teams • Provide Fodders at MPFS centres& facilitate relief works • Make arrangements of vaccination camps • Take steps for disposal of the dead animals. 	<ul style="list-style-type: none"> • Carry out vaccination camps • Assessment of loss of animal life • Carcass disposal • Submit report of sanction of financial benefits. • Make available the good quality animals to the farmers. •
RTO/MVI	<ul style="list-style-type: none"> • Operate control room • Keep contact with Collector & DEOC • Keep vehicle ready for emergency • Keep close contact on road connectivity 	<ul style="list-style-type: none"> • Coordinate for rescue & restoration • Arrange vehicle for supply speed up relief works • Disaster Transportation teams are deputed to transport the ESF teams to the disaster affected areas. • To depute the relief transportation teams to the affected areas. 	<ul style="list-style-type: none"> • Carry out damage assessment & submit report • Take steps for immediate restoration of communication & transportation system • To assist in the transportation of the reconstruction materials
DFO-	<ul style="list-style-type: none"> • Formation of teams • Keep ready of vehicles • Operate control room in office • Alert to the forest dwellers 	<ul style="list-style-type: none"> • Facilitate rescue & restoration works • Facilitates road clearance due to blockage of fallen trees • Look the health conditions of 	<ul style="list-style-type: none"> • Carry out damage assessment & submit report • Ensure plantation of the fodder and other trees in the affected areas

		<p>wild animals in reserved forests</p> <ul style="list-style-type: none"> • Immediate arrangement of fodders for animals 	
EE- Electricity	<ul style="list-style-type: none"> • Contact the District Control Room and assist in their work. • Ensure that all the employees remain present on duty at the Block head quarter. • To assign work to all officers/employees • Ensure to make available the resources available and will establish contacts for the same to deploy those at the time of emergency 	<ul style="list-style-type: none"> • make temporary arrangement for electric supply to the places like hospitals, shelter, jail, police stations, bus depots etc; • Facilitate immediate restoration activities 	<ul style="list-style-type: none"> • Utilize the external resources and manpower allotted to him in a planed manner for disaster management. • To immediately undertake the emergency repairing work .
EE – PHED	<ul style="list-style-type: none"> • Teams are to be formed by EE PHED to attend complains on a rotation basis and also on emergency. • Take steps for arrangement of Necessary materials and Bleaching Powder stacked at Block points to be used during and at post disaster period. • People to be informed to store emergency supply of drinking water. 	<ul style="list-style-type: none"> • Facilitate rescue & restoration works • Take immediate supply of drinking water to the affected areas • 	<ul style="list-style-type: none"> • Carry out damage assessment • Tame immediate repair works of the damage areas for quick supply of drinking water
DEO- School & Mass Education	<ul style="list-style-type: none"> • Instruction to the schools for closing of schools • Instruct HM of schools to hand over keys 	<ul style="list-style-type: none"> • Facilitate rescue & restoration of works • Inform the damage of school 	<ul style="list-style-type: none"> • Carry out damage assessment • Instruct to the HM of schools for not using the damaged building for school

	<p>for shelter purpose if required</p> <ul style="list-style-type: none">• Cancel the leaves of staffs	<p>buildings & drinking water situations to the concerned departments</p> <ul style="list-style-type: none">• Instruction to use the stock of rice of MDM for relief works if required	<p>purposes</p>
<p>DEO - Higher Secondary Education</p>	<ul style="list-style-type: none">• Formation of teams• Include NSS & NCC volunteers and keep them ready for emergency handle• Keep contact with DEOC	<ul style="list-style-type: none">• Facilitate the rescue & restoration works• Involve the NSS , NCC teams in the works• Use of buildings as shelter purposes and relief storage centres	<ul style="list-style-type: none">• Carry out damage assessment• Implement restoration works

13.7 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

Special Relief Commissioner, Orissa

State Emergency Operation Centre (SEOC),

Rajiv Bhawan, Ground Floor, Unit-5, Bhubaneswar

Fax No: 0674-2534176, E-mail: relief_sr@yahoo.com/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
- f. Animals
 - Affected
 - Lost
- g. Crops affected and area (approx. in hect.)
- h. Number of houses damaged
- i. Damage to public property
- j. Relief measures undertaken in brief
- k. Immediate response & relief assistance required and the best logistical means of delivering that relief from State/National
- l. Forecast of possible future developments including new risks
- m. Any other relevant information

Authorised 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).

10.7. 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,..... Qtlsgur 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 15

Rehabilitation & Restoration:-

15 Rehabilitation & Restoration

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.

15.1. Standard Operating Procedure: Restoration & Rehabilitation

Name of the Department	Normal Time
Collector/ADM / Emergency Officer	<ul style="list-style-type: none"> • Restoration of Critical Infrastructures to bring situation to normalcy • Ensure Restoration of roads & channels, Communication network, Electricity & Energy • Ensure health in the affected areas • Adopt sustainable mitigation measures in the restoration activities
CDMO	<ul style="list-style-type: none"> • Carry out Disease surveillance measures to check epidemic prone diseases • Dis-infection of drinking water & measures for health & hygiene • Rehabilitation of deprived & destitute • Carry out Trauma & Psycho-social counselling
Superintendent of Police (SP)	<ul style="list-style-type: none"> • Quick assessment of law and order situation in affected areas • Support and coordinate with Local Administration

	<ul style="list-style-type: none">• Prepare updates on the law and order situation every 4-6 hours and brief the authorities• Controlling situations like rioting and looting, and cordon off sensitive areas• Control and monitor traffic movement.
EE- RWSS	<ul style="list-style-type: none">• Ensure that supply of drinking water is made available at the affected site and relief camps.• Ensure the temporary sewerage lines and drainage lines are kept separate.• Report the situation and the progress on action taken by the team to the EOC• Carry out emergency repairs of all damages to water supply systems.• Assist health authorities to identify appropriate sources of potable water.• Identify unacceptable water sources and take necessary precautions to ensure that no water is accessed from such sources, either by sealing such arrangements or by posting the department guards.• Arrange for alternate water supply and storage in all transit camps, feeding centers, relief camps, cattle camps, and also the affected areas, till normal water supply is restored.• Set up temporary sanitation facilities at the relief camps.• Coordinate with DEOC
EE- Irrigation	<ul style="list-style-type: none">• Round the clock inspection and repair of bunds of dams, irrigation channels, bridges, culverts, control gates, overflow channels, repair of pumps, generators, and motor equipment and station buildings.• Establish communication with the State EOC, Divisional Control Room, District Control Room and Police.• Carry out damage assessment & restoration & reconstruction activities
DAO- Agriculture	<ul style="list-style-type: none">• Identification of different areas to be affected by

	<p>different disasters</p> <ul style="list-style-type: none">• Organize transport, storage & distribution of seeds, fertilizers, pesticides & labour.• Communication with the State EOC, Divisional Control Room, District Control Room and• Other concerned departments.• Public information centre should be established with a means of communication, to assist in• Providing an organized source of information.• Submit a report on the amount spent on disaster management in pursuance of these relief activities,• Carry out restoration , crop loss assessment , input subsidy etc activities
EE- Rural Works	<ul style="list-style-type: none">• Carry out detailed survey assessment of affected rural work areas in the Disaster• Submit report to the govt• Implement repair & restoration activities
EE- Public Works	<ul style="list-style-type: none">• Carry our quick damage assessment & submit reports• Carry our Restoration & rehabilitation works• Contact with DEOC• Route strategy for evacuation and relief marked• Community assistance mobilized for road clearing.
DTO-Telecom	<ul style="list-style-type: none">• Restoration of tele communication system• Carry out damage assessment & submit report• Look immediate restoration of communication for emergency services
CDVO	<ul style="list-style-type: none">• Supply of emergency medicines and medical equipments• Arrangement of anesthetic drugs/vehicle for transport of injured animals• Identification of places for opening of operational sites• Carry out damage assessment of animal lives & submit report
RTO/MVI	<ul style="list-style-type: none">• Coordinate with DEOC nodal office.

	<ul style="list-style-type: none">• Report the situation and the progress on action taken for clearance of transportation system• Ensure timely re-establishment of the critical transportation links• Carry out damage assessment & carry out restoration activities
DFO-	<ul style="list-style-type: none">• Carry out damage assessment & submit report• Ensure plantation of the fodder and other trees in the affected areas
EE- Electricity	<ul style="list-style-type: none">• Begin repairing and reconstruction work• Assisting hospitals in establishing an emergency supply by assembling generators and other emergency equipments, if necessary.• Establish temporary electricity supplies for other key public and private water systems• Establish temporary electricity supplies for transit camps, feeding centers, relief camps and, District Control Room and on access roads to the same.• Establish temporary electricity supplies for relief material go downs.• Compile an itemized assessment of damage, from reports made by various electrical receiving centers and sub-centers.• Report about all the activities to the head office.
EE – PHED	<ul style="list-style-type: none">• Facilitate Search & rescue works• Engage Several teams of engineers and assistants for restoration of water supply services should be• Constituted as precautionary measure.• Make provisions to acquire tankers and establish other temporary means of• Distributing water on an emergency.• Supply Required stock of lengths of pipe, connections, joints, hydrants and bleaching powder for restoration & reconstruction works• Carry our damage assessment & submit report

DEO- School & Mass Education	<ul style="list-style-type: none">• Facilitate search and rescue and first-aid team which has formed in schools.• Carry out Damage assessment on school buildings• Monitor shelter centers attached with schools• Contact with DEOC & report about the status
DEO - Higher Secondary Education	<ul style="list-style-type: none">• Facilitate search & rescue works• Carry out damage assessment of college infrastructure• Carry our construction & developmental activities

15.1 Damage & Loss Assessment

15.2 Table-14.2

Sector	Damage in Physical terms	Requirement of funds for repair of immediate nature	Out of (3) amount available from annual budget	Out of (3) amount available from related schemes/ programmes / other sources	Out of (3) amount proposed* to be met from SDRF/NDRF as per the list of works indicated in the revised items & norms
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					
Primary Health Centres					
Community assets insocial sectors covered by Panchayats					

15.6 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 house hold					Expenditure incurred (Milch animals @ Rs.30,000 for large animal , Rs.3000 for small animals& Draught animals@Rs25000 for large animal, Rs.16,000 for small animals)				Poultry@ 50/-per Bird subject to a ceiling of assistance of Rs.5000/- Per beneficiary House hold.	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		Buff alo/ Cow	Shee p/ Goat	Camel/ Horse/ Bullock	Calf/ Donkey / Pony	Buff alo/ Cow	Sheep /Goat	Camel/ Horse/ Bulloc k	Calf/ Donk ey/ Pony			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

Contd..

15.9 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	
2.	Number and names of Blocks affected	
3.	Number of villages affected	
4.	Population affected (in lakh)	
5.	Total and area affected (in lakh)	
6.	Cropped area affected (in lakh)	
	i)Total cropped area affected	
	ii)Estimated loss to crops(Rs. In lakh)	
	iii)Area where cropped damage as 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	

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

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
Roads & Bridges	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				
Drinking	Rural Water	No. of Tubewells damaged–				

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

Chapter-16

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-terms 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-17

Financial Arrangement:-

17.1 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 Subcommittee 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.

17.2 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 13th 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 instalments in June and December respectively in each financial year. Likewise, the State Government transfers its contribution of 25% to the SDRF in two instalments 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 instalments 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.

17.3 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.

17.3.1 Cases Eligible for Assistance under 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.

17.3.1.1 Poor and persons in distress:

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

17.3.1.2 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.

17.3.1.3 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.

17.3.4. 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.

17.4 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.

17.5 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.

17.5.1 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.

17.5.2 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.

17.6 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

Sl No	Name of the Scheme	Sector	Nodal Department	Objective of the Scheme
.				

1	National Agriculture Insurance Scheme (NAIS)/ Rastriya Krishi BimaYojna (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 Corporation Of India	The objective of the scheme is to provide life insurance protection to the rural and urban poor persons below poverty line and marginally above the poverty line.
3	Mahatma Gandhi National Rural Employment Guarantee Schemes (MGNREGS)	Livelihood Security	Ministry of Rural Development / Panchayati raj Department	It aims at enhancing the livelihood security of the households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do Un-Skilled manual work.
4	National Rural Livelihood Mission (DeenDayalAntordaya Yojana)	Poverty reduction programme	Ministry of Rural Development / Panchayati raj Department	To reduce poverty by enabling the poor households to access gainful self-employment and skilled wage employment opportunities, resulting in appreciable improvement in their livelihoods on a sustainable basis, through building strong grassroots institutions of the poor.
5	DeenDayal Upadhaya-GraminKaushalaya Yojana (DDU-GKY)	Skill development scheme	Ministry of Rural Development / Panchayati raj Department	DDUGKY is a placement linked skill development scheme for rural poor youth. This initiative is a part of NRLM
6	Pradhan Mantri Gram Sadak Yojana (PMGSY)	Poverty Reduction Strategy	Rural Development Department	Pradhan Mantri Gram Sadak Yojana (PMGSY) aims at providing all weather connectivity to all unconnected habitations having population 250 and above for IAP districts and population of 500 or more in general area and population of 250 or more in schedule area for non-IAP districts
7	National Social	Social	Ministry Of Rural	The National Social Assistance Programme

	Assistance Programme (NSAP)	Welfare programme	Development	(NSAP) which came into effect from 15th August, 1995 represents a significant step towards the fulfillment of the Directive Principles in Article 41 of the Constitution. The programme introduced a National Policy for Social Assistance for the poor and aims at ensuring minimum national standard for social assistance in addition to the benefits that states are currently providing or might provide in future. NSAP at present comprises of Indira Gandhi National Old Age Pension Scheme (IGNOAPS), Indira Gandhi National Widow Pension Scheme (IGNWPS), Indira Gandhi National Disability Pension Scheme (IGNDPS), National Family Benefit Scheme (NFBS) and Annapurna.
8	Pradhan Mantri Awas Yojana (Housing for all – Urban)	Rehabilitation of Slum Dwellers	Ministry of Housing and Urban Poverty Alleviation	The Mission will be implemented during 2015-2022 and will provide central assistance to Urban Local Bodies (ULBs) and other implementing agencies through States/UTs for: <ol style="list-style-type: none"> 1. In-situ Rehabilitation of existing slum dwellers using land as a resource through private participation 2. Credit Linked Subsidy 3. Affordable Housing in Partnership 4. Subsidy for Beneficiary-led individual house construction/enhancement.
9	Swachha Bharat Mission(SBM-U)	Cleanliness, Water & Sanitation, Urban	Ministry of Drinking Water & Sanitation	To accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India launched the Swachh Bharat Mission on 2nd October, 2014. The Mission Coordinator shall be Secretary, Ministry of Drinking Water and Sanitation (MDWS) with two Sub-Missions, the Swachh Bharat Mission (Gramin) and the Swachh Bharat Mission

				(Urban), which aims to achieve Swachh Bharat by 2020, as a fitting tribute to the 150th Birth Anniversary of Mahatma Gandhi, which in rural areas shall mean improving the levels of cleanliness in rural areas.
10	Swachha Bharat Mission(SBM-G)	Cleanliness, Water & Sanitation, Gramin	Ministry of Drinking Water & Sanitation	To accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India launched the Swachh Bharat Mission on 2nd October, 2014. The Mission Coordinator shall be Secretary, Ministry of Drinking Water and Sanitation (MDWS) with two Sub-Missions, the Swachh Bharat Mission (Gramin) and the Swachh Bharat Mission (Urban), which aims to achieve Swachh Bharat by 2020, as a fitting tribute to the 150th Birth Anniversary of Mahatma Gandhi, which in rural areas shall mean improving the levels of cleanliness in rural areas.
11	National Rural Drinking Water Programme (NRDWP)	Safe Drinking Water	Ministry of Drinking Water & Sanitation	The aim and objective of National Rural Drinking Water Programme (NRDWP) is to provide every rural person with adequate safe water for drinking, cooking and other basic domestic needs on a sustainable basis, with a minimum water quality standard, which should be conveniently accessible at all times and in all situations. Achieving this aim and objective is a continuous process.
12	Pradhan Mantri Krishi Sinchai Yojana (PMKSY) – Integrate Watershed Management Programme	Agriculture	Ministry of Agriculture and Farmers Welfare, GoI	Har Khet ko Pani “Prime Minister Krishi Sinchayee Yojana” PMKSY has been formulated amalgamating ongoing schemes viz. Accelerated Irrigation Benefit Programme (AIBP) of the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR,RD&GR), Integrated

	(IWMP)			Watershed Management Programme (IWMP) of Department of Land Resources (DoLR) and the On Farm Water Management (OFWM) of Department of Agriculture and Cooperation (DAC).
13	Digital India Land Record Modernisation Programme (NLRMP)	Digital India	Ministry of Rural Development	The Digital India Land Records Modernization Programme (DILRMP) is launched by Government of India in August 2008, aimed to modernize management of land records, minimize scope of land/property disputes, enhance transparency in the land records maintenance system, and facilitate moving eventually towards guaranteed conclusive titles to immovable properties in the country.
14	DeenDayalUpadha ya Gram Jyoti Yojana (DDUGKY)	Rural Electrification	Ministry of Power	Separation of agriculture and non-agriculture feeders Strengthening and augmentation of sub-transmission & distribution rural electrification
15	Shyama Prasad Mukherjee Urban Mission – NRuM	Economic Development	Ministry of Rural Development	The objective of the National Rural Urban Mission (NRuM) is to stimulate local economic development, enhance basic services, and create well planned Rural clusters.
16	Atal Mission for Rejuvenation and Urban Transformation (AMRUT)	Urban Infrastructure	Ministry of Urban Development	Providing basic services (e.g. water supply, sewerage, urban transport) to households and build amenities in cities which will improve the quality of life for all, especially the poor and the disadvantaged is a national priority.
17	Smart City Mission	Urban Infrastructure	Ministry of Urban Development	It aims at: i. Adequate water supply, ii. Assured electricity supply, iii. Sanitation, including solid waste management, iv. Efficient urban mobility and public transport, v. affordable housing, especially for the poor, vi. Robust IT connectivity and digitalization, vii. good governance,

				especially e-Governance and citizen participation, viii. Sustainable environment, ix. Safety and security of citizens, particularly women, children and the elderly, and x. health and education.
18	Pradhan Mantri FasalBima Yojana (PMFBY)	Agriculture Insurance	Ministry of Agriculture and Farmers Welfare, Government of India	<ul style="list-style-type: none"> To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases. To stabilise the income of farmers to ensure their continuance in farming. To encourage farmers to adopt innovative and modern agricultural practices. To ensure flow of credit to the agriculture sector.
19	National Health Mission (NHM)	Health	Department of Health & Family Welfare, GoO	Improved health status and quality of life of rural population with unequivocal and explicit emphasis on sustainable development measure.
20	SarvaSishkya Abhiyan (SSA)	Elementary Education	Ministry of Human Resource Development, Department of School Education, Literacy, GOI	Sarva Shiksha Abhiyan (SSA) is Government of India's flagship programme for achievement of Universalization of Elementary Education (UEE) in a time bound manner, as mandated by 86th amendment to the Constitution of India making free and compulsory Education to the Children of 6-14 years age group, a Fundamental Right.
21	Integrated Child Development Scheme (ICDS)	Women and Child	Ministry of Women and Child Development	<p>Objectives of the scheme are as under:-</p> <ul style="list-style-type: none"> To improve the nutritional and health status of children in the age group of 0-6 years. To lay the foundation for proper psychological, physical and social development of the child. To reduce the incidence of mortality, morbidity, malnutrition and school dropout. To achieve effective co-ordination of policy

				<p>and implementation amongst the various departments to promote child development, and</p> <ul style="list-style-type: none"> To enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.
22	Mid-Day Meal Scheme	Primary Education	Ministry of Human Resource Development, Department of School Education, Literacy, GOI	With a view to enhancing enrolment, retention and attendance and simultaneously improving nutritional levels among children, the National Programme of Nutritional Support to Primary Education (NP-NSPE) was launched as a Centrally Sponsored Scheme on 15th August 1995.
23	Pradhan Mantri UJJWALA Yojana (PMUY) – LPG connection to BPL families	Women Empowerment	Ministry of Petroleum and Natural Gas	Pradhan Mantri Ujjwala Yojana (PMUY) aims to safeguard the health of women & children by providing them with a clean cooking fuel – LPG, so that they don't have to compromise their health in smoky kitchens or wander in unsafe areas collecting firewood.
24	Pradhan Mantri Kaushal Vikash Yojana	Skill Development	Ministry of Skill Development and Entrepreneurship (MSDE)	Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the Ministry of Skill Development & Entrepreneurship (MSDE). The objective of this Skill Certification Scheme is to enable a large number of Indian youth to take up industry-relevant skill training that will help them in securing a better livelihood. Individuals with prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL).
25	Digital India – Public Internet Access Programme –	Digital India	Ministry of Electronics & Information Technology	SCs would be strengthened and its number would be increased to 250,000 i.e. one CSC in each Gram Panchayat. CSCs would be made viable and multi-functional end-points for delivery of

	Providing common Service Center in each Gram Panchayat		Government of India	government and business services. DeitY would be the nodal department to implement the scheme.
26	Pradhan Mantri Awaas Yojana (Gramen) Earlier - Indira Awaas Yojana (IAY)			Indira Awaas Yojana has been restructured into Pradhan Mantri Awaas Yojana w.e.f 1st April, 2016 in India. Government committed to provide “Housing for all” by 2022. Identification and selection of beneficiaries based on the housing deficiency and other social deprivation parameters in SECC-2011.
27	Gopabandhu Gramin Yojana (GGY)	Rural Development	Panchayati Raj Department	The principal objective of the scheme is to provide additional development funds to the targeted districts to provide infrastructure consisting of Bijili, Sadak and Pani (i.e. electrification, roads and water supply) to every revenue village in the identified districts on need based manner.
28	Biju Pucca Ghar Yojana (BPGY)	Rural Housing	Rural Development Department	Biju Pucca Ghar Yojana is a major Flagship program of Government of Odisha, which plays a pivotal role in Rural Development. Odisha Government attaches utmost priority and importance to provide pucca house to every household, living in kutcha house and is committed to achieve this goal by 2020.
29	Biju Pucca Ghar Yojana (Mining)	Rural Housing	Rural Development Department	Biju Pucca Ghar Yojana (Mining) is a major Flagship program of Government of Odisha, which plays a pivotal role in Rural Development. Odisha Government attaches utmost priority and importance to provide pucca house to every household, living in kutcha house and is committed to achieve this goal by 2020.
30	Nirman Shramik Pucca Ghar	Rural Housing	Rural Development	The Nirman Sharmika Pucca Ghara Yojana has been launched to meet the housing needs of

	Yojana		Department	building and other construction workers registered under the Odisha Building and other Construction Workers' welfare Board who do not have their own pucca house and who have not availed of housing assistance under any other Govt. Scheme of the State or Central Govt. A building worker between the age of 18 years and 60years having existing valid registration with the Odisha Building and other construction Workers Welfare Board under the Building and other construction workers (RE&CS) Act at least for a continuous period of 3years will be eligible for assistance under the "NirmanSharmika Pucca Ghara Yojana".
31	Self Employment training & bank Linkage (SKILL DEVELOPMENT)	RUDSET Institute, Bhubaneswar	Odisha Livelihood Mission, Panchayati Raj Department	The objective of the programme is to provide Self employment/Skill development training to rural youths within the age group of 18-35 & bank linkage them for their economic development with free of cost.

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

17.7 Roles of District planning committee on financial outlay on main streaming Disaster Risk Reduction (DRR) in development programmes.

The 73rd & 74th Amendments of the constitution marked a new era in the federal democratic setup clearly envisaging a reversal of the hitherto centralised approach to the district planning. The 74th constitutional amendment act mandated the establishment of District planning committees for consolidating plans prepared by the Panchayat and municipalities in the district into Draft District plan. The DPC should be the nodal agency for district level planning & related task. The DPC can take the assistance of technical and academic institutions and experts to perform its function effectively. It is found that Disaster Risk Reduction and climate change adaptation considerations are not appropriately addressed during the process of district planning through the DPCs. The major constrains in mainstreaming DRR in the District planning are a) lack of understanding of DRR b) insufficient guidance on how to mainstream these components and c) the limited opportunities for mainstreaming in the District level planning due to lack of instruments and capacity in the field. Economic losses due to disasters can be reduced by incorporating risk mitigation measures in the

development projects. Accordingly financial outlay can be done in development projects. The following roles may be played by DPC on mainstreaming Disaster Risk reduction in development programme.

1. Include DRR in the development projects. (consider disaster risks before initiating development projects)
2. Ensure Risk sensitive and informed Developmental projects (take professional advice of a disaster management expert to vet the project proposals)
3. Consider vulnerabilities and needs of the community (physical , Social , Economic & environmental)
4. Sensitise and build capacity of the key stake holders (build local capacity and reduce vulnerability)
5. Facilitate integration and inter departmental linkages (village level planning , GP level Planning and Block level planning)

17.8. Fund provision for disaster preparedness & capacity building

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 *The State Disaster Response Fund (SDRF) can be utilised for this purpose thorough proper Capacity building plans. The fund provision for conducting capacity building programmes is that District Administration to prepare the Capacity Building plan for the district and send the same with detailed budget to SDMA for necessary funding. After receiving the proposal form District administration, necessary fund provision will be made to the Districts for carrying out Disaster preparedness and capacity building programmes.*

17.9 Preparation and Implementation of District Disaster Management Plan (3 pages)

17.9.1 Procedure for preparation of DDMP as per the DM act to be elaborated

Under Section 31 of Disaster Management Act 2005 (DM Act), 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. DDMP shall include Hazard Vulnerability Capacity and Risk Assessment (HVCRA), prevention, mitigation, preparedness measures, response plan and procedures. 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.

17.9.2 Roles of ADM, DEO and Nodal Officers support from other line Departments to be defined

ADM, Boudh:

- ADM, Boudh took the leading role in preparation of DDMP.
- Reminders issued to the line departments to provide the necessary information.
- Time to time reviewed the progress of preparation of DDMP by discussing with DEO and DPO, Emergency.

12.3 Support of line departments (for providing information) to be mentioned.

DEO, Emergency Boudh

- Actively supervised the preparation of DDMP.
- Review the DDMP of the previous years and prepared a critical analysis of Previous DDMP to insert valuable inputs in the current DDMP
- Visited to Different emergency operating departments like Fire, CDMO to understand the District emergency situations.
- Gone through Different Reports, Information, Websites & Departments sites to collect information relating to Disaster of the District.
- Overview the Files like Flood, Drought , Heat wave , lighting etc & guidelines of DM Act , Odisha Relief Code, CMRF guidelines etc of the section relating to Disaster
- Time to time coordinated & contacted different departments to provide the required information.
- Talked to the senior officials to the departments to provide necessary inputs from the department for preparation of DDMP.
- Time and again wrote mails to all to provide data.

Nodal Officers:

- Provided necessary support for data from their line departments.
- As huge data required from different departments, the Nodal officers took the pain of extracting the data from the files and provided to the Dist. Administration.

12.3 Support of line departments (for providing information) to be mentioned. Catholic Relief Services (CRS), New Delhi.

12.4 Time lines for updating DDMP to be mentioned. (From January to February of every) should be incorporated in matrix (information to line departments etc.)

12.5 Details of number of consultation and meetings, discussion with stakeholders for modification and final sharing.

12.6 Sharing and placing before DDMA for approval

Chapter 18

Standard Operating Procedures (SoPs) for District level Officials for management of Heat wave Conditions

1. Collector/ ADM/PD, DRDA

- i. Updating the Heat Action Plan for the District in the month of January
- ii. Action plan for mitigating water scarcity problems in different towns and villages to be prepared in the January
- iii. Water scarcity areas to be identified in advance and supply of drinking water and for other uses through tanker to those areas to be ensured
- iv. Prepare list of water tankers and earmark them to water scarce areas
- v. Preventive maintenance of tube wells has to be ensured
- vi. Suitable arrangements also to be made to promptly respond to reports of water scarcity anywhere in the district
- vii. Ensuring Public Awareness campaign through electronic and print media on heat wave precautionary measures (Dos and Don'ts) from February onwards
- viii. Involve Civil Society Organization and Panchayati Raj Institutions (PRI) members in awareness campaign and other measures to tackle the situation arising out of Heat Wave
- ix. Identification and trace out of the high-risk vulnerable pockets of district prior to the heat wave.
- x. Issue directions to line departments officials for taking measures to tackle heat wave situations in the month of February
- xi. Issue direction to BDOs to convene meeting of PRI representatives in the month of February
- xii. Issue direction to ULBs/GPs for opening of "***Jal Seva Kendra***" (Water Kiosk) at market places, bus stands and other congregation points. Ensuring sanitation and hygiene of water distribution points.
- xiii.** Convene meeting of the Civil Society Organization to seek their assistance in Heat Wave mitigation activities including opening of "***Jal Seva Kendra***"
- xiv. Issue direction to CDVO/BDOs for construction/repair of vats for ensuring drinking water for roaming livestock
- xv. Issue instructions to BDOs, District Education Officer, District Social Welfare Officer and District Child Protection Officer for making drinking

- water arrangements in all schools
- xvi. Principals of all Government and Private colleges are to be instructed to make drinking water arrangements in their institutions
 - xvii. Instruct and direct the leading PSUs & Industries of the district to supply potable water in the water scarcity villages of their periphery under CSR initiatives.
 - xviii. Ensuring functioning of control room at District office, DHH, Block /Tehsil, CHC/PHC round the clock
 - xix. Rescheduling of timing of classes and examination in schools and colleges during summer as per the directions given by SRC/School & Mass Education Department.
 - xx. DSWO/CDPO/Dist. Child Protection Officer are to be instructed to facilitate availability of drinking water and health needs in all Child Care Institutions (CCIs) in the district
 - xxi. District Labour Officer (DLO), PD, DRDA, the Executive Engineer, Rural Works, the E.E. R&B to ensure rescheduling of the timing of working hours and make necessary arrangements for supply of drinking water, ORS packets and provision of rest shed at worksites as per directions of SRC/ Labour and ESI department
 - xxii. Ensuring restriction of working hours in works under MGNREGA and other schemes
 - xxiii. Give instructions to the Regional Transport Officer (RTO) to ensure availability of water and ORS packets in public transport vehicles. Timing of public transport services and plying of buses to be rescheduled as per directions of SRC/ C&T (Transport) Department
 - xxiv. To issue instruction to the Electricity Distribution Company to ensure uninterrupted power supply during heat wave period. Uninterrupted power supply to be maintained for critical facilities such as hospitals, urban health centres and water supply facilities
 - xxv. If any information on casualty is received or report published in newspaper, it should be immediately enquired jointly by the medical and revenue officers.
 - xxvi. Prompt steps are to be taken for payment of ex-gratia to the bereaved family where, upon enquiry, the death is confirmed to be due to sunstroke
 - xxvii. Instruct the departments like CDM & PHO / CDVO /Executive Engineer,

CESU / General Manager, WATCO and other related departments to submit the Heat Wave management action plan in the month of February

2. Chief District Medical & Public Health Officer (CDM & PHO)

- i. Facilitate training programs for the CHC staffs, ANM, ASHA workers on treatment of patients affected with heat/sun stroke.
- ii. IEC activities and Public Awareness in the districts relating to Heat Wave conditions/ advisories to be done from the month of February onwards
- iii. Check hospital readiness prior to the heat wave seasons start in the district from CHC level to DHH.
- iv. Take necessary steps for albedo/white painting of roof tops of hospitals, Community Health Centres (CHCs), Public Health Centres (PHCs) and patients resting areas in coordination with the concerned engineering Departments.
- v. Sufficient Storage of life savings medicines, ORS in dispensaries, PHCs, CHCs and District Head Quarter Hospitals to meet any crisis.
ORS to be available with ASHA and AWWs
- vi. Arrangement of separate wards and beds and cool rooms for treatment of heat stroke patients in different hospitals
- vii. Ensure 24x7 ambulance services 108 for the treatment of heatwave & heat stroke patients with reaching at the patients with shortest time for that to find out alternative routes in an advance.
- viii. Continuous monitoring and preventive measures against diarrhoea and other health hazards during summer season.
- ix. Daily reporting of cases and deaths to H&FW Department, SRC and Collector
- x. Copy of the post-mortem report of heat wave casualties to be shared with the Tahasildars to make the process of ex-gratia payment fast and smooth

3. Executive Officers -Municipalities/ Urban Local Bodies (ULB)/ Development Authorities

- i. Preventive maintenance of tube wells/pipe water supply-arrangements for distribution of water through water tankers in the water scarce areas.
- ii. Awareness generation on Heat Wave Do's and Don'ts with Special attention to slums areas.
- iii. Opening of "*Jal Seva Kendra*" (Water Kiosk) at market places, bus stands, slums, vending zones and other congregation points-Ensuring sanitation and

hygiene of water distribution points.

- iv. Identification of suitable resting places for street vendors during summer.
- v. Increasing access to public parks, public libraries for providing cool resting places for the public.
- vi. Regular sprinkling of water on roads.
- vii. Promote cool roof initiatives (albedo painting of roofs).
- viii. Encourage use of K-glass, doubly glazed glass in buildings and vehicles.
- ix. Setup the electronic display boards in the prominent places to broadcast the temperate and heat wave related information.
- x. Engage the leading CSO/ NGO in creation of the public awareness & street play on heat wave warning the urban areas.
- xi. Suspend non-essential supply of water (other than cooling and drinking) in the city by taking permission of the collector & DM of the district.

4. District Labour and Employment Officer (DLO)

- i. Monitoring and enforcement of rescheduling of working hours as per the instructions of SRC/ L &ESI Department.
- iii. Monitoring provision of sufficient drinking water, ORS packets and first-aid, rest sheds at worksites.
- iv. Instruct the Project Directors of all National Child Labours Projects (NCLPs) to reschedule the school timing for special schools running under NCLP in accordance with the timings prescribed by SRC/ School and Mass Education Department.
- v. To ensure creation of awareness among the labourers and workers on risks, signs and symptoms of heat stress during probable heat wave like Situations, preventive and precautionary measures including that through constructions agencies/contractors.
- vi. Ensure the supervision of construction sites, quarries, factories and other vulnerable worksites, particularly during high temperature periods, to enforce labour laws related to heat safety.

5. District Education Officer (DEO)

- i. Monitoring and enforcement of school timings and other restrictions.
- ii. Promoting IEC activities on Heat Wave prevention and management in schools.
- iii. Ensuring training of the teachers and conduct of mock drills among students

on health risks and management during heat waves through workshops, orientation programmes, special classes, etc.

- iv. Ensuring provision of safe drinking water, ice packs, ORS, etc. in schools and examination centres.
- v. Encourage concerned authorities/schools for Albedo paintings on roofs of schools.
- vi. Encourage students to bring their own water bottle while coming to school.

6. Executive Engineer-Electrical

- i. Identify overload energy points/transformers and take precautionary measures for uninterrupted power supply.
- ii. Ensuring uninterrupted power supply for critical facilities such as hospitals, urban health centres and drinking water supply facilities.
- iii. Keep energy gangs, equipment, spares ready at strategic locations for earliest restoration of power supply in case of outages.
- iv. Setting up timing for power shedding, if absolutely required, and ensuring announcement of power shedding sufficiently in advance.
- v. Record and monitor the peak load of primary substations/feeders regularly, so as to avoid breakdown due to failure of power transformers/ overloading and consequent snapping of conductors in co-ordination with competent authorities.
- vi. Instruct all Junior Engineers (JEs)/Sub-Division Officers (SDOs) to monitor and record peak load status of the Distribution Transformers (DTs) (250KVA & both), so as to avoid burning of DTs due to over loading and consequent power outages there to.
- vii. Keeping the stock of transformers in different strategic places to meet the urgent need.

7. Regional Transport Officer (RTO)

- i. Taking initiatives on creating awareness among drivers and helpers of vehicles on Heat Wave.
- ii. Encourage the Bus/Truck owner's association of the district and the local NGOs to involve them in public awareness campaign on Heat Wave.
- iii. Ensuring functioning of Control room at RTO office round the clock during Heat Wave period.
- iv. Issue instructions for restriction of Bus plying times during peak hours and rescheduling of timing of the public transport as decided by SRC/ C&T

(Transport) department.

- v. Enforce and monitor provision of safe drinking water, ice packs, ORS packets in buses and cool resting places at bus stops.
- vi. Facilitate setting up of “*Jal Seva Kendra’s*” (water kiosk) at bus stops and bus stands.
- vii. Conducting regular meetings with stakeholders for sorting out issues pertaining to Heat Wave conditions.
- viii. Ensuring all the buses plying in his/her jurisdiction must have affixed with the awareness material pertaining to heat wave.

8. Executive Engineers-Water Resources

- i. Prepare an action plan for storage of water in the reservoirs to meet the water requirement of drinking water supply facilities and irrigation.
- ii. Monitoring release of water in canals for public use, to increase the underground water level and to reduce the atmospheric temperature during summer.

9. District Mining Officer (DMO)

- i. Issuing directives for heat wave prevention and management in industries and mines.
- ii. Give instructions for and facilitate water sprinkling in mines and other areas to settle down the suspended particulate matter (SPM).

10. District Tourism Officer (DTO)

- i. Issue instructions and monitor registration of tourists visiting the district.
- ii. Disseminate safety tips (Do’s and Don’ts) on Heat Wave at tourist points during summer.
- iii. Ensure availability of water and rest sheds at tourist places.
- iv. Rescheduling of visiting hours at tourist places to avoid heat stress to the visitors.

11. District Social Welfare Officer (DSWO)

- i. Use the Village Health Nutrition Day (VHND) for creating awareness and educate young girls and mothers regarding the dangers of Heat Wave, its related health impact and precautionary measures to be taken.
- ii. Ensure display of IEC materials at Anganwadi Centres.
- iii. Encourage Anganwadi workers to create awareness on Heat Wave with

special focus on infants, children below five years, pregnant women, lactating mothers and geriatric population to protect them from dehydration.

- iv. Ensure provision of drinking water and first aid at all the Anganwadi Centres, old age homes and Child Care Institutions (CCIs).
- v. Sufficient ORS to be kept in Anganwadi Centres and with AWWs.

12. Divisional Forest Officer (DFO)

- i. Identify water scarce locations in forest and prepare a plan of action for ensuring availability of water for animals and human habitation facing water scarcity inside reserved/protected forest.
- ii. Keeping continuous watch in the forest areas to avoid forest fire.
- iii. Issue instruction and ensure arrangements for protection of the zoo animals from heat wave.
- iv. Give instructions for conducting village meetings through NGOs prior to the hot weather seasons for making the villages aware for not setting forest fire.
- v. Ensure proper afforestation (greenery) in public places.
- vi. Formation a Fire Surveillance team to watch & ward in the forest fire.
- vii. Identification and basic orientation training to the local volunteers on controlling forest fire.

13. Project Administrator, Integrated Tribal Development Agencies (PA,ITDA)

- i. Generate awareness through IEC activities on Heat Wave prevention and management in tribal schools.
- ii. Ensure availability of safe drinking water, ORS packets, Ice packs and other required first aid materials in tribal schools.
- iii. Monitor and enforce school and examination timing as directed by SRC/SC&ST Department.
- iv. Encourage concerned authorities/schools for albedo paintings on roofs of schools and hostel buildings.

14. Chief District Veterinary Officer (CDVO)

- i. Issue advisory on animal care during heat wave by making provisions for drinking water for animals and birds with timely replacement at sheds.
- ii. Generate awareness among animal owners for feeding the animals in early morning or during evening hours to avoid heat stress.
- iii. Issue advisory for farmers for not leaving their animals outside the shed during peak hours of heat.

- iv. Encourage the owners of livestock and poultry farms to plant bushy trees near the sheds.
- v. Advisory to be issued for mixing electrolytes in drinking water of animals and birds to avoid dehydration.
- vi. Issue instructions to the concerned authorities not to vaccinate or deworm the animals and birds during heat hours of the day to avoid any extra stress.
- vii. Issue advisory to the farmers for restraining the animals from hard work in open areas during heat hour of the day.
- viii. Mobile Veterinary Units must be kept in readiness to attend the emergency cases

Standard Operating Procedures (SoPs) for District level Officials for management of Drought

1. Collector

- i. Submission of weather and crop situation report to the O/o SRC as per the provisions laid down under the paragraphs 24 and 25 of ORC.
- ii. Convene meeting to review measures in line with the Crisis Management Plan.
- iii. Direct all the district level line departments to participate in drought management prepare contingency plans and mobilize their staffs and resources.
- iv. Prepare District Agriculture Contingency Plans.
- v. Implement all the decisions of Government related to drought management on the ground thorough line departments.
- vi. Monitor all the indicators of drought on the ground such as collection of daily rainfall data, water storage, water availability, seeds supply and progress of sowing operations.
- vii. Monitor local information related to demand of relief employment, prices of food grains and availability of fodders.
- viii. Ensure timely collection of field information and ground truthing of sensor-based data and submission of periodical reports on all the important indicators to the Government.
- ix. Assess the situation related to scarcity of drinking water and fodder and issue appropriate instructions regarding reservations and supply of drinking water, procurement and sale of fodders and setting up of fodder depots and cattle

camps.

- x. Supervise reservoir management with the help and support of Water Resources Department and decide the volume and timing of release of water in the canals.
- xi. Review the progress of drought relief measures in the district from time to time.
- xii. Make arrangements for efficient and timely distribution of food grains after declaration of drought.

- xiii. Prepare relief employment plan in consultation with agencies.

2. Chief District Medical & Public Health Officer (CDM&PHO)

- i. Organize Health Camps in drought affected areas to screen people for common ailments.
- ii. Arrange clinical management of cases due to waterborne and vector- borne diseases.
- iii. Deploy Rapid Response Teams (RRTs) for managing any outbreak of water borne or vector-borne diseases and surveillance through State Integrated Disease Surveillance Programme.
- iv. Ensure laboratory facilities for diagnosis of water borne and vector borne diseases through public health laboratories, district headquarters hospitals, laboratories and medical colleges.
- v. Promote awareness generation on risk of water borne and vector-borne diseases in the community.
- vi. Tracking regularly the children health through ANM/ASHA workers at the villages.

3. Chief District Veterinary Officer (CDVO)

- i. Ensure availability of fodder, feed, and water for cattle.
- ii. Ensure quality of feed and fodder supplied through the fodder depots and cattle camps.
- iii. Undertake awareness campaign for farmers in drought-affected areas on cattle health relating to fodder, feed, vitamin, minerals and other sanitation issues.
- iv. Ensure provision of minerals, vitamins, medicines and vaccines to the livestock owners

- v. Carry out necessary inspection and check in drought-affected areas to ensure that cattle are maintained in good health.
- vi. Depute Livestock Inspector (LI) for checking the health of cattle at least once in a week and undertake all precautionary measures to avoid outbreak of any disease.

4. Chief District Agriculture Officer (CDAO)

- i. Ensure preparation/ updating District Level Crop Contingency Plan in consultation with Krishi Vigyan Kendra (KVK)
- ii. Identify and assess the requirement for important agricultural inputs like-seeds, fertilizers and pesticides at subsidised rates for the farmers through Primary Agricultural Cooperative Societies (PACS) and private dealers.
- iii. Sufficient prepositioning of drought resilient seeds and fertilizers in different strategic locations.
- iv. Promote awareness on crop insurance and ensure timely enrolment of non-loanee farmers under “*Pradhan Mantri Fasal Bima Yojana*” (PMFBY).
- v. Apprise the District Drought Monitoring Cell (DDMC) on crop weather situation on weekly basis.
- vi. Ensure rapid damage assessment during early season drought and facilitate availability of seeds for immediate sowing by the farmers.
- vii. Promote diversification of crops with suitable low water consumption crops like- millets and oilseeds over rice in the drought prone areas.
- viii. Capacity building of farmers through Agricultural Technology Management Agency (ATMA) for alternate livelihood options like mushroom cultivation, goatery, poultry, fruit trees etc. in the drought prone areas.

Standard Operating Procedures (SoPs) for District level officials in the management of Floods and Cyclones

1. Collector/ADM/Sub-Collector

A. Pre Flood Arrangements

- i. Convene meeting of the DLCNC during the month of May.
- ii. Make inventory of private/country/power boats to be used for relief and rescue operation.
- iii. Ensure deployment of Boats at strategic points.
- iv. Ensure regular submission of rainfall reports to the O/o SR.C
- v. Ensure proper functioning of Control room round the clock with adequate

manpower having knowledge about the situation.

- vi. Identification of safe buildings to be used as flood shelters.
- vii. Inventory of non-official and voluntary organization for carrying out relief and rescue operations.
- viii. Identify the Low-lying areas and vulnerable population GP wise for rescue & relief.
- ix. Instruct the R & B and other related works department to identify the low embankment area and repair them accordingly.
- x. Awareness generation activities on flood Safety (Dos and Don'ts).
- xi. Ensure regular updating of IDRN.

B. Arrangements during Flood

- i. Convene immediate meeting of all line department officials, all BDOs, Tahasildars, District heads of NDRF, ODRAF and Fire Services to review the situation and issue necessary instructions to all the concerned to make arrangements accordingly.
- ii. Ensure evacuation of marooned and people residing in the low-lying areas to safe shelters and arrangement of free kitchen.
- iii. Instruction to be given for taking special care of old, PWDs, women and children while evacuating.
- iv. Instruction to be given to concerned authorities for evacuation of livestock and domestic animals to safe shelters.
- v. Ensure provision of emergent relief for the affected people.
- vi. Ensure arrangements of proper sanitation measures in the shelters.
- vii. Timely submission of daily situation reports in the prescribed to the O/o SRC.

C. Post Flood Management

- i. Issue instructions for proper disposal of dead bodies.
- ii. Ensure damage and loss assessment of private properties and submission of report to Government for release of assistance.
- iii. Review the restoration of damaged roads, bridges, embankments and other public properties.
- iv. Ensure proper enumeration of house damage, crop damage and prepare list of beneficiaries along with their bank account numbers for immediate payment of disaster relief.

- v. Ensure proper documentation of the relief and restoration activities for records.
- vi. Submission of final damage report to the O/o SRC.
- vii. Provision of employment to the able-bodied persons under the plan and non-plan schemes of the government ensuring labour employment programmes.

D. On receiving Cyclone warning

- i. Convene immediate meeting of all line department officials, all BDOs, Tahasildars, District heads of NDRF, ODRAF and Fire Services to review the situation and issue necessary instructions to all the concerned to make arrangements accordingly.
- ii. Instruct the BDOs to conduct Block level preparatory meetings involving Sarpanches/Secretaries of CSMMC/FSMMC, NGOs/CSOs and other stakeholders for taking up preparatory measures.
- iii. Issue instructions for operation of the District Emergency Operation Centres and control rooms of other offices round the clock. Adequate manpower to be deployed in the control rooms.
- iv. Issue notice to keep Govt. Offices to remain open, cancel government holidays (if required), recall the officers on leave (if required) and instruct government officials to remain alert.
- v. Take steps for dissemination of correct and updated information on the impending cyclone to people with advice not to panic.
- vi. Check the operationality of the communication equipment like Satellite Phone, Fax and other communication systems.
- vii. In six coastal districts, besides satellite phones, other communication systems like Digital Mobile Radio (DMR), Satellite Based Mobile Data Voice Terminal (SBMDVT), Alert siren towers under EWDS project, are to be tested and kept in readiness.
- viii. Ensure deployment of boats of Special Relief Organizations at strategic locations for transportation of relief materials and relief parties to inaccessible areas, if required.
- ix. Adequate quantities of POL to be arranged. POL stocks also to be arranged for boats of NDRF, ODRAF and Fires Services for carrying out SAR operations and distributions of relief materials.
- x. Instruct the concerned line department officials for making arrangements for

power back up as power supply is likely to be cut off during Cyclones. Generator available in different offices including health institutions should be checked immediately and adequate fuel to be stored.

- x. Instruct the BDOs to monitor the readiness of MCS/MFS and report to the Collector/ADM/DEO.
- xii. Give instructions to the Sarpanch and Secretaries of CSMMC/FSMMC to organize the meetings of CSMMC/FSMMC and make proper arrangements in the MCS/MFS.
- xiii. Instruct the BDOs to coordinate with the Sarpanch and Secretaries of CSMMC/FSMMC to check the water supply systems, generators, inflatable tower lights, mechanical cutters, and other equipment available in the shelters to be put to test run and the defective one gets immediately repaired. Fuel arrangements for generators and other equipment to be made.
- xiv. Give instructions to BDOs/Sarpanches and Secretaries of CSMMC/FSMMC to identify the vulnerable people and evacuating them to safe shelters.
- xv. Instruct the BDOs for evacuating people living in kutcha houses or living near the coast or in low lying areas in the coastal and adjoining districts to safe shelters
- xvi. Instruct other line department officials to assess the situations and take steps to evacuate people.
- xvii. Instruction to be given for taking special care of old, PWDs, women and children while evacuating.
- xviii. In case of a possible storm surge instructions to be given for evacuating people living in coastal areas even in two-storied buildings after assessing the situations.
- xix. Instruction to be given to concerned authorities for evacuation of livestock and domestic animals to safe shelters. No cattle should be left tied in kutcha houses.
- xx. Issue instructions to the concerned authorities for checking the safety of residential schools, child care institutions, old age homes and similar institutions, and if necessary, the inmates may be shifted to shelters. Ensuring the availability of sufficient food stuffs, drinking water, and essential medicines for the inmates of such institutions.
- xxi. Instruct the BDOs, Presidents and Secretaries of CSMMC/FSMMC for

arrangements of cooked food through free kitchen, safe drinking water, lighting, health & sanitation facilities at the MFS/MCS.

- xxii. Instruct the concerned authorities for making arrangements for supply of safe drinking water to the people in the affected areas including measures to run the pumps with generators in absence of electricity and make necessary arrangements for supply of water through portable water tankers and water pouches in the affected areas including the shelters.
- xxiii. Give requisition to SRC for deployment of ODRAF / NDRF and Fires Services teams in the likely to be affected locations of the districts.
- xxiv. Arrangements for immediate food assistance in the shape of rice, chuda, gur etc. and other essentials items to be made
- xxv. Check availability of polythene; assess the requirement and requisition placed with SRC.
- xxvi. Arrangements to be made for keeping the mobile health units and veterinary teams ready in advance for deployment in the affected areas. Feed and fodder to be arranged for the animals.
- xxvii. Issue warning messages to the fishermen not to venture into the sea and recall the fishermen inside the sea to the shore.
- xxviii. Entrust responsibilities to specific officers and teams to undertake the above tasks in seamless manners and monitor it frequently.

E. During Cyclone

- i. Coordinating with BDOs and other Block Officials of affected areas and take stock of the situation.
- ii. Disseminate latest updates on Cyclone at the earliest to the concerned as & when received from SEOC/State.
- iii. Coordinate with SEOC, Army, Air Force, Navy, NDRF & ODRAF for support towards evacuation and rescue.

F. Post Cyclone

- i. Convene an emergency meeting and take stock of the situation
- ii. Soon after Cyclone abated food assistance in shape of rice, chuda, gud etc. and other essentials items to be provided to people immediately.
- iii. The households whose houses are damaged in cyclone/heavy rain need to be provided with temporary shelter materials (polythene sheets) without delay

- iv. Ensuring immediate restoration of road communication for movement of relief materials. Instruct the concerned departments for restoration of damaged roads immediately after Cyclone.
- v. Immediate restoration of electricity and tele-communication including internet services to be ensured.
- vi. Instruct the BDOs and concerned officials for enforcing and monitoring proper relief distribution.
- vii. Issue instructions to the district heads to initiate damage assessment.
- viii. Convene meetings of NGOs, Youth Clubs, Self-Help Groups, etc., in the district, and assign them specific responsibilities for relief, recovery and rehabilitation.
- ix. Enforce, Facilitate & Monitor Ex-gratia & Compensation to the disaster affected families.
- x. Ensure submission of Situation & Daily report to office of Special Relief Commissioner.

2. Chief District Medical & Public Health Officer

A. Pre flood Arrangements/ On Receiving Cyclone Warning

- i. Convene meeting with other stakeholders for taking all preparatory measures.
- ii. Prepare contingency plan for monitoring hygiene and sanitation.
- iii. Taking stocks of essentials medicines for flood related diseases, water purifying (Halogen) tablets, anti-snake venoms in District H.Q. hospitals, CHCs and PHCs.
- iv. Ensuring sufficient stocks of bleaching powder, chlorine powder, lime powder etc.
- v. Relocate the patients to the safe areas within the hospital.
- vi. Power backup arrangements to be made in all CHCs, PHCs and DHH and other hospitals.
- vii. Issue instruction for shifting of pregnant women to MAA Griha immediately on receipt of Cyclone/ Flood warnings.
- viii. Identifying & shifting patients requiring intensive care to safer places well in advance.
- ix. Constitute Mobile Health Units (MHUs) consisting of a doctor, health workers and ANMs. Each mobile health unit should be capable to cover at

least one relief centre in a day.

- x. Deploy Mobile Health Units along with required medicines to the vulnerable/ likely to be affected areas in advance.
- xi. Initiate vaccination in the likely to be affected areas (as & when necessary) for prevention of communicable diseases.
- xii. Ensure availability of medical equipment and essential drugs.
- xiii. Ensure power backup in hospitals.
- xiv. Ensure availability of safe drinking water in hospitals.
- xv. Earmark separate wards in the hospital for treatment of injured persons.

B. During Flood/Cyclone

- i. Deploy Rapid Response Teams and carry out health care services.
- ii. Prepare a maternity facility for pregnant women in every Response Base/ Advance Medical Post.

C. Post Flood/Cyclone

- i. Establish Helpline for providing information to the affected population.
- ii. Initiate, ensure post disaster disease surveillance system and monitor the outbreak of epidemic.
- iii. Promote Psycho-Social Counselling camps for the disaster affected population.
- iv. Coordinate with Private Hospitals for treatment of the affected population, if required.
- v. Enforce & ensure proper dead body management & early submission of post mortem report to the concerned authority.
- vi. Arrange transportation/ambulance for seriously injured/sick patients from PHCs/CHCs to referral hospitals.
- vii. Ensure timely submission of reports to the Collector & H&FW department.

3. Superintendent of Police

A. Pre-Flood Arrangements/ On Receiving Cyclone Warning

- i. Ensure functioning of the communication systems
- ii. Ensure proper functioning of the control room round the clock with public helpline number.
- iii. Prepare a Plan for deployment of police/response force to activate search &

rescue operation, maintain law & order and traffic management.

- iv. Provide necessary support to district administration and others for expediting rescue and relief operations.
- v. Review and update emergency measures, procedures, and take necessary steps to protect emergency equipment.

B. During Flood/Cyclone

- i. Remain in close coordination with the district administration.
- ii. Keep close watch on the situation and activate Search & rescue operations.
- iii. Ensure that all field staff and stationed officers submit the necessary action reports to the Control Room.
- iv. Ensure security of key installations like power, water supply, telecommunication, etc.
- v. Restrict plying of vehicles on over topping roads and bridges.
- vi. Coordinate with the administration for law-and-order situation during distribution of relief to the affected people.

C. Post Flood/Cyclone

- i. Ensure safety of the evacuees during stay at shelters & back at home.
- ii. Ensure security measures at different storage points & relief distribution centres.
- iii. Ensure functioning of control room with public helpline number.
- iv. Provide adequate security to personnel of International Agencies for Medical Assistance, relief operations etc.

4. Chief District Agriculture Officer

i. Pre-Floods Arrangements/ On receiving Cyclone warning

- i. Activate the field functionaries.
- ii. Issue necessary instructions to the staff & advisory to the farmers to safeguard their crops (in case of heavy rain warning, to cover up the paddy or other crops already placed in the house premises).
- iii. Close watch on the situation, review & update precautionary measures and procedures.
- iv. Develop a pest and disease monitoring system so that timely steps can be taken to reduce damage to crops.
- v. Take necessary steps to aware and enrol farmers on “*Pradhan Mantri Fasal*

Bima Yojna”.

ii. During Flood/Cyclone

- i. Close watch on the flood situation, and chalk out a farmers’ awareness plan depending upon the severity of the situation.

iii. Post Flood/Cyclone

- i. Call for emergency meeting to take stock of the situation. Develop strategy and objectives for early recovery.
- ii. Assess the extent of damage to soil, crop, plantation, micro-irrigation systems and storage facilities and ascertain the requirements of seeds, pesticides, equipment, etc. to salvage the situation or go for re-plantation.
- iii. Assist the district administration for enumeration of crop loss and identification of beneficiaries for providing assistance.
- iv. Review of stock of seeds available and timely transportation of theseeds to the affected areas.
- v. Suggest variety of seeds and cropping pattern, which can reduce losses and reduce the risks to farmers.
- vi. Coordinate the provision of agricultural services with irrigation department and soil conservation.
- vii. Establish a public information centre with means of communication, to assist in providing updated information to people.
- viii. Assist farmers to re-establish their contacts with agriculture produce market and ensure that produce gets proper support price.

5. Executive Engineer- Rural Development

i. During Flood/Cyclone

- i. Remain in alertness and close watch on the situation.
- ii. Coordination with district administration and keeping a strict vigil over the situation and act accordingly.
- iii. Co-ordinate with District Administration, Enforce, Organize & Ensure round the clock inspection and repair of 1. Low lying roads 2. Critical buildings 3. Bridges 5. Culverts 6. Overflow channels 8. Pumps 9. Generators 10. Motor equipment, 11. Station building, etc.

ii. Post Flood/Cyclone

- i. Immediate restoration of the relief lines.
- ii. If there is a cut off in communication, then provision of alternative

communication roads for relief operation.

- iii. Identification of areas for clearance, delegation of team, monitoring of work.
- iv. Initiate damage assessment & submission of proposal to the government for repair and restoration.
- v. Continue round the clock inspection and repair of passage ways bridges, culverts, overflow channels, etc.
- vi. Clear the passage ways, on an on-going basis, in order to ensure that relief lines are unobstructed.
- vii. Use information formats and monitoring checklist for programme monitoring and development, and for reporting to District Emergency Operations Centre (DEOC).

6. Executive Engineers- Works

i. Pre-Flood Arrangements/On receiving Cyclone Warning

- i. Appoint Nodal officers (technical officers) and ensure they meet the staff to review emergency procedures in their jurisdiction.
- ii. Move heavy equipment, such as front-end loaders to areas likely to be damaged and put them in a safe place.
- iii. Ensure emergency inspection by mechanical engineer of all plants and equipment at the district workshops.
- iv. Construct/ reinforce the connecting roads from villages to roads, canals and bundhs and raise their level so that people can access the high ground.
- v. Inspect old buildings and suggest retrofitting of weak buildings/ demolition of dangerous structures.

ii. During Flood/Cyclone

- i. Close watch on the situation.
- ii. Immediate restoration of breached roads for clearance of relief lines and to restore traffic.

iii. Post Flood/Cyclone

- i. Provide a work team carrying emergency tool kits, depending on the nature and extent of the disaster, essential equipment such as: 1. Towing vehicles 2. Earth moving equipment and 3. Cranes, etc.
- ii. Coordinate with Public Works Department and Zila Parishad.
- iii. Mobilize community assistance for road clearing by contacting community-based organizations.

- iv. Undertake clearing of ditches, grass cutting, burning or removal of debris, and the cutting of dangerous trees along the roadside in the affected area through area engineer's staff.
- v. As per the decisions of the District Control Room, undertake construction of temporary structures required, for organizing relief work and construction of relief camps, feeding centres, medical facilities, cattle camps and Site Operations Centres.
- vi. Keep an up-to-date report of all damage and repairs in the district officer report book and communicate the same to the District Control Room.

7. District Telecom Officer (DTO)

i. On receiving Cyclone Warning

- i. Remain in close contact with the district administration.
- ii. Regular inspection of towers, initiate repair & maintenance, if required
- iii. Ensure stock pile of generators & sufficient fuels for emergencies.
- iv. Identify and coordinate for additional technical manpower for immediate restoration of telecommunication.

ii. During Flood/Cyclone

- i. Take steps as per the demand of the situation
- ii. All the staff needs to remain alert

iii. Post Flood/Cyclone

- i. Restore the telephone lines as per the priority

8. Chief District Veterinary Officer (CDVO)

i. Pre-Flood Arrangements/On receiving Cyclone warning

- i. Arrangement of vehicle for uninterrupted mobility of mobile health units in inaccessible areas
- ii. Organise Health awareness campaign & ensure vaccination of cattle population.
- iii. Ensure repair of LI Centres and other necessary equipment & make provision for supply of yearly medicines.
- iv. Ensure Storage of cattle feed and fodder in interior vulnerable strategic and key areas.
- v. Regular co-ordination with district administration.

ii. During Flood/Cyclone

- i. Record keeping, Information dissemination to concerned quarters (Sub-Divisional Vet. Officer).
 - ii. Develop a system of monitoring outbreak of diseases to ensure that timely measures can be initiated to contain them.
- iii. Post Flood/Cyclone**
 - i. Identification of areas for clearance, delegation of team, monitoring of work.
 - ii. Damage assessment and reporting.
 - iii. Ensure feed concentrate and fodder for affected cattle population.
 - iv. Ensure that adequate sanitary conditions through cleaning operations are maintained in order to avoid outbreak of any epidemic.
- 9. Regional Transport Officer/MVI**
 - i. Pre-Flood Arrangements/On receiving Cyclone warning**
 - i. Remain in close contact with the District Administration
 - ii. Provide necessary vehicles for evacuation, transportation of relief materials, team movement as and when required.
 - ii. During Flood/Cyclone**
 - i. Remain in close coordination with the administration.
 - ii. Control vehicular movements till normalcy.
 - iii. Post Flood/Cyclone**
 - i. Provide required vans and ambulances for mobile health and animal husbandry teams.
 - ii. Make available vehicles for supply chain management.
- 10. Executive Engineer WATCO**
 - i. On receiving Cyclone warning**
 - i. Ensure drinking water is filled in overhead tanks to provide safe drinking water.
 - ii. Arrangement of water tankers, generator and fuel for emergency at the supply points
 - iii. Ensure provision of safe drinking water and availability halogen tablets, ORS packets in the shelters.
 - iv. Coordinate with Executive Engineer, CESU for necessary uninterrupted power supply to water supply units.
 - ii. During Flood/Cyclone**
 - i. Close watch on the situation
 - ii. Keep track on the low-lying areas & drinking water supply system

therein.

iii. Post Flood/Cyclone

- i. Immediate restoration of water supply with additional human resources.
- ii. Damage assessment and reporting.
- iii. Disinfection of all overhead tanks and piped water supply systems for supply of safe drinking waters.

11. Executive Engineer Electrical

i. On receiving Cyclone warning

- i. Undertake inspection of high-tension lines, towers, sub-stations, transformers, insulators, poles, and other equipment.
- ii. Ensure, regular identification of faults, checking and repair of weak points / transformers.
- iii. Ensure prior maintenance of the transformers and high-tension lines, cutting of the branches of the trees to safe guard the supply lines.
- iv. Ensure Stockpiling of equipment /accessories, skill development training/orientation.
- v. Precautions/protections near high voltage electric equipment installed.
- vi. Disconnection of electricity in the event of an emergency.
- vii. Arrangement of alternative energy sources such as generators and fuel for generators.
- viii. Protect Power Stations from disaster. Raise the height of compound walls. Install pump sets for draining water in case of emergency.

ii. During Flood/Cyclone

- i. Disconnection of electricity to the affected areas to avoid any causality due to short circuit.
- ii. Arrangement of uninterrupted power supply at the Hospitals (PHC, CHC, etc.) / Temporary shelters
- iii. Dispatch emergency repair groups equipped with food, bedding, tents, and tools.
- iv. Provide information to the people about the state of power supply, as it is one of the most important sources of information.
- v. Assist hospitals in establishing an emergency supply by assembling generators and other emergency equipment, if necessary.

iii. Post Flood/Cyclone

- i. Restoration of electricity with additional HR.
- ii. Ensure that the Power Supply department makes alternate arrangements of emergency supply in all critical infrastructures.
- iii. Damage Assessment and reporting.

Standard Operating Procedures (SOPs) for key stakeholders in the management of Tsunami

1. State Emergency Operation Centre (SEOC)

A. On receiving Tsunami Alerts

- i. Functioning of the SEOC round the clock i.e 24x7
- ii. Activation of all the alert sirens systems from SEOC after getting the tsunami message from INCOIS
- iii. Sending Mass SMS through the Early Warning Dissemination System (EWDS) from SEOC
- iv. Sending Voice messages through the Alert Siren Systems from Block Emergency Operation Centres (BEOC)
- v. Using of Digital Mobile Radio (DMR) systems provided to the Alert Siren locations for two-way communication
- vi. Activation of Satellite Based Mobile Data and Voice Terminals (SBMDVT) and Satellite Phones provided to the districts to transmit the message
- vii. Dissemination of Tsunami Bulletins to the District Emergency Operation Centre (DEOC) of the six coastal districts through different communication modes, viz., Phone, Email, Fax, Social Media (Facebook & Twitter) for further transmission to the Block Authorities through Phone, Email, Fax, Social Media
- viii. Alert senior officers of Government like SRC, Chief Secretary, CMO, ADG (LAO), DG, Fire Service
- ix. Send message to electronic media with approval of the SRC

2. District Emergency Operation Centre/ Collector/ ADM/Dist. Emergency Officer

A. On receiving warnings

- i. Ensuring the Tsunami warning by contacting State Emergency Operation Centre
- ii. Once confirmed immediately activate the District Emergency Operation Centres DEOC in Charge or District Emergency Officer to intimate Collector, ADM(s), senior officers of District Administration
- iii. Passing the warning message to the community members and PRI representatives through the existing communication modes i.e through Phones, E-mail, Fax and Social media
- iv. Decision on evacuation should be taken as per the following threat status
 - a. **Warning:** Public should be advised to move in-lands towards higher grounds, Vessels should be advised to move into deep ocean
 - b. **Alert:** Public should be advised to avoid beaches and low-lying areas. Vessels should be advised to move into deep ocean
 - c. **Watch:** No immediate action
 - d. **Threat Passed:** All clear determination to be made the local authorities
- v. Determining the estimated time of tsunami arrival on reception of tsunami message from INCOIS/ SEOC
- vi. Ascertaining level of threat/impact
- vii. Deployment of Response Forces if required

- viii. In case of boats in harbours, estuaries and shallow coastal water should be advised to move from offshore to deep water
- ix. Vessels already at sea should be advised to stay well offshore and remain there until further instructions
- x. All Warning messages to be converted to local languages
- xi. Preparing the message with “what is the current situation and what is the advice to public”
- xii. Evacuation plan is activated if threshold level is exceeded
- xiii. Ensuring the evacuation is done properly through the designated evacuation routes
- xiv. Ensuring all possible evacuation modes to be used during evacuation
- xv. Continuous monitoring of bulletins from TWC
- xvi. Reassess and review instructions
- xvii. Assessing safety for return
- xviii. Issuing “*All Clear*” based on local evidence

B. Post Tsunami activities

- i. After situation gets clear immediately assess the ground situations from field officials
- ii. Response Forces to start the search and rescue and First-Aid to be given to the injured
- iii. Triage and temporary medical camps to set up immediately as per the needs
- iv. Starting of free kitchen at the temporary shelters
- v. Ensuring provision of safe drinking water, medicines and other necessary arrangements to be made at the shelters

3. Community

- i. Get the accurate information on the Tsunami threat from Block /Panchayat Office
- ii. Act as per the instructions (Warning, Alert Watch, Threat Passed) issued by the Sarpanchs/BDOs/District Administration
- iii. If instructed for evacuation use the designated evacuation route of the village
- iv. During evacuation special care to be given to the most vulnerable section like pregnant women, elderly and sick persons, children and PWDs
- v. The shelter level Task Force Volunteers and Apada Mitra volunteers to help evacuating the people
- vi. People need to carry with them essential documents and other goods like (Land records, educational certificates, bank passbooks, daily consumed medicines etc.) while evacuating
- vii. Constantly get in touch with the Panchayat, Block Office regarding the status of the threat
- viii. Need to be evacuated to the identified shelters or other shelter located at the higher places.

CHAPTER-19

LESSON LEARNT AND DOCUMENTATION

Effective Interventions in COVID-19 Management

1. VISIT OF ALL TMCS PRIOR TO INFLOW OF MIGRANTS

101 TMCs are prepared across 69 GPs and one ULB in the district with 4029 Bed capacity. A plan was chalked out to make sure all TMCs are personally inspected by district level officers. The Collector & D.M, Boudh assisted by two Deputy Collectors visited each and every TMC in the District. During visit, detailed analysis of amenities present in the TMC was made and suggestions were given for addressing issues. A checklist was prepared which included items like Beds, Pillows, Bucket & Mugs, and Sanitary items, Masks, Drinking water and Electricity, Service providers, dumping pit etc. All TMCs were rated in different categories as per this assessment. The TMCs having poor rating were monitored and again visited within a week. Personal visit of the Collector, Boudh to all TMCs not only helped in TMC improvement but also raised the morale of all Sarpanchs.



2. ESTABLISHMENT OF CHECK POSTS AT DIFFERENT ENTRY POINTS FOR CHECKING VEHICLES

Three check posts were set up at Manamunda, Bridge Chowk and Charichhak for intercepting all vehicles coming from different neighbouring districts. A team comprising of Police Personnel, Forest Guards and RMC Staffs were stationed at all check posts 24 X 7. One executive



magistrate was in charge of these check posts. All incoming vehicles were stopped, entry was made in the register, details of the journey and passengers inside the vehicle were noted down. If there were any returnees of Boudh District, then they were alighted from the vehicle and sent to the desired TMC by our vehicles. For this purpose required numbers of vehicles were always kept ready at the check posts and the Executive Magistrate In-Charge was in constant contact with BDOs for sending migrants to TMCs.

3. RESCUING STRANDED LABOURERS OF OTHER STATES AND SENDING THEM TO THEIR NATIVE PLACE.

Many labourers were rescued while travelling on foot or by goods vehicle and they were given food, kept in temporary shelters and then sent back to their native states by vehicles arranged by our team. As of now, 652 Nos of such persons have already been sent back to their homes. The concerned district administrations of their home states were intimated before their movement, during travel they were given dry food for the journey and one responsible official accompanied the vehicle in all trips.

4. MECHANISM FOR FILLING UPTMCs.

Even though at least one TMC was ready in each GP, but to have a concentrated approach for convenience in service providing, visit of medical team and administrative supervision, all incoming migrants were put in TMCs irrespective of their home GP. In every block three to four TMCs which have maximum bed capacity were identified and migrants were put in those TMCs on priority basis. Other TMCs were filled up only after these pre-identified TMCs were full. This helped in a focused approach in overall TMC management and effective supervision over various Service Providers. It was convenient for the mobile medical team as well to monitor regular health status of the inmates as no of functional TMCs were minimized.

5. MONITORING OF MIGRANTS IN FLOW DATA AND DISCHARGE DETAILS THROUGH GOOGLE DOC.

A Google Doc format was created by District Office for fetching details of incoming migrants. All BDOs/CDM & PHO were given access to the document to daily enter the details like Name, Address, and Arrived from which State, Sample Collection, and Sample Result etc. This was monitored at District level and daily abstract on No of migrants arrived, State Wise arrival and Sample Collection were prepared on the basis of this data. Immediately after discharge the BDOs enter the discharge particulars like date of discharge, supply of Discharge Certificate and Home Quarantine Undertaking, Disbursement of incentive through the same GoogleDoc.

6. PASS Management System

In view of the COVID-19 Lock Down, employee and vehicle passes were being issued to many offices and persons engaged in delivery of essential services. Physical issuance of Pass was leading to rush at Collectorate, Boudh and possible violation of Social Distancing norms. The District Administration has designed the e-PASS Management System for online issuance of Pass. The applicants can apply online through mobile and get the e-Pass delivered through Whatsapp or e-Mail. We had received 2238 nos. of requests which were filtered on the basis of urgency and 544 nos. of e-pass were issued from this portal.

7. NGOs AT THE FRONT.

Many NGOs like YCDA, Red Cross Society, SURAVI, LKBK, PRAGATI, NYK, Friends Club and others are extending co-operation to District Administration for ensuring Lock Down guidelines of the Govt. of Odisha. They are ensuring Social Distancing at Daily Markets with the Police Personnel, making sure people wash hands before entering the market, providing cooked meals to homeless, mentally ill and destitute persons and also giving food to stray animals. The Volunteers are donating Blood to the Govt. Blood Bank at DHH, Boudh and performing last rites of deceased homeless person's as well.



8. STARTING OF NEW DAILY MARKET TO REDUCE CROWDING

Daily Markets in Rural & Urban areas were splitted and shifted to New places so that there will be less congestion during purchase of daily needs like vegetables, fish, meat etc. All buyers and seller could maintain social distancing during transaction.

9. PAID AUTO SERVICE FOR PATIENTS COMING TO DHH, BOUDH DURING LOCKDOWN

Initially the patients who used to come to DHH, Boudh for routine check up faced difficulties in arranging vehicle after discharge. An intervention was made through model Police Station, Boudh wherein the patients after discharge were facilitated by way of arranging Autos for their travel back to home on production of discharge certificates. The Model Police Station, Boudh had set up dedicated facilitation counter for this purpose in co-ordination with medical authorities and Auto Drivers Association, Boudh.

Stay Indoors, Stay Safe**10. ENFORCEMENT BY LINE DEPARTMENT OFFICERS**

In addition to the Incident Commanders and Executive Magistrates, the Divisional Forest Officer (Territorial), Boudh and Superintendent of Excise, Boudh were authorised to conduct enforcements and create awareness. This helped in mobilising available staffs of forest and excise department. As on date, total amount of Rs. 7 Lakhs has been collected as fines and deposited in District Red- Cross Branch Fund.

**11. TELE HEALTH SERVICE BY DHH,B**

The DHH, Boudh had started Tele Health Service through whatsapp and phone call for patients who needed medical advice and counselling. Many Specialist doctors extended their support and actively participated in this innovative approach. Since the vehicular movement were restricted during lockdown, it proved very helpful for people staying far off the town.

**DISTRICT HEAD QUARTER HOSPITAL
BOUDH**

**TELEMEDICINE FACILITIES
FOR PATIENTS**

Call Time : 9 AM to 1 PM
EVERYDAY

MEDICINE Spl. 94374 04 854 / 94377 12777	PAEDIATRIC 94398 91223 / 94372 73224
SURGERY 94371 79220 / 94370 20650	O & G 94371 94952 / 98614 22149
ORTHOPEDICS 8332994513	ENT 94372 95827
EYE Spl. 91786 39848	BLOOD BANK 70085 10056
GENERAL MEDICINE 99387 46554	

Patients may contact through Whatsapp Voice call / Whatsapp Video call

Stay Home, Stay Safe, Save Lives

