

# **District Disaster Management Plan 2022**

**VOL-I**

**NABARANGPUR, ODISHA**

**DISTRICT DISASTER MANAGEMENT AUTHORITY  
NABARANGPUR, ODISHA**

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## PREFACE

Long years of coexistence with disaster has taught us to remain prepared. Planning is the foundation on which preparedness starts. Disaster management at District and Sub-district level has undergone a sea change since super cyclone of 1999 as Disaster Management Plans are prepared and followed at different levels.

District being the overall unit of disaster management in the administrative system, the District Disaster Management Plan (DDMP) possess an important role in the process of disaster management. The DDMP of Nabarangpur District is prepared/updated regularly to help the District Administration manage disasters effectively.

The geographic, social, demographic and vulnerability data of the District is contained in the DDMP. The Standard Operating Procedure (SOP) are prepared for all levels of functionaries of Government in the District as a guidance note to proactively initiate the work without seeking an advice or instructions from the higher authorities while responding to disasters immediately.

Disaster preparedness transcends the administrative domain to encompass different stakeholders like NGOs, Civil Society Organizations, professional groups, industries, volunteers and others. DDMP covers the tangible contribution by one and all in pre-disaster planning, post-disaster response and recovery activities. DDMP is a document which depicts the planning and preparedness at District and below levels to mitigate the effects of disasters. This document not only organizes the disaster management in the District but also gives a platform to the District Administration to be future ready by identifying the deviation of actual disaster management from the planning and to bridge the gap in future.

The DDMP of Nabarangpur has been prepared with the active collaboration of all levels of Govt. functionaries incorporating the important institutional memories to guide the District Administration in a holistic way for mitigating the affects of disasters.

(Dr. Kamal Lochan Mishra)

## **ABBREVIATIONS**

BDO	:	Block Development officer
BDMC	:	Block Disaster Management Committee
BDMP	:	Block Disaster Management Plan
BCP	:	Block Contingency Plan
BDM	:	Block Disaster Manager
BCR	:	Block Control Room
DDMP	:	District Disaster Management Plan
DDM	:	District Disaster Manager
DCR	:	District Control Room
GPDMC	:	Gram Panchayat Disaster Management
Committee OIC	:	Officer- In-charge
CDPO	:	Child Development Project Officer
MO	:	Medical Officer
VSO	:	Veterinary Stock Officer
VAS	:	Veterinary Assistance Surgeon
JAO	:	Junior Agriculture Officer
SI	:	School Inspector
AFO	:	Assistant Fishery Officer
JE-RWS&S	:	Junior Engineer- Rural Water Supply &
Sanitation JE- R&B	:	Junior Engineer-Roads and Buildings
JE-PWD	:	Junior Engineer- Public Works
Department DRDA	:	District Rural Development
Agency		
IAY	:	Indira Aawas Yojana
CMRF	:	Chief Minister's Relief Fund
AWC	:	Anganwadi Centre
PMRF	:	Prime Minister's Relief Fund
PDS	:	Public Distribution System
CDMO	:	Chief District Medical Officer
CDVO	:	Chief District Veterinary Officer
DSWO	:	District Social Welfare Officer
W&CD	:	Women & Child Development
GP	:	Gram Panchayat
SC	:	Schedule Caste
ST	:	Schedule Tribe
GEN	:	General Caste
BPL	:	Below Poverty Line
APL	:	Above Poverty Line
PHC	:	Primary Health Centre
VHF	:	Very High Frequency
ADM	:	Additional District Magistrate
PD	:	Project Director
WEO	:	Welfare Extension Officer
SEO	:	Social Education Organizer
LSEO	:	Lady Social Education Organizer
FEO	:	Fishery Extension Officer

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## Introduction

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

Section 31 of Disaster Management Act 2005 (DM Act) provides directive to have a disaster management plan in every district. In accordance with the provisions of the DM Act the District Disaster Management Plan (DDMP) of Nabarangpur shall include Hazard, Risk, Vulnerability and Capacity Assessment (HRVCA), prevention, mitigation, preparedness, response plan and procedures to reduce the impact of various disasters.

## DISASTER MANAGEMENT

Despite progress of science and technological advancements, mankind is still unable to come to grips with the fury of nature. Natural disasters continue to have an adverse impact on human life.

The term disaster has come from a French word “Disaster” which is further a combination of two separate terms – “Des” meaning evil or bad and “Astre” meaning star. So in combination it means evil or bad star.

Disaster is a sudden or great misfortune, calamity. Disaster is a sudden devastating event producing great material damage, loss of life and distress.

Disaster disrupts normal pattern of life. It brings hardship and has adverse effect on health. It causes damage to infrastructure, buildings, communication system and other essential services, thereby causing disruption in normal life.

## **TYPES OF DISASTER**

Disaster may be due to human activities or triggered by nature. Disasters triggered by nature can further be classified as wind related e.g. storm, cyclone, tornado, hurricane etc; water related e.g. floods, flash floods, excessive rain etc; geological e.g. earthquakes, snow avalanches, landslides, volcanic eruptions etc; climatic disasters e.g. drought, famine etc.

Manmade disasters are nuclear explosions, industrial accidents, fires of various kinds, accidents of automobiles, trains, aeroplanes, etc.

Disasters can also be classified according to their speed of occurrence. They are mainly of two types disasters with rapid onset e.g. earthquake, tornado, cyclone etc and the other type is “creeping” disaster e.g. drought, famine, epidemic, civil unrest etc.

Disasters with rapid onset give little warning before they strike. On the other hand disasters such as drought, famine are relatively more predictable.

Experiencing wide scale destruction, by natural and manmade disasters, has made us realize that though the occurrence of such disasters cannot be completely stopped, a concerted effort can go a long way in minimizing the adverse effects of these events by adopting suitable means.

We do not live in a totally risk free environment. There are hazards which naturally occur and these hazards have the potential to create huge losses. The chance of a particular hazard actually occurring is the risk – a combination of hazard & vulnerability. There are other hazards as well which pose danger to our life & property.

Therefore, there is the need for **disaster management**. It is possible to reduce the impact of disasters by adopting appropriate disaster mitigation strategies. The disaster mitigation efforts would include.

- i. Minimizing the potential risks by developing early warning system.
- ii. Preparing and implementing development plans to provide resilience to such disasters.
- iii. Improving & developing communication & health care services.

iv. Having a sound rehabilitation & post disaster reduction strategy.

Disaster Management would broadly involve pre- disaster planning, preparedness, monitoring and relief management capability. Disaster management has become an applied science which, through systematic observation & analysis of a disaster, aims to improve measures related to prevention, mitigation, preparedness, emergency response, & recovery.

In the present times there has been a gradual shift in the concept of dealing with disasters from disaster response to disaster mitigation. Thus it is wiser and feasible to take preventive measures before a disaster rather than attempting to save lives & property after the disaster has already occurred. This goes according to the popular saying “a stitch in time saves nine”.

### **1.1 Aims and Objectives of the DDMP**

- i. To identify the area and locations vulnerable to major types of hazards in the district.
- ii. To adopt proactive measures at district level by all the government 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.
- iv. Reduce the loss of public and private property, especially critical facilities and infrastructure, through proper planning.
- v. Manage the future development to mitigate the effect of natural hazards in the district.
- viii. To develop standardized mechanism to respond to the disaster situation and to manage the disaster efficiently.
- x. 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.
- xi. 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.
- xii. To make effective use of media in disaster management.



- xiii. Preparation of rehabilitation plan of the affected people and reconstruction measures to be taken by different government departments at district level and local authority.

The District Disaster Management Plan of Nabarangpur is a guide for achieving the core objectives of mitigation, preparedness, response and recovery in disaster management. This Plan has been prepared to respond to disasters with a sense of urgency in a planned way to minimize the human, property and environmental loss.

## **1.2 Preparation and Approval of DDMP**

The Section 30 of DM Act 2005 defines that, 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 District Disaster Management Plan in the meeting of the DDMA held in the month of January and to prepare the DDMP by the end of February every year.

After finalisation, the District Authority shall send a copy of the District Disaster Management 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**

Identified the important line departments in the district and organised an initiation workshop to discuss expected inputs from all the stakeholders and evolved a common framework for preparation of an integrated comprehensive disaster management plan for Nabarangpur District.



Identified the natural and man-made hazards face this district and Nodal Person(s) of the line agencies analysed each hazard in detail, made a quantitative and qualitative assessment of the risks involved and suggested different measures to reduce the risk. The Nodal Person(s) also suggested measures for preparedness and timely action in the event of a disaster and also actions to prevent disaster wherever possible. It is accepted that suggested measures would address the preparedness at all stakeholder's level such as the political representative, government and private sector, non-government organization and community at a large.

This plan is prepared broadly based on the review of past incidents experienced this district and analysing the vulnerability atlas of Nabarangpur district. On assessment of HRVC identified the district's vulnerability to different natural and man-made hazards. Also focused due attention on vulnerable groups and critical infrastructures to minimize the losses through advance preparedness and timely action.

This DDMP is written in the Model Framework of OSDMA and as per the guidelines of NDMA. The final draft plan was sent to the members of DDMA and all the stakeholders of line department for their critical review and their feedback suggestions were incorporated. Then the final plan was accepted and sent to OSDMA for accord the approval.

#### **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, non-governmental organizations, etc. are also stakeholders of the District Disaster Management Plan.

## **The District Collector**

- i. To facilitate and coordinate with local Government bodies to ensure that pre and post disaster management activities in the district are carried out.
- ii. 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.
- iii. 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.
- iv. To recommend the Special Relief Commissioner and State Government for declaration of disaster.

## **Local Authorities**

- 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.
- iv. 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.
- v. Trust/organisations managing places of worships and congregation.
- vi. Each establishment/organisation identified as critical infrastructure and key resources, including places of congregation in a district shall prepare on-site and off-site disaster management plan.
- vii. Carry out mitigation, response, relief, rehabilitation and reconstruction activities.

## **Private Sector**

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

- ii. They should adhere to the relevant rules regarding prevention of disasters, as may be stipulated by relevant local authorities.
- iii. As a part of corporate social responsibility, undertake disaster risk reduction projects in consultation with District Collector for enhancing district's resilience.

### **Community Groups and Volunteer Agencies**

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

### **Citizens**

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

### **1.5 Plans for Review and Updating: Periodicity**

- Dissemination - The plan must be disseminated to use at all level in the district for effective disaster management.
- Revise and Maintain - Planning teams should establish a process for reviewing and revising the plan. Reviews should be a recurring activity. Review on an annual basis is considered minimum. It should be mandatory to consider reviewing and updating the plan after the following events:
  - i. A major incident.
  - ii. A change in operational resources (i.e., policy, personnel, organizational structures, management processes, facilities, equipment).
  - iii. A formal update of planning guidance or standards.
  - iv. Major exercises.
  - iv. A change in the district's demographics or hazard or threat profile.
  - v. The enactment of new or amended laws or ordinances.

The responsibility for the coordination of the development and revision of the basic plan, annexes, appendices and implementing instructions must be assigned to the appropriate person.

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.



# DISTRICT PROFILE

## 2.1 History & Location

Historically Nabarangpur is a place of nine colours and culturally rich evolved in the elite minds at the court of King Krishna Dev (1814-1843). He was the second direct ruler of Nabarangpur and was the son of JagannathDev of Suryavamsis of Jeypore Estate. The scenic beauty of Hiridongar and lush green forest of this place influenced the king to set up his capital in this locality. NarangParaja, an original settler of this place had settled here with his family members and the habitat was called 'Narangpadar'. So the king decided to have his capital by this habitat and when the capital came into being he named the same as Nabarangpur.

Nabarangpur District is situated in between longitude 81°52' to 82°53' E and latitude 19°9' to 20°5' N. The district is located in south western corner of Odisha and bound by Kalahandi districts in east, Koraput district in south and the Raipur and Bastar districts of Chattisgarh in the north and west respectively stretches over an area of 5294.00 Sq.Km. approximately.

[Source: Nabarangpur Gazetteer/District Web Portal]

## 2.2 Administrative Setup

On 2nd October, 1992 Nabarangpur came into being as a separate district of Odisha State. The district is carved out of Koraput district vide the Notification No.49137/R dated 01-10-1992 of R&E Department, Government of Odisha. The Administrative setup is delineated as below:

i	Sub-Division	:	01	vii	RI Circles	:	66
ii	Tahasils	:	10	viii	Towns	:	02
iii	Blocks	:	10	ix	Municipality	:	02
iv	Gram Panchayats	:	189	x	Police Stations	:	13
v	Inhabited Villages	:	877	xi	Fire Stations	:	10
vi	Uninhabited Villages	:	10	xii	Assembly Constituencies	:	04

[Details are at Table 1.1 of Volume II of the DDMP]

### **2.3 Climate & Rain Fall**

As per the Agro-Climatic Zone Nabarangpur district comes under East Coast Plains and Hills. Entire district except Dabugaon Block, falls under Eastern Ghat High Lands. Dabugaon Block falls under Western Undulating Lands. The climate is sub-tropical to temperate. It is characterised by hot and dry summer, cool and humid monsoon and cold and dry winter. In 2022, Actual rainfall was 1307.19 mm against the Normal rainfall 1569.5 mm of the district.

*[Source: Nabarangpur Gazetteer]*

### **2.4 Geography & Topography**

The natural geographical division of the Nabarangpur district comprises of Nabarangpur and Umerkote region. In the south, there is the plain of Indravati basin forms the border between Nabarangpur and Koraput districts and the Eastern boundary is marked by steep ghats of eastern mountain range. The highest peak is Podagda, which has historical significance as well. In the extreme North-East of Nabarangpur district, there is a region known as PannabedaMutha, recently renamed as Chandahandi is lying around 500 feet below the level of the rest of the plateau experiences similar climate and social life to that of the adjacent Kalahandi District. The greater part of the plateau mainly flat with a few pockets of low hills drains westward and southward but at the Northern corner it drops down into valley of the Tel River. The plateau of the Nabarangpur district receives a heavier rainfall, though there are few hills. Throughout the plateau there is a fine growth of sal and other timbers, to the North of Nabarangpur district and to some parts of Eastern side there are hundreds of square kilometres of thick forests Chandahandi, Jharigam, Tentulikhunti region, but all over the district everywhere Sal springs up naturally. The district gets south-western monsoon rains in the month of July, August and September. There is no effect of north-east monsoon here. In summer the district remains dry.

The district has different types of soils like red and laterite. The soil PH is neutral to alkaline and its salinity is normal. Based on the physical and chemical characteristics, mode of origin and occurrence, soils of the district classified into two groups namely Alfisols and Vertisols. The Classification of Forest Area by Legal Status in the district as on 2011 are Reserve Forests 535.34 Sq.Kms., Demarcated

Protected Forests 685.77 Sq.Kms., Un Classified Forests 0.07 Sq.Kms., Other Forests 1241.55 Sq.Kms. and Per cent of Forest Area to Geographical Area is 46.55%.

*[Source: Nabarangpur Gazetteer, Ground Water Board Report,]*

## **2.5 River System**

The district has many river and perennial streams. Between Nabarangpur and Kunderi can find a river in every four to five kms distance like Indravati, the Tel, the Narangi, the Banjari, the Amarti, the Bhaskel, the Singari, the Belaji and the Turi.

### **1. Indravati**

The Indravati River is the biggest river in the district is the most important and the prime water source of the district. The Indravati emerges from the mountain range of Thuamul Rampur of the Kalahandi district. It consists of three perennial water streams and flows down from north to south ward covering Kalahandi, Nabarangpur and Chattisgarh and merges in the Godavari River. The Indravati basin is very fertile and productive. It passes through Kashipur Tahsil and Koraput district. The Bhaskel joins it just before it leaves Koraput district. The total length is 329 miles of which 77 miles runs through Koraput district. The villages like B.Caligula, Amatole, Churahandi, Nabarangpur Municipality and other adjacent villages are on its bank, and hence agriculturally very rich and prosperous. Due to the construction of Indravati Dam, the flow of water quantity through the Indravati is substantially decreased.

### **2. Mukti & Toori**

The Mukti River near Jatabal also merges in the Indravati. The Toori and the Mukti rivers flow from the plateau of Moidalpur.

### **3. Angi**

The Angi River emerging from Keliashill, flows through Manigam, Banuaguda, Garudaguda and Dabugaon mingles with the Belari river and merges in the Bhaskel river, the Chitrangi river and Belari river merges in the Bhaskel river.

### **4. Bhaskel**

The Bhaskel River flows from Bakoda forest of Umerkote and covers the area of Umerkote, Dhodra and Santoshpur in Kosagumuda Block.



## 5. Tel

The Tel River is one of the important rivers of the district. Tel river emerges from the dense forest of Beheda village (Umerkote region) flowing through the Laxidora and Telnadi village enters in the Chandahandi and then enters in the Kalahandi district at Gambhariguda village and at last merges in the Mahanadi. The Tel is a great tributary of the Mahanadi.

The river system of the district enriches the 70% area of Godavari basin and 30% of the Mahanadi basin.

[Source: Nabarangpur Gazetteer]

## 2.6 Demography

As per 2011 Census, the population of Nabarangpur District and its composition of different category of population are as follows:

### Households and its Distribution

Sl. No.	Total Number of Families/HH	Category			Category			Category	
		Rural	Urban	SC	ST	OBC	GEN	BPL	APL
1	275026	259754	15272	41074	146661	-	-	-	-

### Population and its Composition

Sl. No.	Population			SC		ST		OBC	
	T	M	F	M	F	M	F	M	F
1	1220946	604812	616134	88252	89132	335028	346145	NA	NA

- Population density of the district - 231 per Sq.km.
- Decadal growth of population - 19

### Religion wise Distribution of Population

Sl. No.	Total Population	Category				
		Hindu	Muslim	Christian	Sikh	Others
1	1220946	1178005	6753	32152	169	3867

## Age Group

Sl. No.	Total Population	0-5 years	6-14 years	15-59 years	60 years and above
1	1220946	176079	268760	680008	96099

## Sex Ratio

1	Sex Ratio (Females per 1000 Males)	1019
2	Sex Ratio (0-6 Years)	998

## Literacy Rate

Sl. No.	Literacy	Total	Male	Female
1	Rate	46.4	57.3	35.8

[Source: DD, P&S, Nabarangpur. Details are at Table 1.2 to 1.8 of Volume II of the DDMP]

## 2.7 Socio-Economic Profile of the District

### Workforce Participation

The total worker of the district as per 2011 Census is 610906 out of them Main workers are 279115 and Marginal workers are 331791.

### Workforce Participation Rate

Total Workforce Participation Rate is 50.0, The Male and Female Workforce Participation Rate is 56.7 and 43.5 respectively as per the 2011 Census in this district.

[Source: Census 2011. Details are at Table 1.9 of Volume II of the DDMP]

### Land Holding Pattern

The land holding pattern in the district is Marginal Farmers (<1.0 Ha.) 123048, Small Farmers (1.0 to < 2 Ha.) 59561, Semi Medium (2.0 to <4.0 Ha.) 11443, Medium Farmers (4.0 to < 10 Ha.) 2508, Large Farmers (10.0 Ha. and above) 625 and the Average Size of Land Holding is 11.2825.

[Source: CDAO, Nabarangpur. Details are at Table 1.10 of Volume II of the DDMP]

### Agriculture and Irrigation

Agriculture is the prime occupation in the district. During the year 2020, the net area sown was 201421 hectares. The major crops grown are paddy, maize,

ragi, millets, pulses and wheat. Maize is being grown extensively in Umerkote, Raigarh and Jharigaon Blocks.

The production of paddy was 3663296 quintals, 3316720 quintals of maize, 17738 quintals of ragi, 7500 quintals of wheat, 2871 quintals of millets, 58506 quintals of pulses, 8927.55 quintals of oil seeds, 13896 quintals of species, 3572800 quintals of Other Cash crops and 1942211 quintals of vegetables. During 2020, total fertilizer used in this district is about 7193400 MT.

In the year 2020, the irrigation potential created 73057 hectares from different sources of irrigation.

In year 2020-21 the are of 577 Hectors is utilised for other plantations (Perennial Crops) i.e. Cashew graft planatation and Mango graft plantation. Total 749 nos of farmed involved for the purpose.

*[Source: CDAO, Nabarangpur. Details are at Table 1.12, 1.13 & 1.14 of Volume II of the DDMP]*

### **Employment and Livelihood**

There are 197185 people directly employed in agricultural activities, 328783 people engaged as agricultural labourers, 30616 people engaged in fishery and animal husbandry activities, many more people engaged in business and service activities.

*[Source: CDVO/Fisher/ DIC, Nabarangpur. Details are at Table 1.23 of Volume II of the DDMP]*

### **Industries and Mining**

In this district there is 1 major industry which is engaged 552 people, the 520 MSME units have provided engagement to 3766 person and the 470 handicraft cottage industries provided engagement to 919 person. So far there is no mining operation in this district.

*[Source: DIC/StatisticalHB, Nabarangpur. Details are at Table 1.24of Volume II of the DDMP]*

### **Education**

The Literacy Rate of the district as per 2011 Census is 46.4, the male literacy is 57.3 and the female literacy is 35.8. During 2022-22, 6-15 years total children enrolment is 234366, children dropped out 2018 and 78 children never enrolled in any educational institution. There is 2229 villages/habitation acquired primary education facility within their locality against 2187 villages/habitation having access to ME within 3 Kms and 1933 No of villages/habitation acquired High School within 5 km radius. Total 7603 teachers engaged in 1827 the schools and the Teacher Pupil Ratio is 30.15 in this educational district.

*[Source: DEO/DWO, Nabarangpur. Details are at Table 1.25, 1.26 & 2.1.1of Volume II of the DDMP]*

## Health

The Infant Mortality Rate (IMR) is 48 and the Maternal Mortality Rate (MMR) is 178. The Immunization status of Children below 5 years is increased to 102% and the Institutional Delivery is increased to 91%. There were 312 deaths and 6265 incidences of major diseases in Malaria, Diarrhoea, Tuberculosis, Pneumonia, and Jaundice were reported in the last 5 years. Health institutions of the district are equipped with 109 Specialised Doctor, 420 Paramedical Staff, 420 ANM, 2022 ASHAs and 59 Pharmasists.

*[Source: CDMO, Nabarangpur. Details are at Table 1.33, 1.34 & 2.3 of Volume II of the DDMP]*

## Housing

As per the Census 2011, there are 211911 Katcha Houses, 6584 Semi Pucca Houses, 17494 Pucca Houses and 13803 Homeless households are in this district.

*[Source: SEC Census 2011. Details are at Table 1.11 of Volume II of the DDMP]*

## Electrification

There are 559 villages/habitations are fully electrified, 315 villages/habitations are partially electrified and 0 villages/habitations are un-electrified. Currently 266664 household have electrified against the 285966 households of the district.

*[Source: Southco Utility, Nabarangpur. Details are at Table 1.28 of Volume II of the DDMP]*

## Drinking Water and Sanitation

There are 868 villages having access to safe drinking water and 13 village/hamlets contain fluoride. 98755 households covered with the piped water supply project. There are 17867 functional tube wells and 462 sanitary wells exist in the district. There are 886 ODF villages, 267345 households having IHHL, Yet to construct the community sanitary complexes and 1869 schools having its toilets.

*[Source: RWS&S/PHED/EO, Nabarangpur/Umerkote. Details are at Table 1.29 to 1.31 of Volume II of the DDMP]*

## Migration

313 people of 313 households are migrating to Raipur, Hyderabad, Jagdalpur, Visakhapatnam in search of work and the average migration period is 4-6 months in a year.

*[Source: DLO, Nabarangpur. Details are at Table 1.27 of Volume II of the DDMP]*

## Food Security

Total 314091 households included under NFSA covering 1107095 beneficiaries and supplied with 65041.08 qtls. of Rice and 749.07 qtls. of Wheat during 2022-22 through 189 PDS outlets in the district.

*[Source: CSO, Nabarangpur. Details are at Table 1.37 of Volume II of the DDMP]*

## Social Security

There are 101084 Person covered under Old Age Pension Scheme, 20979 Person Covered under Widow Pension Scheme and 11439 Persons covered under Disability Pension Scheme to provide social security net.

*[Source: DSSO, Nabarangpur. Details are at Table 1.38 of Volume II of the DDMP]*

## 2.8 Critical Infrastructure

### Anganwadi Centres

There are 2321 Anganwadi Centres (AWCs) to provide ICDS and Anganwadi services. 1906 Anganwadi Centres having own Pucca Buildings. Currently 162095 Nos. of children enrolled, 1119 severely malnourished children were referred to different health institutions and 29104 pregnant/lactating mothers were served through these AWCs.

*[Source: DSWO, Nabarangpur. Details are at Table 1.32 of Volume II of the DDMP]*

### Schools and other Educational Institutions

There are 1106 Primary Schools, 491 ME Schools, 230 High Schools, 30 nos of +2 Colleges, 1 Polytechnic, 12 ITI and Vocational Training Institutes in the district during the year 2022-22. Also under the Welfare Department there are 5 Sevashrams, 45 Ashram Schools, 36 High Schools, 8 Higher Secondary Schools and total current enrolment in all these welfare schools is 35632.

*[Source: DEO/DWO, Nabarangpur. Details are at Table 2.1.1 & 2.1.2 of Volume II of the DDMP]*

## **Hospitals and Health Centres**

There are 289 Health Sub-Centres, 41 PHCs, 10 CHCs, 22 Ayurvedic/ 16 Homeopathic Hospitals, 1 Sub-Divisional Hospital, 1 District Hospital, 2 Private Hospital, 10 MHUs, 8 Ambulances and 1 Blood Bank available in the district during 2020-21.

*[Source: CDMO/Statistical HB, Nabarangpur. Details are at Table 2.2 of Volume II of the DDMP]*

## **Veterinary Hospitals**

To provide veterinary health care services to the animal resources there are 16 Veterinary Hospitals, 87 Livestock Aid Centres, 74 Artificial Insemination Centres and 10 Vet MHUs in the district during the year 2022-22.

*[Source: CDVO, Nabarangpur. Details are at Table 2.4 of Volume II of the DDMP]*

## **Police and Fire Stations**

There are 12 Nos. of Police Stations manned with 181 Police Personnel and 10 Nos. of Fire Stations equipped with 74 Fire Service human resources covering all the block of this district.

*[Source: SP/Fire Officer, Nabarangpur. Details are at Table 2.7 of Volume II of the DDMP]*

## **Cooperative Societies**

There are 13 Primary Agricultural Cooperative Societies, 2 Non-Agricultural Cooperative Societies and 2 Marketing Cooperative Societies in the district during 2022-22.

*[Source: ARCS, Nabarangpur. Details are at Table 1.16 of Volume II of the DDMP]*

## **Banks and Post Offices**

The banking facilities are provided through 36 Commercial Banks, 24 Regional Rural Banks, 15 Cooperative Banks and 198 Kiosk Banks. There are 46 Automated Teller Machines (ATMs) to provide cash and e-banking facilities across service areas of this district. There are 178 Post Offices to provide postal services across the district.

*[Source: Statistical HB, Nabarangpur/SLBC, Odisha/Web. Details are at Table 2.6 of Volume II of the DDMP]*

## **Road and Railway Network**

The district has 42.0 km. National Highway, 123.0 km. State Highway, 196.5 km. District Road, 1019.0 km. Rural Road, 6432.0 km. GP/PS Road, 292.0 km. Forest Road and 189 No. of GPs connected with the block headquarters with all-weather roads and maximum villages connected with GP headquarters with all-weather roads. At present there is no Railway network in this district; however the land acquisition work is going to establish railway connectivity.

*[Source: R&B Web. Details are at Table 1.40 to 1.42 of Volume II of the DDMP]*

## **Cyclone and Flood Shelters**

In the first phase 10 Nos. of Multipurpose Flood Shelter (MFS) infrastructures were constructed under the Chief Minister's Relief Fund (CMRF) in 10 different flood prone locations of the district to meet the infrastructure gap as well as to provide temporary shelters to the affected. This MFS are managed by the local communities through the Flood Shelter Management and Maintenance Committee (FSMMC).

*[Source: Emergency Section, Nabarangpur. Details are at Table 4.16 V-I]*

## **Rain Gauge and Automatic Weather Stations**

There are 10 Rain Gauge units are functional covering all 10 block headquarters and an Automatic Rain Gauge unit is established at district headquarter for recording the rain fall in this district. Also Rain Gauge units are installed at Indravati Main Dam, Muran Dam and Kapur Dam to record the inflow and out flow of water during the rainy season on daily basis.

*[Source: Sub-Collector/Irrigation Division, Nabarangpur]*





## **Hazard, Vulnerability And Risk Assessment**

### **3.1 Major Disasters/ Incidents**

Nabarangpur district is vulnerable to flood, drought, lightening and fire accidents frequently. Every year the district bears a considerable loss from natural as well as manmade disasters and it causes a lot of damage to life and property. The district mainly suffers from natural disasters such as flash flood, drought, lightning, landslide and manmade disasters such as road accidents, fire accidents, drowning, etc. An access to the Vulnerability Atlas of Nabarangpur District reveals that almost all the parts of the district is coming under Wind & Cyclone Moderate Damage Risk Zone 'B' (39 m/s), Earthquake Low Damage Risk Zone II with No Flood Zone category. Also majority part of the Chandahandi Block comes under Wind & Cyclone Moderate Damage Risk Zone 'A' (44 m/s). However, on assessment of last ten years disaster occurrence history the Nabarangpur district's majority of life and property were affected due to heavy rain, flood, lightning, drowning, snake bite, fire drought and road accidents.

**Table:3.1**

**A Brief Profile of Major Disasters/ Incidents Occurred in the District During Last Years (2010-11 to 2021-22)**

Sl. No.	Disaster/ Incident	No. of incidents during 2010-11 to 2021-22	No. of Deaths	Affected Population	Livestock Loss	Houses Damaged	Damage to Infrastructure				Damage and loss of Crop Area (in Hectares)
							School/ AWC Buildings	Hospitals	Road in Km.	Critical Other Infrastructure	
<b>Disasters as approved under SDRF/NDRF Guidelines</b>											
1	Flood	2	2	139871	332	2497	-	-	<b>401.652</b>	123	1501.54
2	Drought	3	0	230454	0	0	0	0	0	0	112714
3	Fire	891	32	1295	0	1259	0	0	0	0	0
4	Hail Storm	0	0	0	0	0	0	0	0	0	0
5	Cyclone	4	7	157874	0	1193	0	0	0	2274	24111
6	Earth Quake	0	0	0	0	0	0	0	0	0	0
7	Tsunami	0	0	0	0	0	0	0	0	0	0
8	Landslide	2	4	4	0	0	0	0	0	0	0
9	Avalanche	0	0	0	0	0	0	0	0	0	0
10	Cloud Burst	0	0	0	0	0	0	0	0	0	0
11	Pest Attack	0	0	0	0	0	0	0	0	0	0
12	Cold Wave/ Frost	0	0	0	0	0	0	0	0	0	0
<b>State Specific Disasters as per Notification No.1936, Dt. 01.06.2015</b>											
13	Lightning (2010-2022)	155	164	204	69	0	0	0	0	909	0
14	Heat wave	0	0	0	0	0	0	0	0	0	0
15	Whirlwind	1	0	0	0	654	0	0	0	3	0
16	Tornado	0	0	0	0	0	0	0	0	0	0
17	Heavy Rain	8	2	133137	38	2427	0	0	0	0	0

18	Boat Accidents (Other than during Flood)	1	1	0	0	0	0	0	0	0	0
19	Drowning (Other than during Flood)	254	265	265	0	0	0	0	0	0	0
20	Snake Bite (Other than during Flood)	199	202	200	0	0	0	0	0	0	0
<b>Other Disasters</b>											
21	Animal Menace	0	0	0	0	0	0	0	0	0	0
22	Building Collapse	0	0	0	0	0	0	0	0	0	0
23	Stampede	0	0	0	0	0	0	0	0	0	0
24	Epidemics	10	20	751	0	0	0	0	0	0	0
25	Industrial/ Chemical Accidents	0	0	0	0	0	0	0	0	0	0
26	Road Accidents	3420	668	3420	0	0	0	0	0	0	0
27	Railway Accidents	0	0	0	0	0	0	0	0	0	0
28	Hooch Incidents	0	0	0	0	0	0	0	0	0	0
29	Communa l Riot	0	0	0	0	0	0	0	0	0	0
30	Dam Break/ Spill Way related flood.	0	0	0	0	0	0	0	0	0	0
31	Soil/ Coastal erosion	0	0	0	0	0	0	0	0	0	0
	Total	4825	1266	525165	434	8030	0	0	401.652	3309	136975.54

[Source: Emergency Section/Dist. Police Office/CDMO, Nabarangpur. Year wise details of each disaster occurred during the last 11 years is at Table 3.1of Volume-II of DDMP]

### 3.2 Major Disasters/ Incidents in the District During 2022

The casualties and people affected reported due to Drought, Snake Bite, Drowning, Lightning, Fire and Cyclone had experienced this district during 2022.

**Table:3.2**  
**Major Disasters/ Incidents in the District During 2022**

Sl. No.	Disaster/ Incident	No. of incidents during 2022	No. of Deaths	Affected Population	Livestock Loss	Houses Damaged	Damage to Infrastructure				Damage and loss of Crop Area (in Hectares)
							School/ AWC Buildings	Hospitals	Road in Km.	Other Critical Infrastructure	
1	Flood	0	0	0	0	0	0	0	0	0	0
2	Fire	35	8	36	0	53	0	0	0	0	0
3	Landslide	0	0	0	0	0	0	0	0	0	0
4	Pest Attack	0	0	0	0	0	0	0	0	0	0
5	Lightning	8	8	8	11	0	0	0	0	0	0
6	Drowning (Other than during Flood)	53	53	53	0	0	0	0	0	0	0
7	Snake Bite (Other than during Flood)	29	29	29	0	0	0	0	0	0	0
8	Drought	0	0	0	0	0	0	0	0	0	0
9	Cyclone	0	0	0	0	0	0	0	0	0	0

[Source: Emergency Section/DDA, Nabarangpur]

### **3.3 Vulnerability and Risk Assessment Related to Disasters**

#### **3.2.1 Flood**

The district is normally affected by river flood and flash flood due to heavy rain and inadequate carrying capacity of rain water quickly in the river and nalas are main cause of floods in the low lying areas of the district. In the last eleven years the district is suffered 8 times in flood and affected around two lakh twenty three thousand human beings, damage nearly eight hundred houses, death of two human lives, cause to loss of nearly fourteen hundred livestock and around five thousand one hundred hectares of crop area as well as affected many fold socio economic life of the people of this district.

In 2010 a torrential rain was experienced in most parts of the districts from 4<sup>th</sup> to 6<sup>th</sup> of August, Dabugaon and Jharigaon Blocks recorded rainfall of 486 and 305 mm in a single day and 601 and 496 mm respectively in two days, as a result of heavy downpour in the catchments of Bhaskel and Indravati Rivers the district faced a high flooding. 6 Blocks, 74 Gram Panchayats, 252 Villages were severely affected with 29752 lives of people and 9076 livestock. As many as 457 Roads covering length of 401.65 km. have damaged with occurrence of 247 breaches, 121 Minor Lift Irrigation Project damaged and also sustained a great damage to many public utilities. Free cooked food provided in 6 kitchens to 15357 flood affected beneficiaries. Emergent relief was distributed for a period of 19 days in 41 villages of Kosagumuda Block. Similarly in 2017, due to the low pressure-induced heavy rain in 17-19<sup>th</sup> July 2017 and again in 27-29<sup>th</sup> August 2017 caused a flood-like situation in the district and floods have disrupted surface communication in many parts of the district. The loss and damage caused by these floods in the district has been estimated at Rs 5159 lacs. About 1.824 lakh people in 359 villages were affected by these floods. As per assessment, 582 private houses have been damaged. The flood water has badly affected to 2168.49 hectares of paddy and 976.15 hectares of non-paddy cultivated land. Agriculture land to the extent of 101.56 hectares has been sand casted in 7 blocks. Huge damage has been caused to public properties as roads, bridges, culverts; check dams electrical installations, education & health infrastructures and government buildings worth approximately Rs. 5005.83 lakh.

**Table : 3.3**

**Flood Vulnerable Areas of the District in General**

Sl. No.	Name of the Block/ ULB	No. of susceptible Gram Panchayats	No. of susceptible Villages/ Wards	Population in Nos.	Milch and Draught animals	Houses	Vulnerable Infrastructure			
							School/ AWC Buildings	Hospitals	Roads (in Km)	Other Critical Infrastructure
1	Nabarangpur	10	23	46055	28050	10586	11	7	-	0
2	Nandahandi	8	17	25680	20681	6085	11	5	-	0
3	Tentulikhunti	9	12	21902	14711	5417	2	2	-	0
4	Papadahandi	11	13	32424	14976	7417	2	2	-	0
5	Kosagumuda	17	54	74402	82317	16088	43	23	-	0
6	Dabugaon	4	9	9378	11396	2151	0	0	-	0
7	Umerkote	4	4	14365	12955	3126	1	1	-	0
8	Raigarh	0	0	0	0	0	0	0	0	0
9	Jharigaon	13	20	41455	34530	8892	1	2	-	0
10	Chandahandi	11	22	26218	17354	6408	4	5	-	0
11	Nabarangpur Municipality	0	5	10866	0	2563	0	0	-	0
12	Umerkote Municipality	0	0	0	0	0	0	0	0	0
	Total	87	179	302745	236970	66170	75	47	-	0

Source: Emergency Section/CDVO/DEO/DSWO, Nabarangpur.

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

**Table : 3.4****Causing Agent wise Flood Vulnerable Areas of the District**

Sl. No.	Causing agent- Rivers/ Water bodies/Tidal Wave/ Others	No. of Susceptible Blocks/ ULB	No. of Susceptible GPs	No. of Susceptible Villages/ Wards	Vulnerable Population	Milch and Draught animals	Houses	Vulnerable Infrastructure			
								School/ AWC Buildings	Hospitals	Roads (in Km)	Other Critical Infra.
1	River- Indravati	4	33	84	135213	104432	28652	38	30	-	0
2	River- Tel	2	23	39	61322	48829	14107	4	7	-	0
3	River- Bhaskel	4	20	43	73786	68733	15994	29	8	-	0
4	River- Toori	1	11	13	32424	14976	7417	2	2	-	0
5	Flash Flood	0	0	0	0	0	0	0	0	0	0
6	Others	0	0	0	0	0	0	0	0	0	0
	Total	10	87	179	302745	236970	66170	75	47	-	0

[Source: Emergency Section/CDVO/DEO/DSWO, Nabarangpur]

**Table : 3.5****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	Nabarangpur	10840	7006	-	-
2	Nandahandi	8230	6270	-	-
3	Tentulikhunti	6500	9415	-	-
4	Papadahandi	11140	11655	0	0
5	Kosagumuda	22800	11381	-	-
6	Dabugam	5360	4390	0	0
7	Umerkote	12860	10275	0	0
8	Raighar	13390	16905	0	0
9	Jharigam	9000	8094	0	0
10	Chandahandi	6230	9680	0	0
11	Nabarangpur Municipality	0	0	0	0
12	Umerkote Municipality	0	0	0	0
	Total	106350	95071	-	-

[Source: DDA, Nabarangpur]



**Table: 3.6**  
**Electrical Infrastructure in the Flood Prone Area**

ELECTRICAL INFRASTRUCTURE IN THE FLOOD PRONE AREA UNDER NABARANGPUR DISTRICT											
SI No	Name of the District	Name of the Block	NOS OF 132/33KV GRID	NOS OF 33/11KV PRIMARY SUBSTATION	NOS OF DISTRIBUTION TRANSFORMERS			Conductor /Electrical Line - 11KV OR LESS (Length in Km)	No of Electrical Poles	Nos of High Tention Towers	High Tention Lines above 11KV ( Length in Km)
					11KV OR LESS	11KV ABOVE AND BELOW 66KV	60KV AND ABOVE				
1	NABARANGPUR	NABARANGPUR									
2	NABARANGPUR	NANDAHANDI									
3	NABARANGPUR	TENTULIKHUNTI									
4	NABARANGPUR	PAPADAHANDI									
5	NABARANGPUR	KOSAGUMUDA	0	2	582	6	0	680	17000	1098	61
6	NABARANGPUR	DABUGAM									
7	NABARANGPUR	UMERKOTE									
8	NABARANGPUR	RAIGHAR									
9	NABARANGPUR	JHARIGAM									
10	NABARANGPUR	CHANDAHANDI									
11	NABARANGPUR	NABARANGPUR MUNICIPALITY									
12	NABARANGPUR	UMERKOTE MUNICIPALITY									
GRAND TOTAL			0	2	582	6	6	680	17000	1098	61

[Source: TPSODL, Nabarangpur 2.5 of DDMP Vol-2]

**Table:3.7**  
**Drinking Water and Flood Vulnerability**

SI. 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	Nabarangpur	1324	7	14	37	185	32	389	
2	Nandahandi	931	6	11	30	135	21	428	
3	Tentulikhunti	1413	10	38	32	144	22	190	
4	Papadahandi	1935	2	19	37	211	35	595	
5	Kosagumuda	2037	25	8	46	230	37	610	
6	Dabugam	1161		28	22	110	21	210	
7	Umerkote	2293		3	44	198	26	247	
8	Raighar	2675		30	42	190	30	168	
9	Jharigam	2297		54	44	201	37	261	
10	Chandahandi	1330	1	0	29	145	23	180	
11	Nabarangpur Municipality	214			4553	60			
12	Umerkote Municipality	257		257	21	90			
Total		17867	51	462	4947	1899	284	3278	

[Source: RWS&S/PHED, Nabarangpur]

### 3.2.2 Drought

Nabarangpur district is also vulnerable drought due to deficient rainfall, low level of groundwater and less water content in the soil. The frequency, intensity and extent of droughts are gradually on the rise. This is leading to crop failure, decline in surface and groundwater level, increasing unemployment and indebtedness. During 2011, 2015 & 2018 many parts of the district, especially highlands faced serious problems of drought. As consequences 79745.84 hectares of agricultural land sustained a heavy crop loss affecting 147473 farmers.

Drought in 2015 Kharif, 858 Villages, all 169 Gram Panchayats, 6 Wards and several parts of all the 10 Blocks were sustained a crop loss of 50% and more in 1390.52 hectares and 33% more in 30093.89 hectares of cultivated area affecting 85307 small and marginal farmers. Drought in 2018 Kharif, 816 Villages, all 169 Gram Panchayats, and several parts of all the 10 Blocks were sustained a crop loss of 33% and more in 32968.00 hectares of cultivated area affecting 83031 small and marginal farmers which was lead to affect the economical backbone of the farming community.

**Table: 3.8**  
**Status of Paddy & Non-Paddy Cultivated Area**

Sl. No.	Name of the Block	Average Annual Rain Fall	Ground Water Level (ham) %	Cultivated Area (In Hectares)			
				Paddy		Non- Paddy	
				Rainfed Area	Irrigated Area	Rain fed Area	Irrigated Area
1	Nabarangpur	1537.8	22.31	3502	7338	6954	52
2	Nandahandi	1471.6	11.93	2173	6057	6205	65
3	Tentulikhunti	1318.3	20.23	2892	3608	9377	38
4	Papadahandi	1399.1	14.44	6084	5056	11582	73
5	Kosagumuda	1490.93	24.45	12513	10287	11295	86
6	Dabugam	1165.4	15.47	2087	3273	4345	45
7	Umerkote	1585.2	9.16	313	12547	10149	126
8	Raighar	1052.6	15.43	2365	11025	16773	132
9	Jharigam	1244.44	12.60	3111	5889	8046	48
10	Chandahandi	1054.82	8.30	152	6078	9633	47
	Total	13320.19	154.32	35192	71158	94359	712

[Source: DDA, Nabarangpur]

**Table :3.9  
Drought Vulnerability**

Sl. No.	Name of the Block	Year- 2018				Year- 2015				Year - 2011			
		No. of GPs experienced drought	No. of Villages	Agricultural Crop Area lost (in Hectares)		No. of GPs experienced drought	No. of Villages	Agricultural Crop Area lost (in Hectares)		No. of GPs experienced drought	No. of Villages	Agricultural Crop Area lost (in Hectares)	
				Paddy	Non- Paddy			Paddy	Non- Paddy			Paddy	Non- Paddy
1	Nabarangpur	13	55	1460	-	13	56	2672	-	12	54	-	-
2	Nandahandi	11	32	954	-	10	46	1101	-	9	48	-	-
3	Tentulikhunti	15	54	973	-	15	62	1041	-	15	52	-	-
4	Papadahandi	23	90	2717	-	22	89	4776	-	13	22	-	-
5	Kosagumuda	26	120	6051	-	24	120	5053	-	11	14	-	-
6	Dabugam	12	70	2566	-	8	70	1467	-	8	64	-	-
7	Umerkote	26	78	2713	-	18	99	2492	-	15	79	-	-
8	Raighar	18	117	3920	-	24	117	5882	-	8	16	-	-
9	Jharigam	23	111	4606	-	21	112	2624	-	16	48	-	-
10	Chandahandi	14	89	5008	-	14	88	4375	-	8	30	-	-
	Total	181	816	32968	-	169	859	31484	-	115	427	-	-

[Source: Emergency Section, Nabarangpur.  
The detailed list of drought prone Villages is at 3.2 of Volume II of the DDMP]

### 3.2.3 Cyclone

Cyclone impacted the district due to formation of cyclonic low pressure in the Bay of Bengal and causes heavy rain and thereby resulting severe damages to the agriculture, infrastructure and affects a huge human population. In the last several years this district mainly affected by unseasonal rain due to cyclonic depression in 2010, 2012, 2014 and 2017. For these cyclonic rains, the standing and harvested crops suffered a lot and sustained a heavy crop loss to many small and marginal farmers.

The very severe cyclonic storm 'Hudhud' passed through the neighbouring districts Malkangiri and Koraput in 12<sup>th</sup> October 2014. Under its impact the district heavily affected various sectors due to heavy cyclonic wind, torrential rainfall and consequent flooding. 62350 people in 328 villages under 109 Gram Panchayats of 10 Blocks and 10 Wards of 2ULBs in the district were affected, 3 people lost their lives and 1193 houses damaged due to this disaster.

**Table : 3.10**  
**Cyclone Vulnerable Areas of the District**

Sl. No.	Name of the Block/ ULB	No. of susceptible Gram Panchayats	No. of susceptible Villages/ Wards	Vulnerable Population in Nos.	Milch and Draught animals	Houses	Vulnerable Infrastructure			
							School/ AWC Buildings	Hospitals	Roads (in Km)	Other Critical Infrastructure
1	Nabarangpur	0	0	0	0	0	0	0	0	0
2	Nandahandi	0	0	0	0	0	0	0	0	0
3	Tentulikhunti	0	0	0	0	0	0	0	0	0
4	Papadahandi	0	0	0	0	0	0	0	0	0
5	Kosagumuda	0	0	0	0	0	0	0	0	0
6	Dabugam	0	0	0	0	0	0	0	0	0
7	Umerkote	0	0	0	0	0	0	0	0	0
8	Raigarh	0	0	0	0	0	0	0	0	0
9	Jharigam	0	0	0	0	0	0	0	0	0
10	Chandahandi	0	0	0	0	0	0	0	0	0
11	Nabarangpur Municipality	0	0	0	0	0	0	0	0	0
12	Umerkote Municipality	0	0	0	0	0	0	0	0	0
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

*[Detailed list of Vulnerable Villages/Wards is at 3.2 of Volume II of the DDMP]*

Table : 3.11

**Electrical Infrastructures and General Cyclone Affect (Updated)**

ELECTRICAL INFRASTRUCTURE AND GENERAL CYCLONE AFFECTED UNDER NABARANGPUR DISTRICT											
SI No	Name of the District	Name of the Block	NOS OF 132/33KV GRID	NOS OF 33/11KV SUBSTATION	NOS OF DISTRIBUTION TRANSFORMERS			Conduct or /Electrical Line - 11KV OR LESS (Length in Km)	No of Electrical Poles	Nos of High Tention Towers	High Tention Lines above 11KV ( Length in Km)
					11KV OR LESS	11KV ABOVE AND BELOW 66KV	60KV AND ABOVE				
1	NABARANGPUR	NABARANGPUR	0	2	378	4	0	334	8350	684	38
2	NABARANGPUR	NANDAHANDI	0	1	564	2	0	470	11750	180	10
3	NABARANGPUR	TENTULIKHUNTI	1	3	521	7	2	954	23850	756	42
4	NABARANGPUR	PAPADAHANDI	0	3	793	4	0	779	19475	648	36
5	NABARANGPUR	KOSAGUMUDA	0	2	582	6	0	680	17000	1098	61
6	NABARANGPUR	DABUGAM	1	2	1052	5	2	882	22050	432	24
7	NABARANGPUR	UMERKOTE	1	2	1262	4	2	1340	33500	900	50
8	NABARANGPUR	RAIGHAR	0	1	1140	5	0	1678	41950	576	32
9	NABARANGPUR	JHARIGAM	0	1	624	2	0	710	17750	720	40
10	NABARANGPUR	CHANDAHANDI	0	1	702	2	0	446	11150	630	35
11	NABARANGPUR	NABARANGPUR MUNICIPALITY	0	1	184	2	0	135	3375	504	28
12	NABARANGPUR	UMERKOTE MUNICIPALITY	0	1	104	3	0	105	2625	162	9
GRAND TOTAL			3	20	7906	46	6	8513	212825	7290	405

[Source: TPSODL, Nabarangpur]

Table :3.12 (OK)

**Drinking Water Facility in the General Cyclone Affect Area**

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	Nabarangpur	1324	14	37	185	32	389	
2	Nandahandi	931	11	30	135	21	428	
3	Tentulikhunti	1413	38	32	144	22	190	
4	Papadahandi	1935	19	37	211	35	595	
5	Kosagumuda	2037	8	46	230	37	610	
6	Dabugam	1161	28	22	110	21	210	
7	Umerkote	2293	3	44	198	26	247	
8	Raighar	2675	30	42	190	30	168	
9	Jharigam	2297	54	44	201	37	261	
10	Chandahandi	1330	0	29	145	23	180	
11	Nabarangpur Municipality	214	-	4553	60.36	2	4553	
12	Umerkote Municipality	257	257	21	90	1	21	
Total		17396	205	363	1749	284	3278	

[Source: RWS&amp;S, Nabarangpur &amp; PHED, Nabarangpur/Umerkote]

### 3.2.4 Events, Festivals and Functions Organized in the District where Mass Gathering Occurs

Table : 3.13

Sl. No.	Name of the Event/ Festival/ Function	Place (Block & Gram Panchayat)	Duration of the event (in No. of days)	Month (as per English Calendar)	Strength of population gathering (Approx.)	Remarks (other vulnerabilities associated with the place/ event, if any to be mentioned)
1	Republic Day	Nabarangpur Stadium (Nabarangpur Block)	1	January	6000	-
2	Maha Shiv Ratri	Papadahandi (Papadahandi Block/GP)	1	February	5000	-
3	Maha Shiv Ratri	Kelia (Dabugaon Block&Junapani GP)	1	February	17000	-
4	Maha Shiv Ratri	Bhatrasuini Shiv Temple (Nabarangpur Block)	1	February	8000	-
5	Maha Shiv Ratri	Ghumreswar Shiv Temple (Tentulikhunti Block)	1	February	12000	-
6	Maha Shiv Ratri	Chatahandi, Manadongri (Nabarangpur Block)	1	February	10000	-
7	Magha Mandei	Kosagumuda (Kosagumuda Block/GP)	1	February	20000	-
8	Dhadra Mondei	Dhadra (Jharigaon Block &Dhadra GP)	3	March	25000	-
9	Kalasi Mondei	Raigarh (Raigarh Block/GP)	1	April	20000	-
10	Ratha Yatra	Nabarangpur (Nabarangpur Block/GP)	1	June	15000	-
11	Ratha Yatra	Khatiguda (Tentulikhunti Block)	1	June	7000	-
12	Ratha Yatra	Kodinga (Kosagumuda Block)	1	June	5000	-
13	RathaYatra	Umerkote (Umerkote Block/GP)	1	June	10000	-
14	BahudaYatra	Nabarangpur (Nabarangpur Block/GP)	1	July	16000	-
15	BahudaYatra	Khatiguda (Tentulikhunti Block)	1	July	6000	-
16	BahudaYatra	Kodinga (Kosagumuda Block)	1	July	5500	-
17	BahudaYatra	Umerkote (Umerkote Block/GP)	1	July	10000	-
18	Maa Pendrani Yatra	Umerkote (Umerkote Block/GP)	1	July	8000	-
19	Independence Day	Nabarangpur Stadium (Nabarangpur Block)	01	August	5000	-

20	Dasahara	Nabarangpur (Nabarangpur Block/GP)	5	October	12000	-
21	Dasahara	Papadahandi (Papadahandi Block/GP)	3	October	20000	-
22	Dasahara	Umerkote (Umerkote Block/GP)	3	October	70000	-
23	Kalipuja	Umerkote (Umerkote Block/GP)	1	November	15000	-
24	Mondei	Nabarangpur (Nabarangpur Block/GP)	5	December	20000	-
25	Christmas Festival	Nabarangpur (Nabarangpur Block)	2	December	8000	-

[Source: Dist. Police Office/Emergency Section, Nabarangpur]

### 3.2.5 Boat Operation Points

Table : 3.14

Sl. No.	Name of the Block	Name of the ghat/ boat operation point	Name of the water body	No. of Panchayats/ villages connected	Daily to and fro movement of people in Nos. (Approx.)	Type of boats operating in Nos.	
						Mechanised	Non-Mechanised
1	Nabarangpur	Sindhigam Ghat	Indravati River	1	5-10	0	1
2	Nabarangpur	Khandiguda Ghat	Indravati River	1	5-10	0	1
3	Tentulikhunti	Khatiguda Ghat	Indravati Reservoir	5	20-50	1	2
4	Kosagumuda	Belputi Ghat	Bhaskel River	4	10-40	0	4
5	Kosagumuda	Khanduguda Ghat	Bhaskel River	2	10-20	0	2
6	Kosagumuda	Umargam Ghat	Bhaskel River	1	5-10	0	1
7	Kosagumuda	Bhainsabeda & Gajagam Ghat	Bhaskel River	2	5-10	0	1
8	Kosagumuda	Ghatakusumi Ghat	Indravati River	1	5-10	0	1
9	Kosagumuda	Alupadar & Pujasara Ghat	Indravati River	2	10-20	0	2
10	Kosagumuda	AP Ghatachura Ghat	Indravati River	1	5-10	0	1
11	Kosagumuda	Ghatabasuli Ghat	Indravati River	1	5-10	0	1



12	Kosagumuda	Baragam Ghat	Bhaskel River	1	10-20	0	1
13	Kosagumuda	Bania Ghat	Indravati River	2	25-45	0	3
14	Kosagumuda	Ghataguda & Kottagam Ghat	Bhaskel River	1	10-15	0	1
15	Kosagumuda	Ekori Ghat	Bhaskel River	1	10-15	0	1
16	Kosagumuda	Badagumuda Ghat	Bhaskel River	1	10-15	0	1
17	Kosagumuda	Bhattaguda Ghat	Indravati River	4	10-40	0	4
18	Kosagumuda	Joganiguda Ghat	Indravati River	1	5-10	0	1
19	Kosagumuda	Kantasaruguda Ghat	Indravati River	1	5-10	0	1
20	Kosagumuda	Ghatualiguda Ghat	Indravati River	2	10-20	0	2
21	Chandahandi	Beheramunda Ghat	Tel River	1	10-20	0	1
	Total	21	3	36	190-410	1	33

[Source: Tahasildar, Nabarangpur/Kosagumuda/Chandahandi]

### 3.2.6 Land Slide Vulnerability

Table : 3.15

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
1	Jharigaon Block - Sinaguda Village of Chitabeda GP	0	1	0	0	0	0	0	0
2	Umerkote Block - Dubalahandi Village	0	1	0	0	0	0	0	0
	Total	0	2	0	0	0	0	0	0

(Detailed list of Villages, School, Hospitals and Roads are given at 3.2 of Volume II of the DDMP)

### 3.2.7 Lightning

Most of the casualties reported due to lightning and thunder were in pre-monsoon season. Losses to human lives and critical equipments are being reported extensively. Due to much more outside exposure of the working class the lightning and thunder affected the lives in general and other critical equipments also affected due to this natural disaster.

**Table : 3.16**

Sl. No.	Name of the Block/ ULB	Identifiable incidents of lightning hit during 2015 to 2022		No. of Lightning Events	No. Fatality/ Deaths	Injured Persons
		No. GPs	No. of Villages/ Wards			
1	Nabarangpur	9	10	11	13	4
2	Nandahandi	3	3	3	3	7
3	Tentulikhunti	3	5	8	5	5
4	Papadahandi	8	10	11	11	0
5	Kosagumuda	12	17	19	19	17
6	Dabugaon	5	7	8	8	0
7	Umerkote	12	22	21	21	8
8	Raighar	14	14	20	20	5
9	Jharigaon	10	14	16	16	6
10	Chandahandi	6	8	8	8	2
11	Nabarangpur Municipality	0	1	1	1	0
12	Umerkote Municipality	0	0	0	0	0
	Total	82	111	126	125	54

[Source: Emergency Section, Nabarangpur. List of Villages is at 3.2 of Volume II of the DDMP]

### 3.2.8 Major Industrial Establishments/ Chemical & Other Hazardous Material Storage Points

Table : 3.17

Sl. No.	Name & location of the Industry/ Storage point	Department/ Ownership	Name of hazardous materials stored	Quantity	Total no. of workers in the establishment	No. of adjacent Villages/ Habitations within 2 Kms. radius	Susceptible Population	House	Vulnerable Infrastructure		
									School Buildings & AWC	Hospitals	Other Critical Infra.
1	Mangalam Timber Products Ltd, Kusumi, Nabarangpur	Private	0	0	545	8	0	0	0	0	0
	Total	Private	0	0	545	8	0	0	0	0	0

### 3.2.9 Fire

As many as 866 incidents of fire occurred during last 11 years and affected the live and livelihood of the people due to poor socio-economic aspects in the district.

### 3.3.10 Heat Wave

Almost all parts of the district experiences Heat Wave condition due to high humidity in the month of April to June every year. The Average temperature exceeds 40 degree Celsius during the peak April & May each year affecting life and livelihoods of the people of the district and brings substance decrease in income of the working class.

### 3.3.11 Other Incidents

In addition, the district is also affected by Heavy Rain, Whirlwind, Snake Bite, Drowning, Boat Accidents, etc and as many as human beings were lost their lives in these disasters. In the last three years due to Drowning 154 person and in Snakebite 116 people were lost their lives.

### 3.4 Drinking Water Crisis

**Table : 3.18**

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	Nabarangpur	-	-	0		-	-	-
2	Nandahandi	-	-	0		-	-	-
3	Tentulikhunti	-	-	0		-	-	-
4	Papadahandi	-	-	1	92	-	-	-
5	Kosagumuda	-	-	0		-	-	-
6	Dabugaon	-	-	1	483	-	-	-
7	Umerkote	-	-	0		-	-	-
8	Raigarh	-	-	6	629	-	-	-
9	Jharigaon	-	-	4	191	-	-	-
10	Chandahandi	-	-	0		-	-	-
11	Nabarangpur Municipality	-	-	-	-	-	-	-
12	Umerkote Municipality	-	-	-	-	-	-	-
	<b>Total</b>	-	-	12	1395	-	-	-

[Source: PHED/RWS&S, Nabarangpur. Block wise Village list is at 3.2 of Volume II of the DDMP]

### 3.5 Railway Line Exposed Different Hazards

At present there is no Railway Network in this district; however the land acquisition work is going to establish railway connectivity to this district in the near future.

**Table : 3.19**

Sl. No.	Hazard	Length of Railway line exposed (in Km.)	Location
1	Flood	0	0
2	Land Slide	0	0
	<b>Total</b>	0	0

### 3.6 Road Accidents

Road Accidents are occurring frequently and in the last 12 years there were 3536 incidences of Road Accidents reported with 862 human casualties. 108 Kms. of NH/SH are identified with 16 Nos. of Accident Prone Areas and also marked 9 Nos. of Black Spots in this area.

**Table : 3.20**

Sl. No.	Stretch of Road (From - To)	Length in Kms.	No. of Traffic Congestion Areas	No. of Accident Prone Areas	No. of villages/habitations adjacent to accident prone Areas
1	Nabarangpur to Daibhatta Chowk	4	5	3	2
2	Raighar to Ganjapara	4	0	1	1
3	Raighar to Jodinga	9	0	1	1
4	Raighar to Sarguli	7	0	1	1
5	Dabugaon to Jatabal	12	0	1	1
6	Dabugaon to Bijapur	18	0	1	1
7	Dabugaon to Saraguda	4	0	1	1
8	Dabugaon to Chatiguda	20	0	1	1
9	Umerkote to Chikalpadar	4	1	1	1
10	Umerkote to Bokadabada	14	1	1	1
11	Umerkote to Burja	7	1	1	1
12	Umerkote to Kondagaon Road	1	1	1	1
13	Kundeï to Khiloi	2	0	1	1
14	Kundeï to Hatabharandi	2	0	1	1
	Total	108	9	16	15

[Source: Dist. Police Office, Nabarangpur]

### 3.7 Population Requiring Special Care

**Table : 3.21**

Sl. No.	Name of the Block/ ULB	No. of HHs headed by Women	No. of HHs headed by PwD	No. of Person's with Disability		No. of Widow	No. of Children		No. of Orphan		No. of Aged Persons (60 and above)		No. of Pregnant and lactating mothers
				M	F		0-5 Years	6-14 Years	M	F	M	F	
1	Nabarangpur	1380	9	556	387	2460	15725	16785	-	-	4491	2871	2277
2	Nandahandi	1235	6	354	258	2510	24082	12676	-	-	3227	2243	1373
3	Tentulikhunti	2140	10	515	425	3054	7713	19216	-	-	5248	3498	1957
4	Papadahandi	2180	12	988	808	5260	9334	29805	-	-	6864	1032	3169
5	Kosagumuda	2160	11	715	625	4928	19549	34291	-	-	7326	5305	4154
6	Dabugam	930	8	442	288	2104	8200	13685	-	-	4101	2513	1618
7	Umerkote	1920	12	641	569	3706	6687	33293	-	-	7652	5317	4367
8	Raigarh	1680	12	685	425	4608	20536	36490	-	-	8409	4730	4300
9	Jharigam	2030	11	641	519	3908	19931	31104	-	-	7347	4698	4085
10	Chandahandi	1394	7	624	312	2374	10601	17309	-	-	4446	2842	1705
11	Nabarangpur Municipality	28	4	122	193	2166	0	6410	-	-	585	686	0
12	Umerkote Municipality	29	4	159	188	929	0	6627	-	-	1645	1008	0
	<b>Total</b>	<b>17106</b>	<b>106</b>	<b>6442</b>	<b>4997</b>	<b>38007</b>	<b>142358</b>	<b>257691</b>	<b>-</b>	<b>-</b>	<b>61341</b>	<b>39743</b>	<b>2905</b>

[Source: DSSO/DSWO, Nabarangpur/OPEPA/SECC2011. The table is the block wise abstract of population requiring special care Village wise details are at 3.13 of Volume II of the DDMP]

### 3.8 Earthquake Vulnerability

As per Earthquake Hazard Zoning Atlas-2016 issued by the National Disaster Management Authority (NDMA), Government of India and Building Materials and Technology Promotion Council (BMTPC), Ministry of Housing, Urban Poverty Alleviation, Government of India.

- The Nabarangpur District is coming under Zone-II : Low Damage Risk Zone (MSK VI or Less)
- All the Blocks of the district is coming under Zone-II : Low Damage Risk Zone (MSK VI or Less).

(For Reference: The Earthquake Vulnerability Map is in Volume II of the DDMP)

### 3.9 Identified Old and depleted Buildings in the District (if any)

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

### 3.10 Forest Fire

#### Forest Fire Incidents

Sl. No.	Name of the Division	Range	No. of Fire Incidents Reported during last 5 years	Area Affected in Ha.	Loss of life/ property if any
<b>For the year 2017</b>					
1	Nabarangpur	Nabarangpur	116	36.46	Nil
		Kodinga	17	5.34	
		Dabugam	88	27.66	
		Umerkote	158	49.66	
		Jharigam	274	86.12	
		Raighar	159	49.98	
		<b>Total:-</b>	<b>812</b>	<b>255.23</b>	
<b>For the year 2018</b>					
2	Nabarangpur	Nabarangpur	56	23.01	Nil
		Kodinga	23	9.45	
		Dabugam	40	16.44	
		Umerkote	166	68.22	
		Jharigam	185	76.03	
		Raighar	211	86.71	
		<b>Total:-</b>	<b>681</b>	<b>279.86</b>	
<b>For the year 2019</b>					
3	Nabarangpur	Nabarangpur	91	50.16	Nil
		Kodinga	23	12.68	
		Dabugam	34	18.74	

		Umerkote	154	84.89	
		Jharigam	194	106.94	
		Raighar	144	79.38	
		<b>Total:-</b>	<b>640</b>	<b>352.78</b>	
<b>For the year 2020</b>					
4	Nabarangpur	Nabarangpur	30	18.35	Nil
		Kodinga	5	3.06	
		Dabugam	19	11.62	
		Umerkote	91	55.68	
		Jharigam	226	138.27	
		Raighar	149	91.16	
		<b>Total:-</b>	<b>520</b>	<b>318.15</b>	
<b>For the year 2022</b>					
5	Nabarangpur	Nabarangpur	80	27.84	Nil
		Kodinga	30	10.44	
		Dabugam	68	23.66	
		Umerkote	413	143.70	
		Jharigam	538	187.20	
		Raighar	391	136.05	
		<b>Total:-</b>	<b>1520</b>	<b>528.88</b>	

### Forest fire vulnerability

Sl. No.	Name of the Division	Range	Area ( in Sq. Km)	Total Notified Forest Area ( in Sq. Km)	High Risk Zone (Area in Sq.Km)	No. of Villages/ habitations inside/ adjacent to the High Risk Zone	Medium Risk Zone (Area in Sq.Km)	No. of Villages/ habitations inside/ adjacent to the Medium Risk Zone	Low Risk Zones (Area in Sq.Km)	No. of Villages/ habitations inside/ adjacent to the Low Risk Zone
1	Nabarangpur	Nabarangpur	5294	99.98	0.00	0	40.35	20	59.63	26
2		Kodinga		74.25	0.00	0	34.42	17	39.83	18
3		Dabugam		188.75	32.59	12	83.01	32	73.15	36
4		Umerkote		227.29	71.87	17	115.93	42	39.49	14
5		Jharigam		488.28	429.72	30	51.29	35	7.27	5
6		Raighar		142.57	112.01	15	29.08	14	1.48	2
		<b>Total:-</b>		<b>1221.12</b>	<b>646.19</b>	<b>74</b>	<b>354.08</b>	<b>160</b>	<b>220.85</b>	<b>101</b>



### 3.11 Fire and Life Safety of High Rise Buildings (buildings having a height of more than 15 meter)

**Table : 3.22**

Sl. No.	Name of the ULB/ Block	No. of High Rise Buildings	No. of High Rise Buildings where Fire & Life Safety Audit has been carried out in last 2 years.	Remarks
0	0	0	0	0

**Table : 3.23**

Sl. No.	Name of the High Rise Building	Location/ Area	Name, Address, Contact Details of the Owner	Whether Fire & Life Safety Audit Under Taken (Yes/ No.)	If Yes then the Year and the Name of the Agency	Vulnerable Population
0	0	0	0	0	0	0

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

### 3.12 Embankments

**Table : 3.24**

#### Irrigation Division Wise Embankments in the District

Sl. No.	Division	Name of the Embankment	Type (Capital Embankment/ Other Agricultural/ Test Relief/ Saline)	Length (in Km.)
1	Nabarangpur Irrigation Division	0	0	0

**Table : 3.25**

#### Division wise list of Vulnerable Points

Sl. No.	Name of the Division	Name of the Embankment/ River	Location of the Vulnerable Point	Affected Length (in Mtr.)	Name of the Block	Name of the Villages to be affected
1	Nabarangpur Irrigation Division	0	0	0	0	0

### 3.13 Dam- Burst Scenario (For large Dams)

Table : 3.26

i.

Sl. No.	Name of the Dam	Location & Water body	Type (Major/ Medium/ Minor)	Storage Capacity	Full Reservoir Level (FRL)	Maximum Water Level (MWL)	Dam Break Model / Risk Map for Dam break developed? (Yes/No)	Pre and Post Monsoon Inspection of Structural Measures done? (Yes/ No)	No. of Villages to be affected/ needs to be evacuated in case of a possible scenario (District & Block Wise)	Remarks
1.	Bhaskel Dam	Umerkote	Medium	2982.50 Ha.M	-	-	Yes	Yes	-	Safe

Table : 3.27

### Contingency Planning for Dam Bursts Scenario

1. For Dam –I

Sl. No.	District	Block	Name of the Village	Evacuation Route for the village/s	No. of HHs	Population	Safe Shelter Identified	Remarks
-	-	-	-	-	-	-	-	-

### ii. Formation and Subsequent Bursting of Landslide Dams

Table : 3.28

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

### 3.3 Cultural Heritage Sites and Precincts (Updated)

Table : 3.29

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 (Avg. Foot Fall & Days/ Period during which the place receives highest Foot Fall)
1.	Achaeological Sites and Remains	At: Podagoda, Block: Umerkote, Dist. Nabarangpur	State Protected Monument	Tourist Officer, Nabarangpur	NIL	July & November to March
2.	Pendrani Temple	At: Umerkote, Block: Umerkote, Dist. Nabarangpur	State Protected Monument	Tourist Officer, Nabarangpur	NIL	July & November to March
3.	SahidStamba	At: Papadahandi, Block: Papadahandi, Dist. Nabarangpur	State Protected Monument	Tourist Officer, Nabarangpur	Near the Bank of Toori River	24 <sup>th</sup> August
4.	Nilakantheswar Temple	At: Papadahandi, Block: Papadahandi, Dist. Nabarangpur	State Protected Monument	Tourist Officer, Nabarangpur	NIL	July & November to March
5.	Rama Krushna Ashram	At: Papadahandi, Block: Papadahandi, Dist. Nabarangpur	Unprotected Monument	Private Management of the Ashram	NIL	Throughout the year
6.	Shiv Temple at Kelia	Near Chacharaguda, Block: Dabugaon, Dist. Nabarangpur	State Protected Monument	Tourist Officer, Nabarangpur	NIL	July & November to March
7.	SahidBhawan	At: Bhagabati Street, Block: Nabarangpur, Dist. Nabarangpur	Unprotected Monument	MahabirYubakSangha, Nabarangpur	NIL	23 <sup>rd</sup> March
8.	BudhiThakurani Temple	At: Bhagabati Street, Block: Nabarangpur, Dist. Nabarangpur	State Protected Monument	Endowment, Tahasildar, Nabarangpur	NIL	October, November, March & April
9.	Library Hall-Temporary Jail for Freedom Fighters during British Rule	At: Govt. Girls High School, Block: Nabarangpur, Dist. Nabarangpur	Unprotected Monument	Govt. Girls High School, Nabarangpur	NIL	23 <sup>rd</sup> March
10.	MaaBhandaraGharani Temple	At: Main Road, Block: Nabarangpur, Dist. Nabarangpur	State Protected Monument	Tourist Officer, Nabarangpur	NIL	March, April & October
11.	Mandadongri Shiv Temple	Near Mokiya, Block: Nabarangpur, Dist. Nabarangpur	State Protected Monument	Endowment, Tahasildar, Nabarangpur	NIL	February, March & July

12.	Sri Jagannath Temple	At: Main Road, Block: Nabarangpur, Dist. Nabarangpur	State Protected Monument	Endowment, Tahasildar, Nabarangpur	NIL	Through put the year
13.	Hanuman Temple	At: Main Road, Block: Nabarangpur, Dist. Nabarangpur	State Protected Monument	Endowment, Tahasildar, Nabarangpur	NIL	October to April
14.	Sri Chaitanya Temple	At: Nabarangpur, Block: Nabarangpur, Dist. Nabarangpur	State Protected Monument	Endowment, Tahasildar, Nabarangpur	NIL	April, December & January
15.	BhatraSiuni Shiv Temple	At: Sanamasinga, Block: Nabarangpur, Dist. Nabarangpur	State Protected Monument	Endowment, Tahasildar, Nabarangpur	NIL	July, March, October & November
16.	Raja Jagannath Old Bhandarghar ani Temple	At: Nandahandi, Block: Nandahandi, Dist. Nabarangpur	Unprotected Monument	Local Committee of Nandahandi	NIL	April & October

### 3.4 Museums

Table : 3.30

Sl. 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.	Podagoda Archaeological Museum	At: Podagoda, Block: Umerkot, Dist. Nabarangpur	Archaeological Museum	State Government	Tourist Officer, Nabarangpur	.	.	.

The Podagarh Archeological museum established during the year- 2003. The Museum is maintaining by the Podagarh Sebayat Trust till date. The Tourist from the district & outside of Odisha like Andhra Pradesh and Chhatisgarh have been visiting regularly during the November to March every year.

### 3.5 Human Animal Conflict

#### i. Loss of Human Lives and Property due to animal attack

SI. No.	Vulnerable Place(Village/ Panchayat etc.)	Causing Agent/Animal (Elephant,Bear,Crocodile etc.)	Number of Human Lives lost during last 5 years	Damage to House and property during last 5 Years	Crops Damaged
1	2	3	4	5	6
1	B.S.Padar (Dhodra) , Dalaiguda (Papadahandi) , Sindhiguda (Nandahandi), Haladi (Dabugam), Nilogundiguda(Papadhandi), Dengaguda (Tentulikhanti) Janiguda(Kangara) Dhepaguda (Palia) Kodinga,Chandandi,Jharigam, Raighar,Umerkote .	Sloth Bear	8 Nos.	-	1

#### ii. Loss of Animal Lives due to man-made causes

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



# 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, drinkingwater supply, environment and forests, finance (expenditure),health,power, rural development,science and technology,space,telecommunication,urban development, water resources and Chief of the Integrated DefenceStaffof the Chiefs of StaffCommittee are the*ex-officio* members of NEC.

*(Please refer Figure 7.1 of Volume-II, Page No. 141for Central Government Notification on constitution 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 Sub-section (1) & (2) of Section 14 of Disaster Management Act 2005. The Hon'ble Chief Ministers of the state are The Chairpersons (*ex-officio*) of SDMA and other members not exceeding than eight may be nominated by the Chairpersons. The Chairman of the State Executive Committee (SEC), Chief Secretary of the State is a member and Chief Executive Officer (*ex-officio*) of SDMA.

The State Disaster Management Authority shall:

- a) Lays down policies and plans for disaster management in the State.
- b) Approves the State Plan in accordance with the guidelines laid down by the NDMA.
- c) Coordinates the implementation of the State Plan, recommend provision of funds for mitigation and preparedness measures.
- d) Review the developmental plans of different departments of the State to ensure the integration of prevention, preparedness and mitigation measures.
- e) Lay down guidelines to be followed by the departments of the State Government for the purpose of integration of measures for prevention of disasters and mitigation in their development plans and projects and provide necessary technical assistance there for.
- f) Review the measures being taken for mitigation, capacity building and preparedness by the departments of the Government & issue such guidelines as may be necessary.
- g) Lay down detailed guidelines for providing standards of relief (Not less than the minimum standard of relief in the guidelines of NDMA) to persons affected by disaster in the State.

*(Please refer Figure 7.2 of Volume-II, Page No. 142 for Odisha Government Notification on reconstitution of SDMA)*

### **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 *ex-officio*. The Chairperson of SEC use powers delegated by SDMA and state Governments.

The State Executive Committee shall:

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

*(Please refer Figure 7.3 of Volume-II, Page No. 143 for Odisha Government Notification on constitution of SEC)*

#### **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 Organisation vide Finance Department Resolution No. IFC-74/99-51779/F, Dated 28<sup>th</sup> December 1999 (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.

*(Please refer Figure 7.4 of Volume-II, Page No. 144 for Odisha Government Notification on reconstitution of SLCNC)*

## 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.

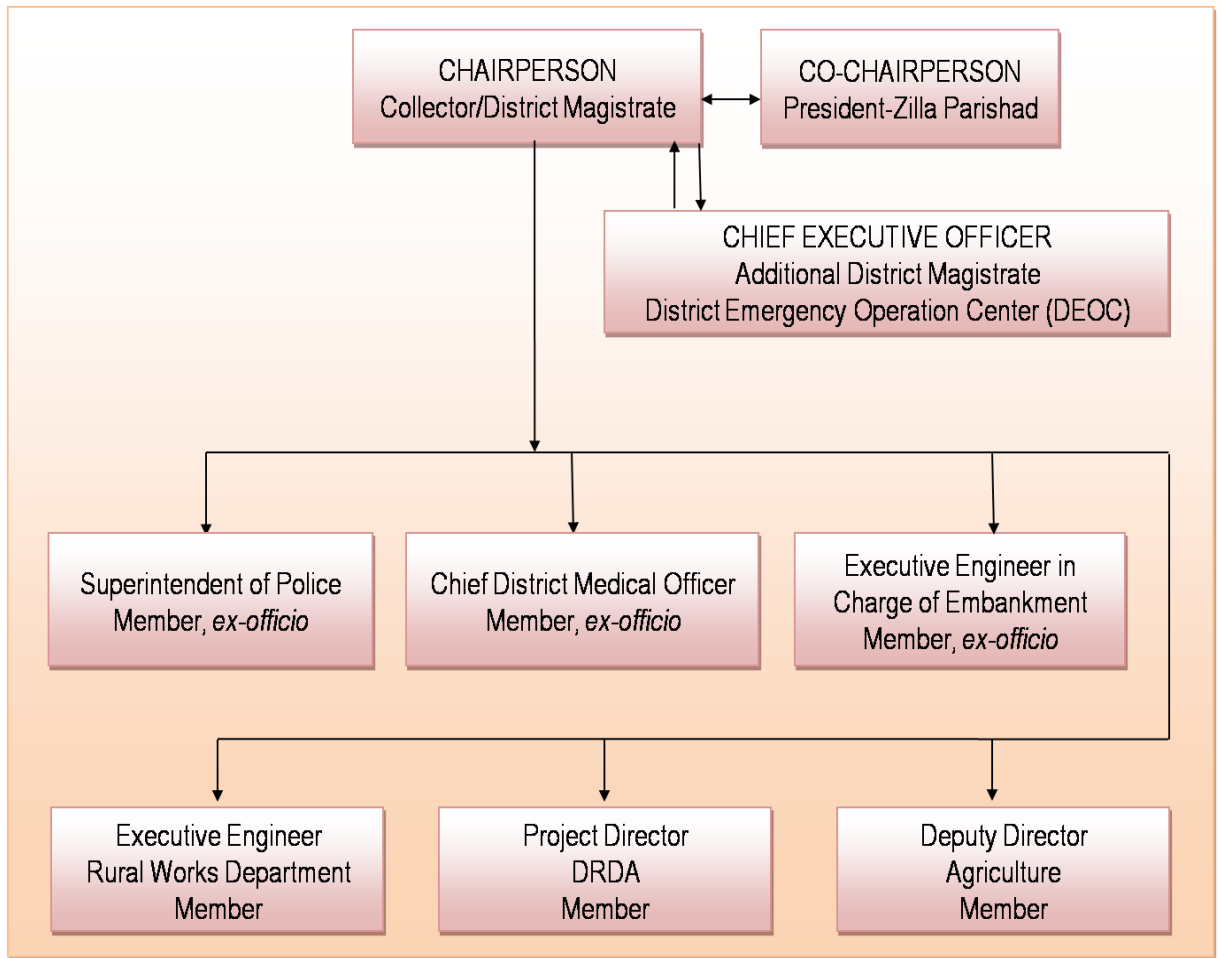
The State Government appoints an officer not below the rank of Additional Collector or Additional District Magistrate or Additional Deputy Commissioner, as the case may be of the District to be Chief Executive Officer of DDMA.

*(Please refer Figure 7.5 of Volume-II, Page No. 146 for Odisha Government Notification on constitution of DDMA, Nabarangpur)*

**Table :4.1**  
**Structure of Nabarangpur District Disaster Management Authority**

Sl. No.	Name of the Officer	Designation	Position in DDMA	Contact No.
1	Dr. Kamal Lochan Mishra, (IAS)	Collector, Nabarangpur	Chairperson	9556568435
2	Sri. Motiram Nayak	President, Zilla Parishad, Nabarangpur	Co- Chairperson, ex-officio	
3	S.Susree , IPS	Superintendent of Police, Nabarangpur	Member, ex- officio	9438916840
4	Dr.Kali Prasad Behera	Chief District Medical & PHO, Nabarangpur	Member, ex- officio	9439988885
5	Er.Suresh Chandra Pradhan	Executive Engineer in charge of Embankments /Irrigation Division	Member, ex- officio	9437749105
6	Sri Bhaskar Raito , OAS (S)	Additional District Magistrate, Nabarangpur	Chief Executive Officer, ex- officio	9439613560
7	Sri Ratnakar Sahoo,OAS (S)	Project Director, DRDA, Nabarangpur	Member	9437302402
8	Er.S.CH.Mohapatra	Superintendent Engineer, Rural Development, Nabarangpur	Member	9437255374
9	Sri Braja Kishore Lenka	Deputy Director Agriculture, Nabarangpur	Member	9556037232

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



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

The District Disaster Management Authority (DDMA) shall:

- a) Prepare Disaster Management Plan including District Response Plan of the District.
- b) Coordinate and Monitor the implementation of the National DM Policy, State DM Policy, State DM Plan and District DM Plan.

- c) Ensure that vulnerable areas of the districts are identified and prevention and mitigation measures are being undertaken by the departments of the Government both at district level and at local level.
- d) Ensure that guidelines for Prevention and Mitigation measures, Preparedness and Response as lay down by NDMA and SDMA are being followed by all departments of Government both at district and local level.
- e) Monitor the implementation of Disaster Management Plans prepared by the departments of the Government at the district levels.
- f) Lay down guidelines to be followed by different Government departments both at district level and local level for integrating disaster prevention and mitigation measures in their development plans and projects and provides necessary technical assistance 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 centers or camps in the event of any disaster or disaster like situation and make arrangements for water supply and sanitation in such buildings and places.
- n) Establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at short notice;
- o) Encourage the involvement of non-government organization and voluntary social welfare institutions working at the grass root level in the district for disaster management.
- p) Ensure communication systems are in order and disaster management drills are carried out periodically.
- q) Perform such other functions as the State Government or State Authority may assign to.

#### **4.10 Specific Task Assigned to the Members of DDMA by the Chairperson**

##### **4.10.1 Superintendent of Police, Nabarangpur Member, Ex-Officio**

- Regulate the flow of traffic/people to the disaster affected areas as and when such situation arises with the help of local police.
- Maintain law and order in the affected area.

##### **4.10.2 Executive Engineer, Irrigation Division, Nabarangpur Member, Ex-Officio**

- To identify the weak points in the river banks and take appropriate action by 1<sup>st</sup> June, 2018.
- Identification of flood circles in the district and assign the Charge of Flood Circles to Responsible Officers.

#### **4.10.3 CDMO, Nabarangpur Member, Ex-Officio**

- Special arrangement will make to provide causality services 24 x 7 at all health institutions.
- Medical Relief Center (MRC) at strategic places are chosen to render health services for affected person in the identified schools and declared shelters.
- Mobile Medical Team (MMT) will render the services regularly to the displaced persons at their place of shelter (MRC) and affected areas.
- Continuous IEC activities to be taken up to aware the public about the availability of services of 108 and 102 Ambulance including the services of all vehicles exiting in the health department.

#### **4.10.4 DDA, Nabarangpur Member**

- Take appropriate steps for availing flood resistance seeds to farmers in the rainy season.
- Team shall be in readiness to support to face any stress situation of the farmers of the District in terms of seeds, saplings, fertilisers.
- Take appropriate steps for availability of seeds and pesticides at different points of the district for smooth distribution to the farmers for the ensuing Khariff season.

#### **4.10.5 Executive Engineer, RD, Nabarangpur Member**

- Take appropriate steps wherever necessary to close the bridges and roads submerged or over topped with flood/rain water by constructing the temporary barricades on both sides and erect hoardings.
- Respective authorities in charge of the roads will responsible for taking such actions.
- An action taken report on the above shall be submitted by the 1<sup>st</sup> week of June, 2018.

#### **4.11 District Level Committee on Natural Calamities (DLCNC)**

The Codal provision of Odisha Relief Code envisages the constitution of District Level Committee on Natural Calamities (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 Collector is the District Relief Officer and Disaster Manager at the district level and the other members of DLCNC are as follows:

**Table :4.2**  
**Structure of District Level Committee on Natural Calamities**

Sl. No.	Name of the Member	Designation	Contact No.
1	Sj. Ramesh Chandra Majhi	Hon'ble MP, Nabarangpur P.C.	9178264493
2	Sj. Motiram Nayak	Hon'ble President, ZP, Nabarangpur	8018574669
3	Sj. MonoharRandhari	Hon'ble MLA, Dabugam A.C.	9437313680
4	Sj. Sadasiva Pradhani	Hon'ble MLA, Nabarangpur A.C.	9437206541
5	Sj. Nityananda Gond	Hon'ble MLA, Umerkote A.C.	9668208900
6	Sj.Prakash Chandra Majhi	Hon'ble MLA, Jharigam A.C.	8847848221
7	Sj. Kunu Nayak	Chairperson, Nabarangpur Municipality	9937648168
8	Smt. Radha Bhatra	Chairperson, Umerkote Municipality	70773 36333
9	S.Susree , IPS	Superintendent of Police, Nabarangpur	9438916840
10	Sri Ratnakar Sahoo,OAS	Project Director, DRDA, Nabarangpur	9437302402
11	Sri Bhaskar Raito , OAS	Addl. Dist. Magistrate, Nabarangpur	9439613560
12	Sri Prasana Kumar Behera ,IFS	DFO (T), Nabarangpur	9437094840
13	Sri. Kriti Ranjan Parida	DFO (KL), Nabarangpur	8280342592
14	Sri Abhimanu Majhi, OAS	PA, ITDA, Nabarangpur	9437092240
15	Sri. Agrawal Akshya Sunil, IAS	Sub-Collector, Nabarangpur	9326094704
16	Sri Ratanakar Sahoo, OAS	DPC, RTE-SSA, Nabarangpur	9437094725
17	Sri Pradip Nag, OES	DEO, Nabarangpur	6372641644
18	Dr. Kali Prasad Behera	CDMO, Nabarangpur	9437050292
19	Dr. Ramesh Sahu	CDVO, Nabarangpur	9437476250
20	Sri Suvendu Nayak	CDAO, Nabarangpur	9337923055
21	Dr.Pradosh Kumar Panda	DDH, Nabarangpur	9437281535
22	Sri B.K. Mishra	Asst. Director, Sericulture, Koraput	9438470533
23	Sri Dilip Kumar Pradhan	DD, Planning, Nabarangpur	9861102611
24	Sri Santosh Kumar Dhala Samanta	Superintendent of Excise, Nabarangpur	9437918247
25	Sri Abhijit Padhy	EE, TPSODL, Nabarangpur.	9437959619
26	Er. Amarandra Kumar Padhy	EE, RWS&S, Nabarangpur	9437015920
27	Er. Prafula Kumar Mishra	EE, R&B, Nabarangpur	9437085505
28	Er. Suresh Chandra Pradhan	EE, MI Division, Nabarangpur	9437749105
29	Er.Biswanath Mohanty	EE, Irrigation Division, Nabarangpur	9899424153
30	Er. Antuni Kishan	EE, RD, Nabarangpur	9668572352
31	Er. Antuni Kishan	EE, RD, Umerkote	9668572352
32	Sri Bandhu Charan Jena	District Manager, OAIC, Nabarangpur	8658491054
34	Sri Bibhu Ranjan Nayak	ARTO, Nabarangpur	8763739442



35	Sri Laxmidhar Jena	PD, Watershed, Nabarangpur	9437679745
36	Sri Jagadaish Rao	District Fishery Officer, Nabarangpur	9658985282
37	Sri Smrutiranjan Samantray,OWS	DWO, Nabarangpur	9437741859
38	Smt Swarnalata Biswas	DSWO , Nabarangpur	8658046694
39	Sri Sudhansu Patra	DSSO, Nabarangpur	9437165186
40	Sri Suresh Patnaik	DCPO, Nabarangpur	8895186403
41	Sri Kuber Behera	DLC, Nabarangpur	9937460973
42	Sri Sanjeeb Kumar Sahu	CSO, Nabarangpur	9438200053
43	Bijay Kumar Sahu	GM, DIC, Nabarangpur.	9937378226
44	Monika Ray	ARCS, Nabarangpur	7397404616
45	Sri Agrawal Akshya Sunil, IAS	Secretary, RMC, Nabarangpur	9326094704
46	Sri Sisir Kumar Pani	Dist. Panchayat Officer, Nabarangpur	8328963551
47	Sri HaldharNial	DI&PRO, Nabarangpur	9437427155
48	Sri Agrawal Akshya Sunil, IAS	EO, Nabarangpur Municipality	9326094704
49	Sri Ramchandra Majhi	EO, Umerkote Municipality	9938607235
50	Sri Bimal Kumar Mallik	TL, Govindalaya, Nabarangpur	9556405047
51	B.Ramesh	District Youth Officer, Nehuru Yuba Kendra, Nabarangpur	9861916221
52	Sri Sarat Bhatra,Chairman	Panchayat Samittees Nabarangpur	9937284405
53	Smt. Rasmita Majhi	Panchayat Samittees Nandahandi	7077891281
54	Smt Niladri Nayak	Panchayat Samittees Tentulikhunti	7077641605
55	Smt. Sarbeswari Majhi	Panchayat Samittees Kosagumuda	6370976553
56	Smt. Bina Majhi, Chairman	Panchayat Samittees Dabugaon	6371948289
57	Smt. Susila Majhi, Chairman	Panchayat Samittees Umerkote	9692723559
58	Smt. Sumitra Pujari	Panchayat Samittees Chandahandi	9556047801
59	Smt. Nabina Nayak	Panchayat Samittees Raighar	9938848816
60	Smt. Hemalata Majhi	Panchayat Samittees Papadahandi	7978653408
61	Sri. Durga Prasad Majhi	Panchayat Samittees Jharigaon	9938596834
62	Sri Rabindra Kumar Rauta	Tahasildar, Nabarangpur	8249645870
63	Smt. A. Snehalata	Tahasildar, Nandahandi	7008391806
64	Sri Pradip Kar	Tahasildar, Tentulikhunti	8124007640
65	Sri Jogeswar Bhoi	Tahasildar, Papadahandi	9437572936
66	Sri Siba Prasad Patnaik	Tahasidlar, Kodigan	9438154547
67	Susri Sandhya Samarath	Tahasildar, Dabugaon	8280492649
68	Sri N.Jagjivan Choudhury	Tahasildar, Umerkote	9437562308
69	Sri Hrusikesh Gand	Tahasildar, Jharigaon	9438787079
70	Sri Shakti Mohapatra	Tahasildar, Raighar	9439318981
71	Susri. Rasmirekha	Tahasildar, Chandahandi	9938710438
72	Sri Sukant Patnaik	BDO, Nabarangpur	8895853240
73	Sri Sibasankar Murmu	BDO, Nandahandi	7838605922
74	Sri Durjyodhan Bhoi	BDO, Tentulikhunti	9437702160
75	Ranjita Mallik	BDO, Papadahandi	9437293854

76	Susri. Akhayamita Kartik	BDO, Kosagumuda	9337028407
77	Sri Sarat Majhi	BDO, Dabugaon	7978144578
78	Dr. Himachal Majhi	BDO, Umerkote	7609069939
79	Sri Satyanarayan Meher	BDO, Jharigaon	7325919536
80	Dr. Tushar	BDO, Raighar	9439700053
81	Sri Dharmaraj Majhi	BDO, Chandahandi	9437951987
82	Smt Sarojini Rath	CDPO, Nabarangpur	9437847281
83	Smt. Sumitradevi Tripathi	CDPO, Nandahandi	9337195564
84	Binodini Patnaik	CDPO, Tentulikhunti	9438375508
85	Smt. S.Gita	CDPO, Papadahandi	9178648424
86	Smt. Gitanjali Moharana	CDPO, Kosagumuda	9777297901
87	Smt. Jamuna Bhatra	CDPO, Dabugaon	6371864484
88	Smt. Diptirani	CDPO, Umerkote	7978063463
89		CDPO, Jharigaon	
90	Sutapa Choudhoury	CDPO, Raighar	9437343200
91	Smt. Sarindri Mahananda	CDPO, Chandahandi	9938306914
92	Sri Subash Muduli	Assistant Fire Officer, Nabarangpur	8249096469
93	Er. Ranjit Rai	JE, PHED, Nabarangpur	9439295279
94	Er. Harapriya Patra	JE, PHED, Umerkote	9668502654

**KEY OFFICIALS IN THE NABARANGPUR DISTRICT ASSOCIATED WITH DISASTER  
MANAGEMENT, DISTRICT-NABARANGPUR**

SI No	Name of the Officer	Designation	Telephone No.with STD Code	Mobile No	E-Mail
1	President Zp, Nabarangpur	Sri. Motiram Nayak	06858- 222678	8018574669	Ori- Dnawarangpur @Nic.In
2	Collector, Nabarangpur	Dr. Kamal Lochan Mishra, IAS	06858- 222034 /222345	9556568435	Dm- Nawarangpur@ Nic.In
3	Superintendent Of Police	S.Susree , IPS	06858- 222301/2223 02	943891684 0	Spngpr.Orpol@ Nic.In
4	Adm, Nabarabngpur	Sri Bhaskar Raito , OAS)	06858- 222040	9439613560	Admnaba.Or@ Nic.In
5	Adm, Revenue/ Emergency	Sri Bhaskar Raito , OAS	06858- 222434	9439613560	Deoc- Ngp.Od@Gov.I n
6	PD, DRDA, Nabarangpur	Sri Ratnakar Sahoo,OAS(Sb)	06858- 222372	9437302402	Ori- Dnawarangpur @Nic.In
7	Sub Collector, Nabarangpur	Sri Agrawal Akshya Sunil, IAS	06858- 222032	932609470 4	Subcollector.Na barangpur@Gm ail.Com / Eroscngpur@G mail.Com
8	Cdmo, Nabarangpur	Dr. Kali Prasad Behera	06858- 230022/2220 57	9437050292	Dhionab@Gmail .Com
9	Chief District Agriculture, Nabarangpur	Sri Suvendu Nayak	06858- 222017	9337923055	Ddanaba.Dag @Nic.In
10	Deputy Collector, Emergency	Smt Mausumi Nayak, OAS	06858- 222434	9938688120	Deoc- Ngp.Od@Gov.I n
11	DD Planning	Sri Dilip Kumar Pradhan	06858- 222160	9861102611	Dponaba.Or@N ic.In
12	DFO, Nabarangpur	Sri Prasanna Kumar Behera,IFS	06858- 222014	9437094840	Dfo.Ngpur@Yah oo.Co.In
13	SE Rwss, Nabarangpur	Sri Amerndra Padhy	06858- 222643	8280408056	Eerwss_Ngp@ Rediffmail.Com
14	EE Rwd, Nabarangpur	Sri Antuni Kishan	06858- 222023	9668572352	Eerwngp@Redif fmail.Com
15	EE Rwd, Umakote	Sri Antuni Kishan	06860- 222011	9668572352	Eerwukt@Gmail .Com
16	EE, R&B, Nabarangpur	Sri Prafull Kumar Mishara	06858- 222833	9437210432	Eerbnngpur@Ya hoo.Com
17	EE, MI, Nabarangpur	Sri Suresh Pradhan	06858- 222130	9437749105	Mingpur@Yaho o.In
18	EE, Tpsodl Nabarangpur	Sri Abhijit Padhy	06858- 222092	9437959619	Ee.Ned@South coodisha.Com
19	Olic, Nabarangpur	Sri Dilip Kumar Das	06858-	7978524268	Eeolicngpr22@ Gmail.Com

20	CSO, Nabarangpur	Sri Sanjeeb Kumar Sahoo	06858-222349	9438200053	Csongp.Irrs@Gmail.Com
21	DSWO, Nabarangpur	Smt Swarna Lata Biswas	06858-223122	8658046694	Dswonawrangapur@Ori.Nic.In
22	DPO, Nabarangpur	Sri Sisir Kumar Pani	06858-222470	8328963551	Dpo.Od-Naw@Nic.In
23	Suptd Excise, Nabarangpur	Sri Santosh Dalosamanta	06858-222186	8328871056	Senabarangpur@Gmail.Com
24	CDVO, Nabarangpur	Dr. Ramesh Sahu	06858-222108	9437476250	Cdvonorg@Gmail.Com
25	DCPO, Nabarangpur	Sri Sures Patnaik	06858-223322	8895186403 / 9777145823	Dcpo.Nawarangpur.Od@Nic.In
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59	Binodini Patnaik	Cdpo,Tentulikhunti	Na	9438375508	Cdpottk@Gmail. Com
60	Deepti Rani Sing	Cdpo,Umarkote	Na	7978063463	Cdpoumerkote @Gmail.Com
61	Sri Santosh Kumar Sadangi	Director, Prayas Ngo ( Leading Ngo, DIncc)	Na	9778080478	Prayasindia.Ngp @Gmail.Com / Director_Prayas @Yahoo.Com

**SHELTER WISE LIST OF PRESIDENT, VICE PRESIDENT AND SECRETARIES OF  
NABARANGPUR DISTRICT**

<b>Sl No</b>	<b>Name of the Shelter</b>	<b>Name of the President</b>	<b>Name of the Vice President</b>	<b>Name of the Secretary</b>
1	Baghsiuni, Nabarangpur Block	Krushna Chandra Bhatra 7008818282	Prakash Chandra Ghanto 9437206914	Sudhir Kumar Sahu 8658352381
2	Pujariguda, Nabarangpur Block	Pramila Randhari 9937773858	Trinath Bisoi 9348745158	Debendra Randhari 9668092138
3	Sindhigam, Nabarangpur Block	Sukant Kumar Pujari 9938805236	Trinath Bisoi 9348745158	Damu Bhatra 9692095168
4	Mokia, Papadahandi Block	Jagatjiban Nayak 9337328297	Narasingh Bhatra 9937240406	Jugal Bisoi 8328807153
5	Beheda, Umerkote Block	Pramila Gond 8018897514	Anath Tarabhdar 8658272091	Damburu bhatra 8144149212
6	Singsari, Umerkote Block	Smt Tobha majhi 9777014445	Dibakar Majhi 9078264269	Arjun Dalei 6370638248
7	Bhatibeda, Umerkote Block	Malati Majhi 9668694125	Kailash Singh Senghar 7605976958	Narasingh Pandey 9178316511
8	Salebidi, Chandahandi Block	Chandrika Dharua 7077374666	Edi Gouda (GPEO I/C) 7853894047	Jagdish Bagh 9668663927
9	Dasarapada, Nabarangpur Municipality	Prasanta Kumar Rout 9937276050	Usha Rani Rao 9556223713	Rama Sankar Dash 7978060185
10	Umerkote, DNK, Municipality	Ramchandra Majhi, E.O 9938607235	Smt. Radha Bhatra, Chairperson 7077336333	Mohan Sahu

## EMAIL ID

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9	DIST EDUCATION OFFICER, NABARANGPUR	<a href="mailto:deonabarangpur23@gmail.com">deonabarangpur23@gmail.com</a>
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#### 4.12 Other Disaster Management Groups

District Crisis Group (DCG) will function for updation of Off-Site Emergency Plan, Capacity Building and Awareness programmes near the location of the hazardous factories and also conduct First-Aid training programs for the volunteers of such localities.

The Tahasildars shall remain in charge of overall relief operation of their respective Tahasils. The BDO and Executive Officers will work as Circle Officers within their jurisdictions. A quick response team at block level and GP level will constitute to tackle the disaster situation in the district. As per the decision taken in the DDMA Meeting vide District Office Memo No. 437, Dated 11-03-2016 all the Tahasildars and Block Development Officers were directed to form the Quick Response Team at Block and Panchayat Level. The Team formed in the flood/disaster prone areas with the following strictures.

**Table : 4.3**

#### Structure of Block Level Quick Response Teams

1.	Chairperson of the Block or Municipality	Chairman
2.	Tahasildar of the Area	Co-Chairman
3.	BDO of the Area	Co-Chairman
4.	IIC of the PS	Member
5.	Executive Officer (in case of Urban)	Member
6.	CDPO	Member
7.	AE, RWS&S	Member
8.	MO, CHC/PHC	Member
9.	VAS	Member
10.	Marketing Inspector	Member

**Table : 4.4**

#### Structure of Gram Panchayat Level Quick Response Teams

1.	Sarpanch of the Gram Panchayat	Chairman
2.	ASI/ Hawlidar/ Constable	Member
3.	PEO of the Gram Panchayat	Member
4.	Revenue Inspector	Member
5.	President of Local Club	Member
6.	Secretary of Local Club	Member
7.	All the Ward Members	Member

### 4.13 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 SahastraSeemaBal (SSB). Each battalion has 18 self-contained specialists Search and Rescue teams of 45 personnel. The NDRF team includes Chemical, Biological and Radiological Disaster (CBRN) emergency responders, S&A element, engineers, technicians, electricians, dog squads and paramedics. The NDRF battalions are strategically located at 8 different locations in the country based on the vulnerability profile to cut down response time for their deployment. During the threatening proactive deployment of NDRF is being carried out by NDMA in consultation with the State Governments.

**Table :4.5  
Location of National Disaster Response Forces**

Sl. No.	Battalion, Location	State	Man power drawn from	Contact Person	Contact No.
1	1 <sup>st</sup> Bn, NDRF, Guwahati	Assam	BSF	Sri C.P.Sexena Commandant	0361-2840284 09435545951
2	2 <sup>nd</sup> Bn, NDRF, Kolkata	West Bengal	BSF	Sri Sukdeb Raj, Commandant	033-25264394 9434742836
3	3 <sup>rd</sup> Bn, NDRF, Munduli, Cuttack-754013	Odisha	CISF	Sri Arun Kumar Commandant	0671-2879710 09437964571
4	4 <sup>th</sup> Bn, NDRF, Arakkonam	Tamil Nadu	CISF	Sri P.S.B.Nayar, Commandant	04177-246594 09442105069
5	5 <sup>th</sup> Bn, NDRF, Pune	Maharashtra	CRPF	Sri Alok Avasthy Commandant	02114-231245 09423506765
6	6 <sup>th</sup> Bn, NDRF, Gandhinagar	Gujrat	CRPF	Sri R.C.Meena Commandant	079-23201551 09428826445

7	7 <sup>th</sup> Bn, NDRF, Bhatinda	Uttar Pradesh	ITBP	Sri R,K.Verma Commandant	0164-2246030 09417802032
8	8 <sup>th</sup> Bn, NDRF, Ghaziabad	Punjab	ITBP	Sri J.P Yadav, Commandant	0120-2351101 09968610011
9	9 <sup>th</sup> Bn, NDRF, Patna	Bihar	BSF	Mr. Vijay Sinha, Commandant	06115-253939 08544415050 09525752125
10	10 <sup>th</sup> Bn, NDRF, Guntur	Andhra Pradesh	CRPF	Mr. Zahid Khan, Commandant	0863-2293050 08333068559
11	11 <sup>th</sup> Bn, NDRF, Varanasi	Uttar Pradesh	SSB	Mr. A.K. Singh, Commandant	0542-2501101 08004931410
12	12 <sup>th</sup> Bn, NDRF, Itanagar	Arunachal Pradesh	SSB	Mr. AngomKiranChand Singh, Commandant	0360-2277106 0360-2277104

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

The Government of Odisha formed Odisha Disaster Rapid Action Force (ODRAF) vide Notification No.939/CD,Dated07-06-2001. 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.

The ODRAF units are strategically located throughout 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.

**Table: 4.6**

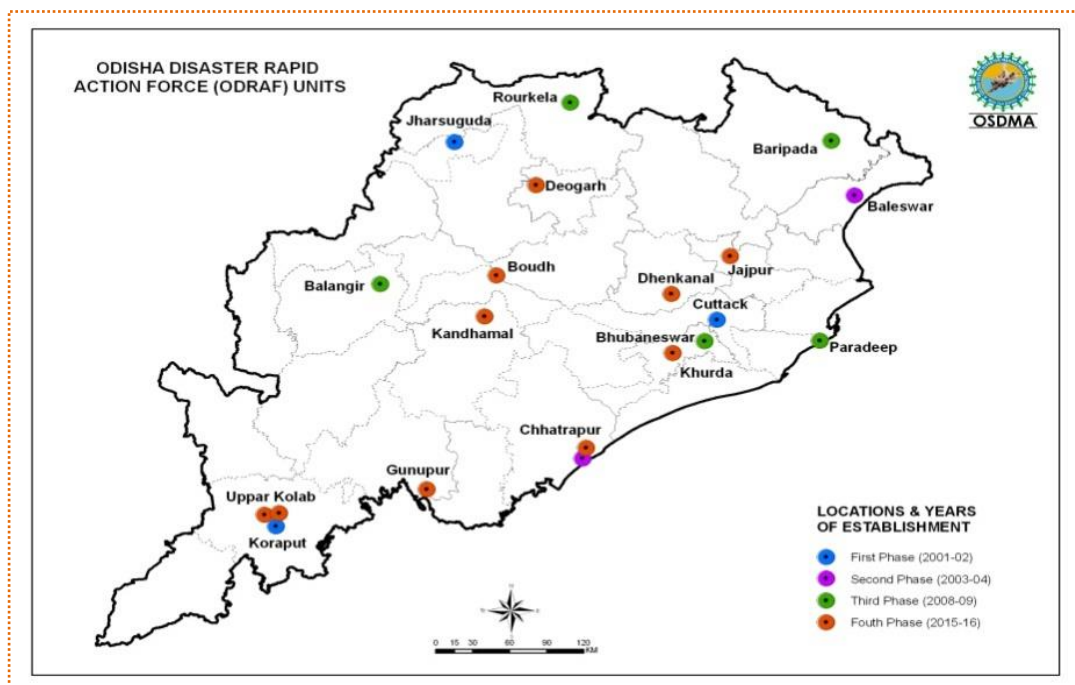
#### Location of Odisha Disaster Rapid Action Force with Contact Details

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	Phone: 0661-2600980(O), 2600434 (R) Fax: 0661-2600980 comdt4thbn.odpol@nic.in
11	IR Battalion, Boudh	2015- 2016	Boudh	47	Phone: 06841-222238 7684872156 (M) 9437232275 (M) comdt5thirbn.odpol@nic.in
12	4th IR Battalion, Deogarh	2015- 2016	Deogarh	52	Phone: 0664-3242130 (O),comdt4thirbn.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, Kalinganagar	2015- 2016	Jajpur	49	Phone: 0672-6244602 (O), 0672- 6244610 (CR) Fax: 0672- 6244610 comdt3rdirbn.odpol@nic.in

16	8th Special IR Battalion, Kandhamal	2015-2016	Kandhamal	43	Phone: 06842-2533017 (O), 8763616282 (M) comdt8thsplrnb.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) comdt7thsplrnb.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

### Location Map of ODRAF Units



## 4.15 Other Disaster Response Teams in the District

**Table:4.7**  
**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
1	Police Personnel	Sri Jayakrushan Behera, OPS-I	Addl. S.P., Nabarangpur	6370670237	-	-
2	Home Guards	Sri M.Marandi	R.I., Nabarangpur	9437977249	-	-
3	Fire Service	Sri Subash Muduli	AFO	8249096469	06858-222233	-
4	National Cadet Crops (NCC)	Mr. G.S.P. Raju	Commanding Officer	7381009811	9848977296	632
5	Nehru Yuva Kendra (NYK)	Mr.V.Ramesh	District Youth Coordinator	9861916221	7008735563	11
6	Youth Red Cross	Mr. Akhila Kumar Bhatta	District Coordinator	9937372303	9437372303	60
7	NGO/CSO	Mr. Bimal Kumar Mallick	Team Leader, Govindalaya	06858-222588	9556405047	12

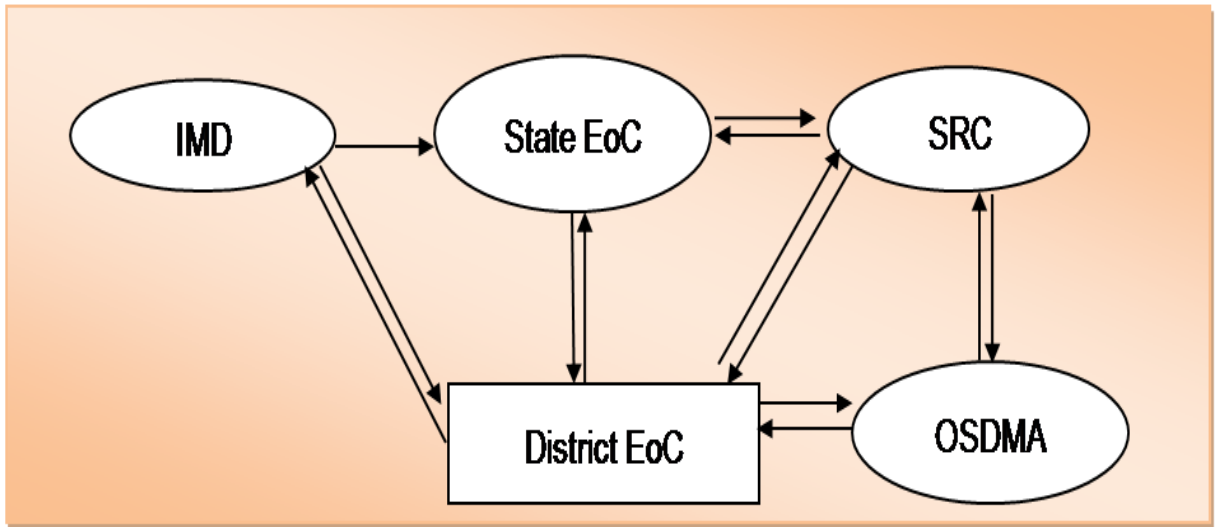
## 4.16 Emergency Communication System

### 4.16.1 State Emergency Operation Center (SEOC)

The State Emergency Operation Centre has been made operational at Rajiv Bhawan, Bhubaneswar with state of art communication network. 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.

**Figure: 4.2**  
**Information Flow Chart from SEOC to Districts**



#### 4.16.2 District Emergency Operation Center (DEOC)

The DEOC is functional at the Collectorate to provide first and immediate response to any disaster. Specially designated Emergency Officer is the Officer in Charge of the DEOC. The District Emergency Operation Centre strengthened and constructed with state of the art emergency communication equipment to communicate with State EOC as well as other local level functionaries.

In DEOC a Control Room is functioning with round the clock manned during 1<sup>st</sup> April to 30<sup>th</sup> November and in the peak period of emergency till the relief operations are over to collect and transmit information regarding the heat wave, flood and other natural calamities and relief operations undertaken, if any, and for processing and communicating all such data to concerned quarters.

**Table:4.8**

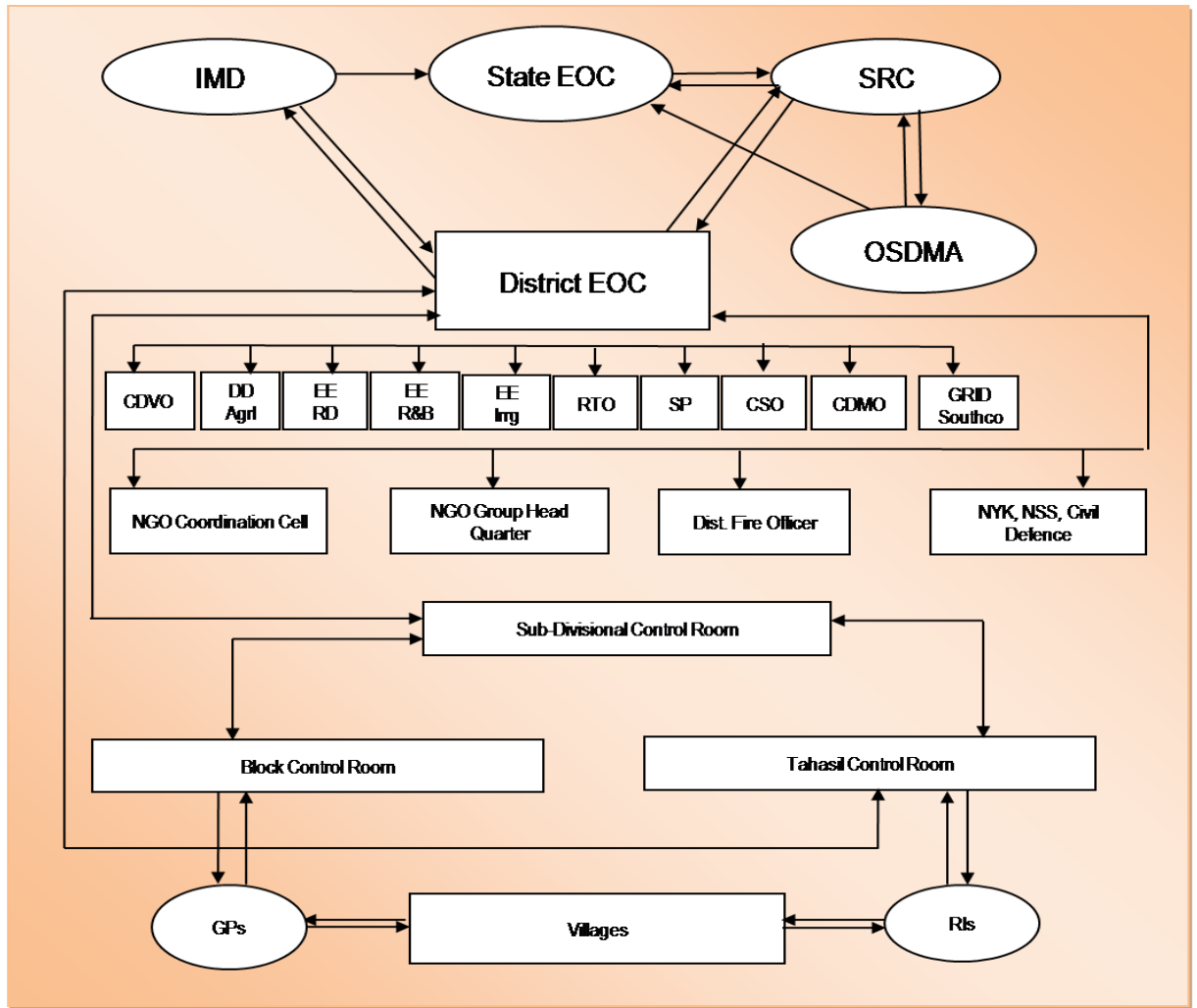
#### Equipments Provided to DEOC and their Operational Status

Sl. No.	Equipments	Unit	Status		Remarks
			Operational	Non-Operational	
1	Desktop Computer	4	3	1	repairable
2	Laser Printer	3	2	1	Damaged
3	UPS	4	4	-	
4	Scanner	2	2	0	
5	Fax	0	0	0	
6	Ink Jet Printer	0	0	0	-
7	Multi Utility Machine (Printer/Scanner/Copy)	3	2	1	1 Damaged
8	Laptop	0	0	0	-

10	LCD Projector	0	0	0	-
11	Photo Copier	0	0	0	-
12	GPS Unit	1	0	1	1 Not Functioning
13	Satellite Phone	1	1	0	-
14	VHF Sets	1	0	1	1 Damaged
15	VHF Mobile Station	0	0	0	-
16	Walkie-Talkie (VHF hand Set)	0	0	0	-
17	Portable Diesel Generator	1	0	1	1 Not Functioning
18	Inverter with Battery	1	1	0	-
19	Inflatable Tower Light	1	1	0	-
20	Power Saw	2	1	1	1 Not Functioning
21	Life Jacket	5	5	0	-
22	Life Buoy	5	5	0	-
23	Aluminium Ladder	0	0	0	-
24	Fire Extinguisher	3	0	3	-
25	Siren	0	0	0	-
26	Megaphone	1	0	1	1 Not Functioning
27	Colour TV/Stand	1	1	0	Damaged
28	Mobile Phone	0	0	0	-
29	Display Board	0	0	0	-
30	White Broad	1	1	0	Damaged
31	Computer Table/Chair	1	1	0	-
32	Rack	6	6	0	-
33	Book Case	0	0	0	-
34	GI Trunk	1	1	0	-
35	Commando Search Light	1	0	1	1 Not Functioning
36	Steel Almirah	10	10	0	-



**Figure : 4.3**  
**Information Flow Chart from District Emergency Operation Center (DEOC) to Villages with Early Warning**



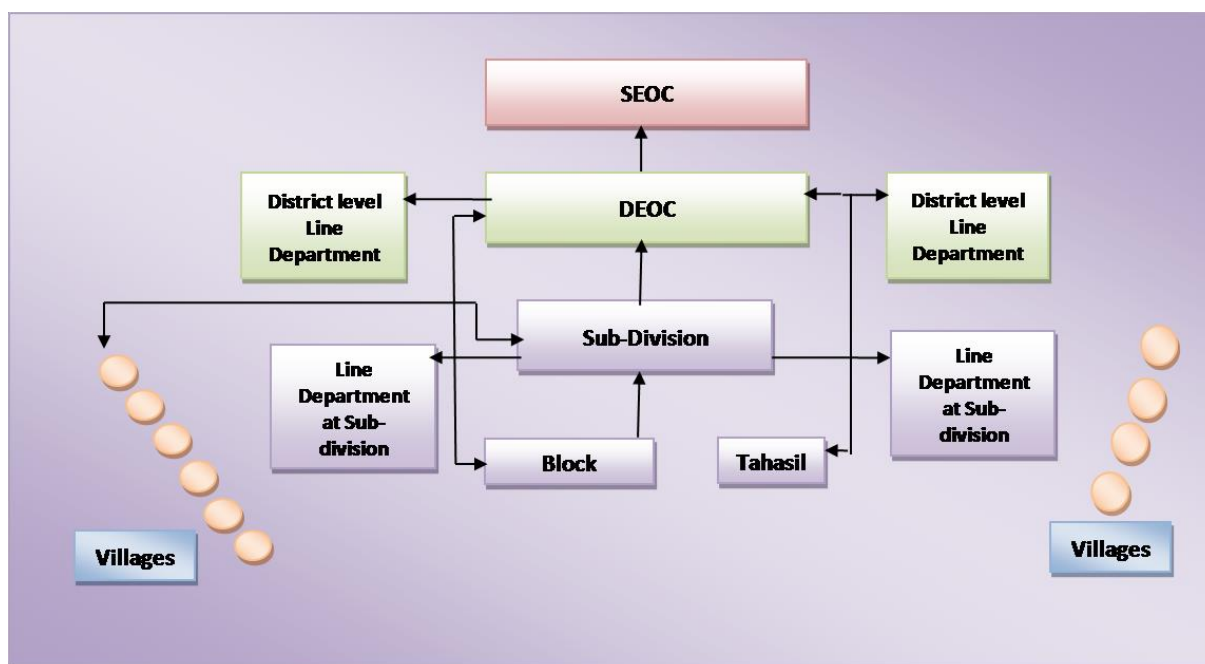
**Table : 4.9**

**Key Line Departments at the District**

Sl. No.	Department	Head of the Department at District	Name of the Nodal Officer	Contact No.
1.	Disaster Management	Collector& DM	Smt.Mousumi Nayak District Emergency Officer	9938688120
2.	Fire Service	AFO	Sri Subasis Muduli Asst. Fire Officer I/c.	8249096469
3.	Health & FW	CDMO	Dr. Kali Prasad Behera, DPHO	9439988885
4.	ARD	CDVO	Dr. Ramesh Sahu DD Clinic	9437476250

**Figure :4.4**

**Information Flow Chart from Villages to District Emergency Operation Center (DEOC) without Early Warning**



**4.16.3 Block Emergency Operation Center (BEOC)**

During the time of disaster the Block Development Officer and Tahasildars are jointly manage reliefadministration at the lowest level. To combat heat wave situation and flood management during the monsoon Control Room is functioning round the clock in all Blocks/Tahasil from 01-06-2022 and shall be in operation till 30-11-2022.

**Table : 4.10**  
**Key Line Departments at the Block**

Sl. No.	Department	Head of the Department at Block	Name of the Nodal Officer	Contact No.
1	PR&DW	BDO, Nabarangpur	Sri Sukant Patnaik	8895853240
2	PR&DW	BDO, Nandahandi	Sri Sibasankar Murmu	7838605922
3	PR&DW	BDO, Tentulikhunti	Sri Durjyodhan Bhoi	9437702160
4	PR&DW	BDO, Papadahandi	Ranjita Mallik	9437293854
5	PR&DW	BDO, Kosagumuda	Susri. Akhayamita Kartik	9337028407
6	PR&DW	BDO, Dabugaon	Sri Sarat Majhi	7978144578
7	PR&DW	BDO, Umerkote	Dr. Himachal Majhi	7609069939
8	PR&DW	BDO, Jharigaon	Sri Satyanarayan Meher	7325919536
9	PR&DW	BDO, Raighar	Dr. Tushar	9439700053
10	PR&DW	BDO, Chandahandi	Sri Dharmaraj Majhi	9437951987
11	Health&FW	MO, CHC, Chandahandi	Dr. Sangram Kesari Sahu MO	9348722696
12	Health&FW	MO, CHC, Dabugam	Dr. Subasis Sahu MO	9439988421
13	Health&FW	MO, CHC, Jharigam	Dr. Prakash Chandra Nayak MO	9439988992
14	Health&FW	MO, CHC, Kosagumuda	Dr. Soumya Ranjan Biswal MO	986141418
15	Health&FW	MO, CHC, Papdahandi	Dr. Tapaprakash Behera MO	9439988480
16	Health&FW	MO, CHC, Pujariguda	Dr. Abhaya Kumar dey MO	9040816737
17	Health&FW	MO, CHC, Nandahandi	Dr. Bikash Chandra Barik MO	9439988355
18	Health&FW	MO, CHC, Sanamosigam	Dr. Prabhakar Das MO	9439988292
19	Health&FW	MO, CHC, Hataharandi	Dr. Satya Narayan Sahu MO	9439988293
20	Health&FW	MO, CHC, Tentulikhunti	Dr. Samali Prasad Panda MO	9178899944
21	Health&FW	MO, CHC, Umerkote	Dr. Sarat Chandra Sethi MO	9439074813
22	Home	Fire Service, Nabarangpur	Asst. Fire Officer	8249096469
23	Home	Fire Service, Nandahandi	Station Officer	9439570951

24	Home	Fire Service, Tentulikhunti	Station Officer	8455849600
25	Home	Fire Service, Papadahandi	Station Officer	9668277048
26	Home	Fire Service, Kosagumuda	Station Officer	9937077546
27	Home	Fire Service, Dabugam	Station Officer	9348826606
28	Home	Fire Service, Umerkote	Station Officer	9437186620
29	Home	Fire Service, Raighar	Station Officer	9938629858
30	Home	Fire Service, Jharigam	Station Officer	7008117460
31	W&CD& MS	CDPO, Nabarangpur	Smt Sarojini Rath	9437847281
32	W&CD& MS	CDPO, Nandahandi	Smt. Sumitradevi Tripathi	9337195564
33	W&CD& MS	CDPO, Tentulikhunti	Smt. Binodini Patnaik	9438375508
34	W&CD& MS	CDPO, Papadahandi	Smt. S.Gita	9178648424
35	W&CD& MS	CDPO, Kosagumuda	Smt. Gitanjali Moharana	9777297901
36	W&CD& MS	CDPO, Dabugaon	Smt. Jamuna Bhatra	6371864484
37	W&CD& MS	CDPO, Umerkote	Smt. Diptirani	7978063463
38	W&CD& MS	CDPO, Jharigaon		
39	W&CD& MS	CDPO, Raighar	Smt. Sutapa Choudhury	9437343200
40	W&CD& MS	CDPO, Chandahandi	Smt. Sarindri Mahananda	9938306914

**Table : 4.11**

**Key Line Departments at the Tahasil**

Sl. No.	Department	Head of the Department at Block	Name of the Nodal Officer	Contact No.
1	Revenue & DM	Tahasildar, Nabarangpur	Sri Rabindra Raut	9777146230
2	Revenue & DM	Tahasildar Nandahandi	Ms A.Snehalata	7008391806
3	Revenue & DM	Tahasildar, Tentulikhunti	Sri Pradip Kar	8124007640
4	Revenue & DM	Tahasildar, Papadahandi	Sri.Jogeswar Bhoi	8917583664
5	Revenue & DM	Tahasildar, Kodinga	Sri Siba Prasad Patnaik	9438154547
6	Revenue & DM	Tahasildar, Dabugaon	Mis.Sandhya Samarath	8280492649

7	Revenue & DM	Tahasildar, Umakote	Sri Himanchal Majhi	8457919232
8	Revenue & DM	Tahasildar, Jharigam	Sri Hrushikesh Gond	9438787079
9	Revenue & DM	Tahasildar, Chandahandi	Miss. G. Rasmirekha	9938710438
10	Revenue & DM	Tahasildar, Raigarh	Sri Shakti Mohapatra	9439318981

#### 4.17 State Crisis Group (SCG)

The State Government has constituted a State Crisis Group for management of chemical accidents as provision of the Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996 on 1<sup>st</sup> 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.

##### 4.17.1 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 : 4.12**  
**Composition of State Crisis Group**

Sl. No.	Members	Designation
1.	Chief Secretary, Odisha	Chairman
2.	DC-cum-ACS & 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

#### 4.17.2 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.

#### 4.18 District Crisis Group

As prescribed in the Chemical Accident (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.

#### 4.18.1 Composition of the District Crisis Group

**Table : 4.13**  
**Composition of District Crisis Group**

Sl. No.	Member	Designation
1.	District Collector	Chairperson
2.	Inspector of Factories	Member Secretary
3.	District Energy Officer	Member
4.	Chief Fire Officer	Member
5.	District Information Officer	Member
6.	Controller of Explosives	Member
7.	Chief, Civil Defence	Member
8.	One Representative of Trade Unions	Member
9.	Deputy Superintendent of Police	Member
10.	District Health Officer/Chief Medical Officer	Member
11.	Commissioner, Municipal Corporations	Member
12.	Representative of the Department of Public Health Engineering	Member
13.	4 Experts (Industrial Safety & Health)	Member
14.	Commissioner (Transport)	Member
15.	One Representative of Industry	Member
16.	Chairperson/ Member-Secretary of Local Crisis Groups	Member

#### 4.19 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.



### 4.19.1 Composition of the Local Crisis Group

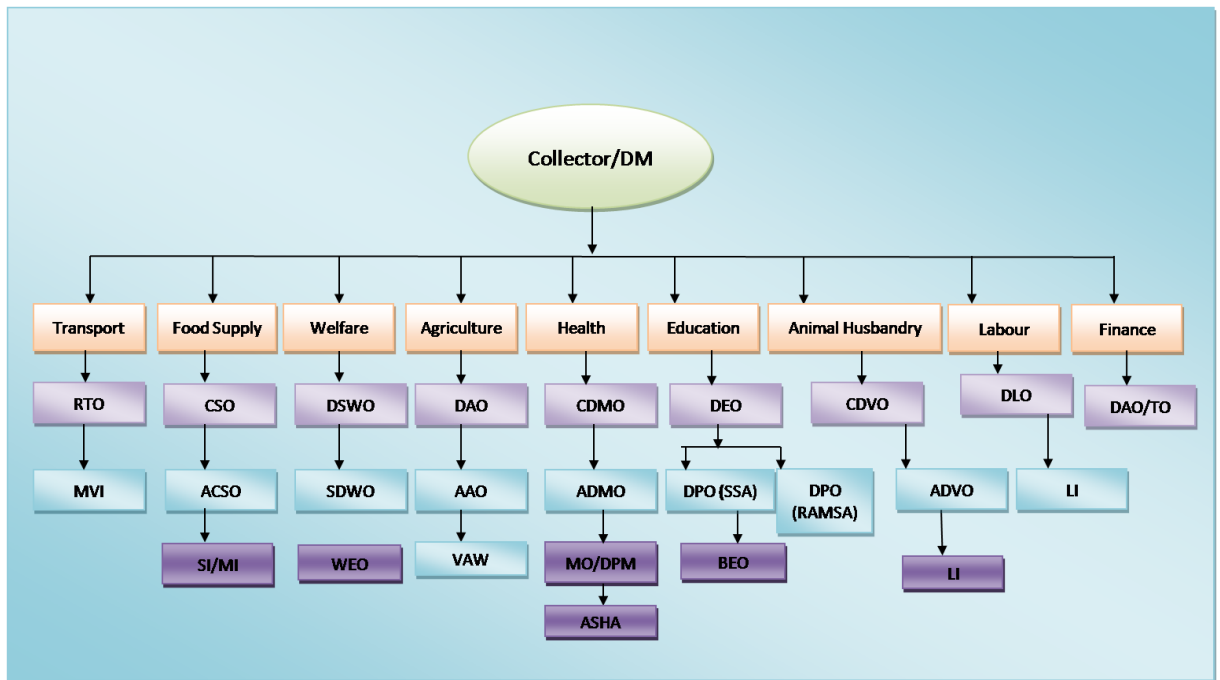
Table : 4.14

#### Composition of Local Crisis Group

Sl. No.	Member	Designation
1.	Sub-Divisional Magistrate	Chairperson
2.	Inspector of Factories	Member Secretary
3.	Industries in the District	Member
4.	Two Transporters of Hazardous Chemicals	Member
5.	Fire Officer	Member
6.	Station House Officer (Police)	Member
7.	Block Development Officer	Member
8.	One Representative of Civil Defence	Member
9.	Primary Health Officer	Member
10.	Editor of Local News Paper	Member
11.	Community leader/Sarpanch/Village	Member
12.	Pradhan nominated by Chairperson	Member
13.	One Representative of NGOs	Member
14.	Two Doctors eminent in the Local area	Member
15.	Two Social Workers	Member

Figure:4.5

#### Coordination Structure at the District Level and Down the Line





## **4.20 GO-NGO Coordination Before and After Disaster in the District**

The Section 35 (2) of DM Act 2005 says, In particular and without prejudice to the generality of the provisions of sub-section (I), the measures which the Central Government may take under that sub-section include measures with respect to all or any of the following matters, namely- (a) Coordination of actions of Ministries or Departments of the Government of India, State Governments, National Authority, Governmental and non-governmental organizations in relation to disaster management.

Odisha State Disaster Management Policy 2005, the Resolution dated 4<sup>th</sup> March, 2005 states that, active participation of NGOs, community based organizations (CBOs) and other civil society institutions are essential for effective disaster management. Therefore, their help and cooperation will be solicited. The NGOs will be encouraged to carry out sustained developmental work with disaster resilience as the central theme, especially in remote, inaccessible and vulnerable areas of the State. The OSDMA will perform the coordinating role among concerned Govt. departments, NGOs, bilateral and multi-lateral agencies, professional groups and the communities with a view to bringing about synergy in Disaster Management. Similar efforts will be undertaken at the District, Block, Municipality and GP levels.

Collaborations between government and non-government organizations would be considered as an opportunity for all stages of the disaster management in the district. There is enormous potential to introduce opportunities of networking for improved coordination. The strengths of existing networks need to be combined with the networks of local communities, self-help groups, youth groups, farmers groups, watershed committees, village health committees, village education committees, PRIs, and local government officials.

In the district non-governmental organizations can play an important role in raising awareness, sensitizing and building local capacity to carry out disaster mitigation actions. Awareness campaigns like safe construction, school safety, personal health and hygiene, environment management, maternal health, food and nutrition and overall sustainable development are key areas of the activities.

In addressing the emerging concerns of climate change adaptation and mitigation in this district, NGOs can play a very significant role in working with local communities and introducing innovative approaches based on the good practices followed elsewhere.

## 4.21 Role of Corporate Sector in the District Relating to Disaster Management

Disaster affects development and all aspect of human life and its management involves actions by all departments, organization and agencies. It is a multi-agency function of government non-government and corporate sectors. Therefore it is important that roles and responsibilities of each stakeholder are laid down during normal time and coordination mechanism worked out so that the same works during emergencies. Therefore, all the stakeholders, government, private and business houses in the district should participate in the DRR strategy in the district.

It is must that preparedness activities with all the stakeholders are held at a regular interval. All corporate stakeholders should associate with DRR activities and share their resources to combat any disaster to save the life and property. Also they should participate in the mock drills to test their preparedness and clarity of roles and responsibility during crisis management.

## 4.22 Public Private Partnership: Public & Private Emergency Service Facilities Available in the District

To provide emergency services in the critical areas partnership with the private agencies established in the district. Ambulance service, patient transport and corpse transport facilities, connectivity to remote areas as well as stocking of food materials in the pre-flood situation managed through public private partnerships by the health, transportation and civil supplies departments respectively.

**Table : 4.15**

### **Other Contact Details of Private Emergency Services**

Sl. No.	Name of the Contact Person	Contact No.
1	Mr. Rakesh Gupta, Executive Trustee, Govindalaya	9178877588
2	Mr. Sudarshan Majhi, Sudarshan Chuda Mill, Raigarh	9777350953
3	Mr. Naresh Kumar Singh, Naresh Chuda Mill, Dabugaon	9556990590
4	Mr. G. Rajsekhar Rao, Rao Chuda Mill, Dabugaon	9668660654
5	Mr. Bhubaneswar Majhi, Madan Chuda Mill, Motigam, Chandahandi	9178871301
6	Mr. SPR Das, Essar Filling Station, Nabaranpur	9437091703
7	Mr. Santosh Kumar Mohapatra, Jai Maa Santoshi Filling, Raigarh	8018888881
8	Mr. Jagannath Bisoyee, J.B. Fuels, Dabugaon	9778388022
9	Mr. G. Gopal Krishna Rao, Manikant Fuels, Dabugaon	9937094620
10	Mr. Prakash Majhi, Panabeda Filling Stations, Chandahandi	9938059607

11	Mr. Gobind Jain, MaaTarini Filling Station, Chandahandi	9668408637
12	Mr. LokanathPati, Bharat Petroleum, Choramula,Tentulikhunti	9556554719
13	Mr. AjitMohapatra, MaaPendrani Fuels, Sanabharandi, Umerkote	9437406214
14	Mr. Man Mohan Senapati, Dakhineswari Fuels Umerkote	06866270656

### SERVICES OF GOVINDALAYA TRUST

Govindalaya is a permanent institutional member of Indian Red Cross Society and recipient of a Tata Force Ambulance fitted with necessary equipment from CSR funds of State Bank of India. It has dedicated full time 12 person trained staff and a network of volunteers.

#### HERS [Health Emergency Response Systems]

Contact: 06858-222588

Helplines (24x7 Working): 9178877588, 9178877411& 9178877399

- Blood Bank Support Services
- Hospital Referral Service for hospitals outside the district
- Patient Transport
- Corpse Transport

#### 4.23 Multipurpose Flood Shelters (MFS) in the District

- a) There are 10 Nos. of Multipurpose Flood Shelters constructed under the Chief Minister's Relief Fund (CMRF) in 10 different flood prone locations of the district to meet the infrastructure gap as well to be used for shelter purposes to save human lives during disasters. The ground floor of the building can be used as shelter for livestock during emergencies. Relief materials and medicines can be stocked for emergency situation.
- b) To ensure sustainable maintenance of the shelter buildings, community based Flood Shelter Management and Maintenance Committee (FSMMC) is formed at each MFS level. Different Task forces are responsible different tasks to manage the disaster more effectively at community level.

**Table:4.16**  
**Details of FSMMC**

Sl. No.	Name of the FS	Location	Name of President	Contact No.	Name of Secretary	Contact No.
1	Miriganguda MFS	Dasarapada, Nabarangpur	Sri Binayakumar Patel, EO, ULB, Nabarangpur	7008796410	Sri Ramakenta Dash	9437515776
2	MFS	Sindhigaon, Nabarangpur	Smt. Chinatamani Majhi	8280423065	Sri Damu Bhatra	9556814492
3	MFS	Pujariguda, Nabarangpur	Smt. Minakshi Nayak	9938376955	Sri Debanada Randhari	9668092138
4	MFS	Baghasiuni, Nabarangpur	Smt. Kamala Bhatra	9078105967	Sri Sudhir Kumar Sahoo	8658352381
5	MFS	Mokiya, Papadahandi	Smt. Puspanjali Niachhika	9556054858	Sri Jugal Bisoi	9777353976
6	MFS	Umerkote	Sri V. PrasadRao, EO, ULB, Umerkote	9437374499	Sri Mohan Kumar Sahoo	9556282075
7	MFS	Beheda, Umerkote	Sri Laldhar Bhatra	9668568830	Sri Manohar Bhadra	-
8	MFS	Singisari, Umerkote	Sri Baidhar Pujari	9668897041	Sri Arjuna Dalei	8658869758
9	MFS	Batibeda, Umerkote	Sri Chandan Bhatra	9556324185	Sri Narasingha Pande	-
10	MFS	Salebidi, Chandahandi	Sri Dasrath Dharua	7077374666	Sri Jagdish Bagh	9668663927

- c) A number of equipments including basic equipment for search and rescue will be provided to each shelter to use at shelter level during disasters.

**Table: 4.17**  
**Details of Equipments Provided to FS**

Sl. No.	Name of the MFS	Location	Equipments Provided	Status		Remarks
				Operational	Non Operational	
1	MFS	Dasarapada, Nabarangpur	Provided	Yes	-	-
2	MFS	Sindhigaon, Nabarangpur	Provided	Yes	-	-
3	MFS	Pujariguda, Nabarangpur	Provided	Yes	-	-
4	MFS	Baghasiuni, Nabarangpur	Provided	Yes	-	-
5	MFS	Mokiya, Papadahandi	Provided	Yes	-	-
6	MFS	Umerkote	Provided	Yes	-	-
7	MFS	Beheda, Umerkote	Provided	Yes	-	-
8	MFS	Singisari, Umerkote	Provided	Yes	-	-
9	MFS	Batibeda, Umerkote	Provided	Yes	-	-
10	MFS	Salebidi, Chandahandi	Provided	Yes	-	-

#### 4.24 Other Identified Safe Temporary Shelters in the District

**Table : 4.18**  
**Identified Safe Temporary Shelters**

Sl. No.	Block	GP	Village	Name of the Institutions/Buildings	Type of Roof	No. of Rooms(Size)	No. of Toilets (M/F)	Availability of Kitchen	Total useable area
1	Nabarangpur	Badomosigam	Ambadola Debraguda Bhatiguda Kutruguda	G.P.Office, Badomosigam	-	-	-	-	-
2	Nabarangpur	Sanomosigam	Sanomosigam Chirmapandi	G.P.Office, Badomosigam	-	-	-	-	-
3	Nabarangpur	Pujariguda	Manjor Pujariguda Dedasapalli Bodokusumi	G.P.OfficeBadomosigam	-	-	-	-	-
4	Nabarangpur	Badamasigam	Bhatiguda Badamasigam	Primary School, Bhatiguda.	-	-	-	-	-

				Sevasharam, Badamasigam					
5	Nabarangpur	Bhatrasiuni	Sirisi	Sevasharam, Sirisi	-	-	-	-	-
6	Nabarangpur	Chattahandi	Chattahandi	UGS High School	-	-	-	-	-
7	Nandahandi	Sindhiguda	Nuaguda, Daibhata Sanodaibhata Koiguda	C.T.School,Nabarangpur M.E.School,Chauriguda Sindhiguda U.P School	-	-	-	-	-
8	Nandahandi	Jagannathpur	Phupugam	JaganathpurG.P. Office&School Building	-	-	-	-	-
9	Nandahandi	Jhadabandhuguda	Usaripadar Ghataguda Bhajaguda	JaganathpurG.P.office	-	-	-	-	-
10	Nandahandi	Dohana	Nuagam	Dohana High School	-	-	-	-	-
11	Nandahandi	Nandahandi	Ekamaba	Nandahandi GP office	-	-	-	-	-
12	Nandahandi	Maliguda	Bania Maliguda Paikaminiguda Parjaminiguda	Sindhiguda U.P School	-	-	-	-	-
13	Tentulikhunti	Manchagam	Manchagam Tangnikote Bagra	Project Building Khatiguda	-	-	-	-	-
14	Tentulikhunti	Digi	Panaspodar	Project Building Khatiguda	-	-	-	-	-
15	Tentulikhunti	Lamtaguda	Aunligumma	U.G.M.E School, Khatiguda	-	-	-	-	-
16	Tentulikhunti	Parajabarangpadar	Khatiguda (Kumbhar Street)	U.G.M.E School, Khatiguda	-	-	-	-	-
17	Papadahandi	Mokiya	Garudaguda	Rajiv Gandhi Seva Kendra, Mokia	-	-	-	-	-
18	Papadahandi	Sirisi	Sirisi	M.E.School,Sirisi	-	-	-	-	-
19	Kosagumuda	Chirma	Duglahandi Bhotaguda Joginiguda Padeiguda K.Bagdori	UGUP School, Duglahandi,  BNRGSK Building	-	-	-	-	-
20	Kosagumuda	Kakudisemla	Ghatualguda Kantasaruguda	U.P.School, Ashanga	-	-	-	-	-
21	Kosagumuda	Sanoamada	S.Keragam Dadhiaguda Gunduriguda	UGUP School, Neigam&UGUP School, S. Keragam	-	-	-	-	-
22	Kosagumuda	Binjili	Ghatachura Alupodar Kidingpadar Amlabhata Ghatkusumi BayaPujariguda Ketiaguda Boripadar	BNRGSK,Binjili & UGUP School, Binjili,	-	-	-	-	-
23	Kosagumuda	Ukiapalli	Ghatabasuli Ukiapali Doragam Boragam	U.P.School, Ghatabasuli&UGUP School Boragam, BNRGSK Building,	-	-	-	-	-

			Hordoli Kendapadar Nuaguda Gajagam	Badamda					
24	Kosagumuda	Badamda	Maliatiguda Anchala Umergam	UGUP School, Umergam	-	-	-	-	-
25	Kosagumuda	Bamuni	B Gumunduli Ambaguda Meriguda Khandiguda	BNRGSK Building , Bamuni (Rampali)	-	-	-	-	-
26	Kosagumuda	Majhiguda	Aunli Majhidhanua Mundidhanua Saraladhanua Bhainsabeda	BNRGSK Building , Majhidhanua, Govt. High School Majhidhanua UGUP School, Bhainsabeda UGUP School, Aunli	-	-	-	-	-
27	Kosagumuda	Kosagumu da	Majhiguda Bajraguda Runiguda Nadisahi Kosagumuda	UGME School, Bajragarh, UGUP School Runiguda BNRGSK Building Kosagumuda	-	-	-	-	-
28	Kosagumuda	Santoshpur	Bansuli Santoshpur Poidapalli	UP School, Bansuli	-	-	-	-	-
29	Kosagumuda	Balenga	Balenga Belputi Boraguda	BNRGSK Building Balenga, Govt. High School, Balenga Ashram School Belputi ME School Baraguda	-	-	-	-	-
30	Kosagumuda	Temra	Churahandi	UGME School Churahandi	-	-	-	-	-
31	Kosagumuda	Badagumu da	Badagumuda Sanogumuda	BNRGSK Building Badagumuda UGME Upgrade High School, Sanagumuda	-	-	-	-	-
32	Kosagumuda	K. Semla	Kantasarugud a Ghatualiagud a	High School,K. Semla,	-	-	-	-	-
33	Kosagumuda	B.M.Semla	Dorgam Kerandimal Jharsemla	BNRGSK Building , BM Semla, Sebashram, Kerandimal	-	-	-	-	-
34	Kosagumuda	Ekori	Nunupani Ekori	BNRGSK Building Ekori UGME Upgrade HighSchool, EkoriUP School, Nunpani	-	-	-	-	-
35	Kosagumuda	Taragam	Ghatguda Sindhiguda Taragam	BNRGSK Building Taragam High School Taragam UGUP School, Sindhiguda	-	-	-	-	-
36	Kosagumuda	Attigam	Sana Atigam Attigam Badattigam Ambagam	BNRGSK Building Atigam UP school Sana Atigam High School, BadaAtigam UP School, Ambagam	-	-	-	-	-
37	Dabugaon	Ghodakhun ta	Mundibeda	Primary School, Mundibeda	-	-	-	-	-

38	Umerkote	Kurshi	Tohora	School Building, Tohra	-	-	-	-	-
39	Chandahandi	Beheramunda	Jhaluiaguda Beheramunda	School Building, Jhaluiaguda	-	-	-	-	-
40	Chandahandi	Saradhapur	Telatandi	School Building, Telatandi	-	-	-	-	-
41	Chandahandi	Mohara	Mohara Boriguda	School Building, Mohara	-	-	-	-	-
42	Chandahandi	Chandahandi	Junapani Sinapali	School Building, Junapani	-	-	-	-	-
43	Chandahandi	Patkhali	Patkhali	School Building, Patkhali	-	-	-	-	-
44	Chandahandi	Gambhariguda	Motigam	School Building, Motigam	-	-	-	-	-

#### 4.25 Other Safe Sites for Temporary Shelter for Flood, etc.

Sl. No.	Block Name	GP Name	No. of Mounts	No. of High Bridges
1	Nabarangpur	Agnipur	1	1
2	Kosagumuda	Santoshpur	0	1
3	Jharigaon	Dhodra	0	1

□ □ □



## Prevention & Mitigation Measures

### 5.1 Ways & Means to Prevent or Reduce the Impact of Various Disasters

A better disaster management is possible only by means of prevention and mitigation activities. Now a day there is a paradigm shift in the approach to disaster management from a culture of relief and rehabilitation to that of prevention and mitigation. Structural prevention and mitigation measures generally refer to physical construction which includes engineering measures, construction of hazard resistant and protective infrastructures. Non-structural measures refer to awareness and education, practice, training and capacity development.

### 5.2 Structural Measures

**Table : 5.1**

Sl. No.	Name of the Department/ Office	Activity/ Project	Starting Date	Date of Completion	Cost (Rs. in lakh)	Funding Source
1	Irrigation Division	Bank Protection of Indravati Near Bagdari	2015-16	2017-18	53.77	Dept.
2	Irrigation Division	Bank Protection of Indravati Near Bhatiguda	2016-17	2017-18	42.14	Dept.
3	Irrigation Division	Bank Protection of Indravati Near Gira	2015-16	2017-18	25.16	Dept.
4	CDMO	Repair and Retrofitting Work at PHC/SC	Current FY	3 Years	48.50	NHM
5	SouthCo Utility	Trimming of trees in the electricity infrastructures	May 2018	2019-2020	-	Dept.
6	Nabarangpur ULB	Construction of road and drain	2019-2020	2019-2020	-	Dept.
7	Nabarangpur ULB	Supply of Drinking Water through Tankers	May 2018	June 2018	-	Dept.

*[Source: Irrigation Division/SouthCo/ULB, Nabarangpur]*

### 5.3 Non-Structural Measures

**Table : 5.2**

Sl. No.	Name of the Department/ Office	Activity/ Project	Starting Date	Date of Completion	Cost (Rs. in lakh)	Funding Source
1	CDM & PHO	Functioning of Control Room	Throughout the year	-	-	-
2	CDM & PHO	First Aid Centre(Medical Relief Centre) by field Health staffs	As per the necessity	-	-	Health Dept.
3	CDM & PHO	Disinfection of drinking water sources (Dug well)	Throughout the year (More frequent during rainy season/ Flood etc.)	-	-	Health Dept.
4	CDM & PHO	Readiness of stocksfor ORS, Halogen, Bleaching powder, Anti diarrhoea, Anti Malaria, Anti Snake venom and other logistics	Throughout the year (More frequent during rainy season/ Flood etc.)	-	-	Health Dept.
5	CDM & PHO	Services of MHU and MMT at village and School level	Throughout the year (Special drive in the affected areas during the disaster period	-	-	Health Dept.
6	CDM & PHO	Testing of Water quality by OT / H <sub>2</sub> S kit and Bacteriological.	Routine/ Special drive as and when required	-	-	Health Dept.
7	CDM & PHO	IEC activities	Throughout the year/ Intensive IEC during the period	-	-	Health Dept.
8	CDM & PHO	Readiness of Rapid Response Team	Throughout the year	-	-	Health Dept.
9	CDM & PHO	Readiness of vehicle	As per the situation	-	-	Health Dept.
10	CDM & PHO	Sensitization of paramedical and other field health staffs	As and when required	-	-	Health Dept.
11	CDM & PHO	Daily Surveillance	Throughout the year	-	-	Health Dept.
12	CDM & PHO	Supervision	As and when	-	-	Health Dept.

		and Monitoring by Nodal Officer	required			
13	CDM & PHO	Co-ordination meeting with different line department	As and when required	-	-	Health Dept.
14	CDVO	Prevention of Outbreak of Epidemics	Routinely Basis	Routinely Basis	-	ARD Dept.

[Source: CDMO/CDVO, Nabarangpur]

#### 5.4 Scope for integrating different schemes for Disaster Risk Reduction (DRR) Activities

Sl. No.	Scheme	Possible Activities for DRR
1	Biju Krushak Kalyan Yojana (BKKY)	<ul style="list-style-type: none"> <li>To provide health security to the farmers and their families</li> <li>To provide financial support through health and accident insurance</li> </ul>
2	GopabandhuGraminYojana (Bijli,Sadak&Pani)	<ul style="list-style-type: none"> <li>Road connectivity</li> <li>Water supply</li> <li>Installation of critical infrastructures</li> </ul>
3	BijuSetuYojana (Rural Bridges)	<ul style="list-style-type: none"> <li>All weather road connectivity in remote areas</li> <li>Infrastructure development</li> </ul>
4	Mission Shakti	<ul style="list-style-type: none"> <li>Institution building</li> <li>Capacity building for risk reduction</li> </ul>
5	Integrated Child Protection Scheme (ICPS)	<ul style="list-style-type: none"> <li>To provide a safe and secure environment for overall development of the children</li> <li>Protection of child rights</li> </ul>
6	Odisha Tribal Empowerment &Livelihood Programme Plus (OTELP Plus)	<ul style="list-style-type: none"> <li>Livelihood support to tribal and vulnerable community</li> <li>Creation of durable structures</li> </ul>
7	DAMAN (DurgamaAnchalare Malaria Nirakaran)	<ul style="list-style-type: none"> <li>Malaria control</li> <li>Health safety</li> </ul>
8	Pradhan Mantri Fasal Bima Yojana (PMFBY)	<ul style="list-style-type: none"> <li>Crop insurance</li> <li>Firming risk coverage in natural calamities</li> </ul>
9	Pradhan Mantri Gram Sinchai Yojana (PMGSY)	<ul style="list-style-type: none"> <li>Irrigating the field of farmers and improving water use efficiency</li> <li>Enhance crop per drop by implementing water-saving technologies and precision irrigation</li> </ul>

10	Sansad Adarsh Gram Yojana (SAGY)	<ul style="list-style-type: none"> <li>• Development of model villages</li> <li>• Social, cultural, economic and infrastructure developments in the villages</li> </ul>
11	JanashreeVimaYojna	<ul style="list-style-type: none"> <li>• Insurance protection</li> <li>• Risk transfer</li> </ul>
12	PradhanMantriSurakshaBimaYojana (PMSBY)	<ul style="list-style-type: none"> <li>• Insurance protection</li> <li>• Risk transfer</li> </ul>
13	PradhanMantriJeevanJyotiBimaYojana (PMJJBY)	<ul style="list-style-type: none"> <li>• Insurance protection</li> <li>• Risk transfer</li> </ul>
14	PradhanMantriAwasYojana (PMAY) - Housing for all by 2022	<ul style="list-style-type: none"> <li>• Construct disaster resilient houses</li> <li>• Vulnerable infrastructure risk reduction</li> </ul>
15	Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)	<ul style="list-style-type: none"> <li>• Construction of roads in remote areas</li> <li>• Construction of multi-hazard shelters</li> <li>• Plantation Activities</li> <li>• Permanent Livelihood Activities</li> </ul>
16	National Health Mission (NHM)	<ul style="list-style-type: none"> <li>• Emergency Medical Response</li> <li>• Ambulances Service</li> <li>• Mobile Health Facility in Remote Areas</li> </ul>
17	PradhanMantri Gram SadakYojana (PMGSY)	<ul style="list-style-type: none"> <li>• Rural Road connectivity to remote and unconnected villages</li> </ul>
18	SarvaShikshaAbhiyan (SSA)	<ul style="list-style-type: none"> <li>• Construction of new disaster resilient school buildings</li> <li>• Retrofitting in existing school buildings</li> <li>• Disaster preparedness and planning at school</li> </ul>
19	Swachh Bharat Mission (SBM)	<ul style="list-style-type: none"> <li>• For clean and hygienic environment</li> <li>• Protection health</li> </ul>
20	Soil Health Card Scheme	<ul style="list-style-type: none"> <li>• Complete evaluation of the quality of soil</li> <li>• Corrective measures to improve productivity</li> </ul>
21	PradhanMantriUjjwalaYojana (PMUY)	<ul style="list-style-type: none"> <li>• Smoke and pollution free environment</li> <li>• Protection of women health by smoke free cooking</li> </ul>

[Source: Government Department/Web Site]

## **5.4 Scheme for Legal Services to the victims of disasters through Legal Services Authorities**

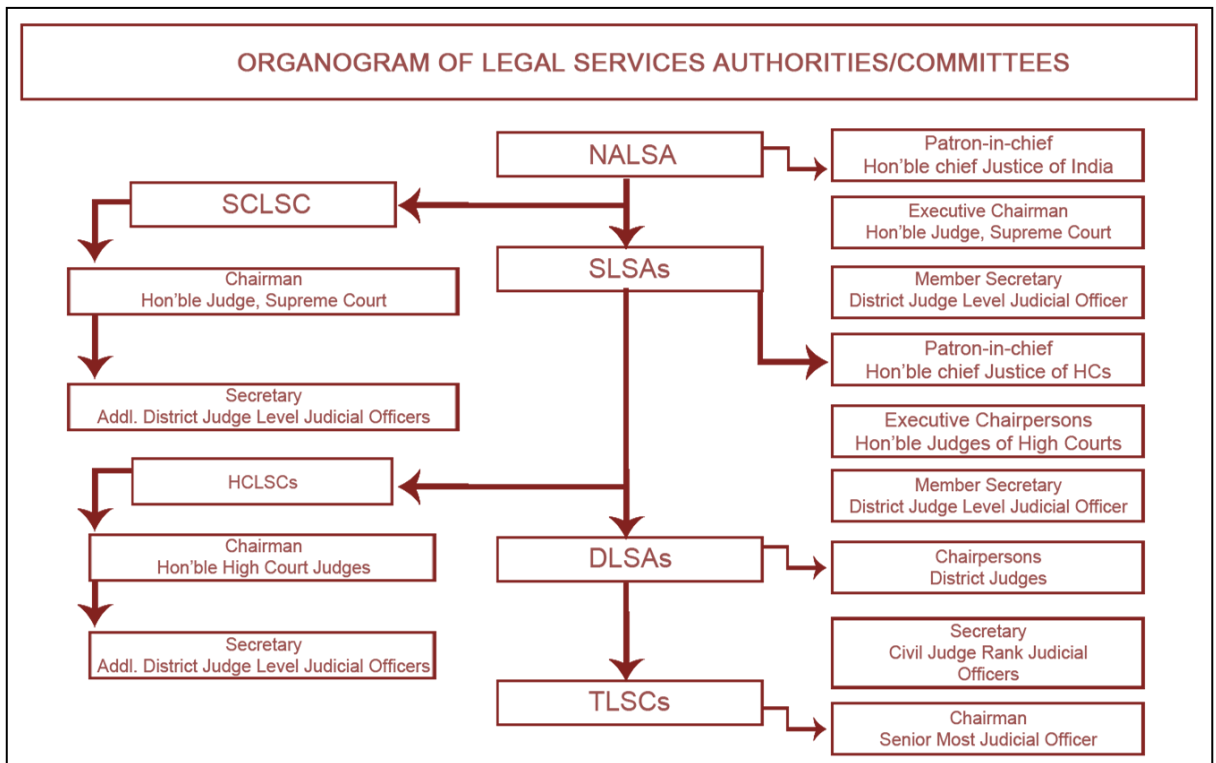
### **5.4.1 National Legal Services Authority (NALSA)**

The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society. The Chief Justice of India is the Patron-in-Chief and the Senior most Hon'ble Judge, Supreme Court of India is the Executive Chairman of the Authority.

Public awareness, equal opportunity and deliverable justice are the cornerstones on which the edifice of NALSA is based. The principal objective of NALSA is to provide free and competent legal services to the weaker sections of the society and to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities, and to organize Lok Adalats for amicable settlement of disputes. Apart from the abovementioned, functions of NALSA include spreading legal literacy and awareness, undertaking social justice litigations etc.

With the aim of reaching out to the diverse milieu of people belonging to different socio-economic, cultural and political backgrounds, NALSA identifies specific categories of the marginalized and excluded groups from the diverse populace of the country and formulates various schemes for the implementation of preventive and strategic legal service programmes to be undertaken and implemented by the Legal Services Authorities at the various levels. In carrying out all these responsibilities, NALSA works in close coordination with the various State Legal Services Authorities, District Legal Services Authorities and other agencies for a regular exchange of relevant information, monitoring and updating on the implementation and progress of the various schemes in vogue and fostering a strategic and coordinated approach to ensure smooth and streamlined functioning of the various agencies and stakeholders.

**Figure :5.1**



## 5.4.2 Odisha State Legal Services Authority (SALSA)

Odisha State Legal Services Authority is a Statutory Body established under the Legal Services Authorities Act, 1987. Hon'ble Chief Justice of High Court of Odisha is the Patron-in-Chief of the Odisha Legal Services Authority and the Sr. Judge of the High Court of Orissa is the Executive Chairman of the Odisha Legal Services Authority. To look after the legal services pertaining to the High Court, there is High Court Legal Services Committee, which is chaired by a sitting Judge of the High Court and the Registrar (Judicial), Orissa High Court is functioning as the Secretary of High Court Legal Services Committee. The State Legal Services Authority monitors and guides the District Legal Services Authorities and Taluk Legal Services Committees in achieving the aims and objectives of the Act. There are 30 District Legal Services Authorities in the State of Odisha and 81 Taluk Legal Services Committees functioning under them. The District Legal Services Authorities are headed by District & Sessions Judges. An officer in the cadre of Senior Civil Judge functions as the Secretary of the District Legal Services Authority. The Taluk Legal Services Committees are headed by the senior most judicial officer posted at the station as the Chairman.

The general public who need any legal help / legal aid can directly contact the concerned Taluk Legal Services Committee / District Legal Services Authority, the High Court Legal Services Committee and the State Legal Services Authority, as the case may be, for their legal needs. Added to it, Front Offices have also been established in the premises of the District Legal Services Authority and Taluk Legal Services Committee manned by advocate retainers to offer legal advice to the beneficiaries and the general public as well and also to assist them in different Legal Services Activities.

The State Legal Services Authority has 15 Members which include the Hon'ble Chairman of High Court Legal Services Committee, Principal Secretaries in the Depts. of Law and Finance, Director-General and Inspector-General of Police, Advocate General, District Judges of Cuttack and Khurda at Bhubaneswar. Apart from that the State Authority has 5 nominated Members namely Hon'ble Minister, Law, Orissa, a Senior Advocate of Orissa High Court, an M.P., an M.L.A., and an eminent social worker who have experience in the field of Law, Finance, Social Service or Administration and who are engaged in the upliftment of the weaker sections of the society, including Schedule Castes, Schedule Tribes, Women, Children, rural and Urban Labour and who are interested in the implementation of the Legal Service Schemes.

*[Source: NALSA & Odisha State Legal Service Web Portal]*

***(Please refer Figure 7.6 & 7.7 of Volume–II, Page No. 147& 148 for NDMA and OSDMA directions for inclusion of NALSA & SLASA as Statkeholders in DRM Strategy)***



# Climate Change Adaptation & Mitigation

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

## 6.1 Important Greenhouse Gases

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



**Table : 6.1**

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

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

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

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

**Table : 6.2**

Sl. No.	Name of the Industry/Plant/Firm	Location	Quantity of CO <sub>2</sub> emission (PPM)	Ranking as per CO <sub>2</sub> Emission (in the district)	Other major pollutants emitted (PPM)	Action taken for cutting down emission
-	-	-	-	-	-	-



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

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

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

**Table : 6.3**

Sl. No.	Name of the Block	Major Sources	Annual émission (In PPM)	Ranking as per CH <sub>4</sub> Emission (PPM)	Action taken for cutting down émission
-	-	-	-	-	-

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

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

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

**Table : 6.4**

Sl. No.	Name of the Block	Fertiliser /Industrial processes	Annual Usage (In tonnes)	Ranking as per N <sub>2</sub> O Emission (PPM)	Other major pollutants emitted (PPM)	Action taken for cutting down émission
-	-	-	-	-	-	-

## 6.5 Important Greenhouse Gases: Fluorinated Gases

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

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

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

**Table : 6.5**

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

## 6.6 Important Green House Gases: Chlorofluorocarbons (CFCs)

Chlorofluorocarbons (CFCs) an important Green House Gas contribute about 12% to radiative forcing by long-lived GHGs has not been included in the Kyoto Protocol because they are already regulated under the Montreal Protocol on Substances that Deplete the Ozone Layer which entered into force in 1989.

The Montreal Protocol includes, for example, chlorofluorocarbons (CFCs) which contribute about 12% to total radiative forcing by LLGHGs. CFCs can stay in the atmosphere for more than 1,000 years. CFCs have a global warming potential (GWP) that ranges between 4,750 and 14,400 (over 100 years time span). CFCs are used in the manufacture of aerosol sprays, blowing agents for foams and packing materials, as solvents, and as refrigerants.

**Table : 6.6**

SI 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
-	-	-	-	-	-

*[Ref.: IPCC (2007). Fourth Assessment Report, Technical Summary –Changes in Human and Natural Drivers of Climate & UNEP (2012). Emissions Gap Report; WMO (2013). Greenhouse Gas Bulletin]*

## 6.7 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”).

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

## Major Greenhouse Gases Contributors (Anthropogenic) to Climate Change (Table : 6.7)

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

*[Source: Reproduced from IPCC 2007, UNEP 2012 and FERN]*

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

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

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

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

**Table : 6.8**

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

## 6.8 Sectors with High Mitigation Potential

**Table : 6.9**

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

## 6.9 Sector Specific Climate Change Mitigation Projects

**Table : 6.10**

Sl. No.	Sector	Project Title	Period		Mitigation Targets
			From	To	
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

## Safety of Schools and Child Care Institutions

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

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

[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]

## **7.2 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 wellbeing of children.
- Hazards include structural and non-structural factors.



- Structural factors include dilapidated buildings, poorly designed structures, faulty construction, poorly maintained infrastructure, loose building elements, etc.
- Non Structural factors include loosely placed heavy objects such as almirahs, infestation of the campus by snakes and any other pests, broken or no boundary walls, uneven flooring, blocked evacuation routes, poorly designed and placed furniture that may cause accidents and injury, inadequate sanitation facilities, etc.

### **Right to Education Act 2009**

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

**7.3 Category & Type of Schools**

Name of the Block	Government Schools				Government Aided Schools		Private Schools	
	Elementary		Secondary		Elementary	Secondary	Elementary	Secondary
	Rural	Urban	Rural	Urban				
Nabarangpur	85	17	18	2	3	5	15	1
Nandahandi	65	-	14	-	2	0	2	1
Tentulikhunti	112	-	18	-	2	2	3	2
Papadahandi	196	-	21	-	2	6	7	0
Kosagumuda	199	-	19	-	2	9	6	1
Dabugam	99	-	9	-	0	1	2	1
Umerkote	242	14	15	7	0	6	8	2
Raighar	280	-	24	-	1	8	9	2
Jharigam	208	-	25	-	1	6	6	0
Chandahandi	103	-	13	-	0	7	3	0
Total	1589	31	176	9	13	50	61	10

**7.4 Category & Type of Students**

Name of the Block	Government Schools				Government Aided Schools		Private Schools	
	Elementary		Secondary		Elementary	Secondary	Elementary	Secondary
	Rural	Urban	Rural	Urban				
Nabarangpur	85	17	18	2	3	5	15	1
Nandahandi	65	-	14	-	2	0	2	1
Tentulikhunti	112	-	18	-	2	2	3	2
Papadahandi	196	-	21	-	2	6	7	0
Kosagumuda	199	-	19	-	2	9	6	1
Dabugam	99	-	9	-	0	1	2	1
Umerkote	242	14	15	7	0	6	8	2
Raighar	280	-	24	-	1	8	9	2
Jharigam	208	-	25	-	1	6	6	0
Chandahandi	103	-	13	-	0	7	3	0
Total	1589	31	176	9	13	50	61	10

**7.5 School Safety Advisory Committee of Nabarangpur District**

1. Date of Formation : -
2. Institutional Architecture

Sl. No	Name & Designation	Contact No.	Email ID	Remarks
1	Collector & District Magistrate, Chairperson	9556568435	-	-
2	Superintendent of Police, Co-Chairperson	9438916840	-	-
3	District Fire Officer, Member	8249096469	-	-
4	District Welfare Officer, Member	9437741859	-	-
5	District Social Welfare Officer, Member	8658046694	-	-
6	Chief District Medical Officer, Member	9439988885	-	-
7	Executive Engineer, RWS&S/PWD, Member	8280408056/9437 015920	-	-
8	District Emergency Officer, Member	9938688120	-	-
9	Panchayat Raj Officer, Member	8328963551	-	-
10	Principal, DIET, Member	-	-	-
11	BEO, District Headquarter, Member	-	-	-
12	2 NGO Personnel (Having experience in Disaster Management to be nominated by the Collector), Member	-	-	-
13	District Project Coordinator, SSA, Member	9437321123	-	-
14	District Education Officer, Nodal Officer & Member Convener	9437321123	-	-

## 7.6 Details of School Safety in the District

Sl. No.	Activity	Total School	Achieved										Total
			Nabarangpur	Nandahandi	Tentulikhunti	Papadahandi	Kosagumuda	Dabugam	Umerkote	Raighar	Jharigam	Chandahandi	
1	Schools having School Safety Advisory Committee (Number)	1964	153	86	141	234	237	113	298	326	249	127	1964
2	Schools having School Disaster management Plan (Number)	1964	153	86	141	234	237	113	298	326	249	127	1964
3	Schools having conducted Safety Audits (Structural) (Number)	1964	150	76	128	208	228	86	246	268	178	124	1692
b	Safety Audits (Non-Structural) (Number)	1964	153	86	141	234	237	113	298	326	249	127	1964

4	Schools having conducted Annual Mock Drills (Number)	1964	93	55	65	116	118	59	123	167	116	80	992
5	Schools Having Fire Extinguisher (Number)	1964	153	86	141	234	237	113	298	326	249	127	1964
6	Schools Adhering to safety norms in storing inflammable & Toxic Material (Number)	1964	153	86	141	234	237	113	298	326	249	127	1964
7	Schools confirming safety standards as per local building bye-laws (Latest) (Number)	1964	122	69	107	192	152	86	188	264	144	86	1410
8	Schools having issued Recognition certificate under sub Rule(4)-Rule 15 of RTE rules 2010 (only to schools that comply with Structural safety norms) (Number)	62	14	2	4	3	5	2	10	7	5	2	54
9	Schools where students & teachers undergo regular training on School Safety & Disaster Preparedness (Number)	1964	153	86	141	234	237	113	298	326	249	127	1964
10	Schools where disaster management is being taught as part of the curriculum (Number)	1964	153	86	141	234	237	113	298	326	249	127	1964
11	Awareness Programme on School Safety	1964	153	86	141	234	237	113	298	326	249	127	1964

## 7.7 Disaster management Education (School Safety and School Disaster Preparedness)

Sl. No.	Name of the Programme	No. of Schools, Colleges and Other Educational institutions to be covered during the year	Time Line	Remarks
1	Awareness generation and mock drills for fire/earth quake etc.	21	October-December, 2022	-
2	Preparation of School disaster management plan	2052	December, 2022	-

## 7.8 Details of Child Care Institutions

Sl. No.	Block	Name and Address of the Organization	Boys	Girls	Total No of Children	Name and Contact no. of the Shift-in-Charge	Fire Safety Equipments (Fire Extinguisher,	Staff Training on Fire Safety Equipment	Nearby open space for evacuation	Alternative Shelter/s Identified
1.	Nabarangpur	More Than Enough Ministry At: Chhatiaiguda, G.P.: Agnipur Block: Nabarangpur	16	0	16	Sri Babula Nag 9938834388	-	-	-	-
2.	Nabarangpur	Good News India Dream Center At: Sana Kumuli, G.P.: Bada Kumuli Block: Nabarangpur	54	72	126	Sri Jephron Suna 9437862485	-	-	-	-
3.	Nabarangpur	Love & Hope Children Home At: Jobaguda, G.P.: Bada Kumuli Block: Nabarangpur	25	29	54	Sri Timan Chinchani 9439770538	-	-	-	-
4.	Nabarangpur	Mighty Fortress Missionaries At: Chhatiaiguda, G.P.: Agnipur Block: Nabarangpur	14	4	18	Sri Saroj Kumar Takri 9437821450	-	-	-	-
5.	Nabarangpur	Asha Kiran Special School At: Main Road, P.O.: Nabarangpur Block: Nabarangpur	33	0	33	Sri Jagannath Behera 9437785158	-	-	-	-
6.	Nandahandi	Utkal Balashram At: Sindhiguda, G.P.: Sindhiguda Block: Nandahandi	67	0	67	Sri Ramkrushna Sabat 9437524707	-	-	-	-

7.	Nandahandi	Pandeet Deen Dayal Girls Orphanage At: Majhiguda, G.P.: Podalguda Block: Nandahandi	0	44	44	Smt. Sabira Begam 78736189 62	-	-	-	-
8.	Nandahandi	Bernabas Children Home At: Podalguda, G.P.: Podalguda Block: Nandahandi	24	0	24	Sri Trilochan Harijan 94377208 67	-	-	-	-
9.		Bethel Gospell Assembly At: Majhiguda, G.P.: Nandahandi Podalguda Block: Nandahandi	20	0	20	Sri Khristodan Nag 80185319 47	-	-	-	-
10.	Tentulikhunti	Utkal Marthan Mission Home At: Tentulikhunti, G.P.: Kukudabai Block: Tentulikhunti	15	38	53	Sri Jacov Kumar Samuel 94373745 30	-	-	-	-
11.	Tentulikhunti	AGAPE Children Home At: Khatiguda, G.P.: Khatiguda Block: Tentulikhunti	31	5	36	Sei Sebak Garada 78736479 16	-	-	-	-
12.	Papadahandi	Impact Children Home At: Doleiguda, P.O.: Papadahandi Block: Papadahandi	24	0	24	Sri Sanjeep Kumar Singh 94379448 45	-	-	-	-
13.	Umerkote	IET Boys Home At: Dadhiaguda, P.O.: Umerkote Block: Umerkote	30	0	30	Sri Nakula Padasethi a 97773237 72	-	-	-	-
14.	Umerkote	Blessing Children Home At: DNK, P.O.: Umerkote Block: Umerkote	0	37	37	Smt. Nibedita Nanada 80189814 19	-	-	-	-
15.	Umerkote	Maa Bastrani Vocational Training Centre, At: DNK, P.O.: Umerkote Block: Umerkote	30	13	43	Sri Gobardhan Nayak 86583798 97	-	-	-	-
16.	Raighar	Sri Sri Rairam Das Seva Ashram At: Sarguli, G.P.: Cheelidangri Block: Raighar	39	0	39	Sri Mahesh Chandra Saha 94394748 50	-	-	-	-
		Total	42 2	24 2	664					



# Capacity Building Measures

## 8.1 Approach

Developing a DDMP without building capacity or raising awareness amongst stakeholders 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.

## 8.2 Capacity Building of Stakeholders

A capacity building plan caters the functional responsibilities of the stakeholders in incidence management. Therefore one of the most important tasks of the DDMA is to facilitate training and capacity building programmes of the Government Officials, PRI Members, Community Members, Volunteers and other stakeholders to make them more skilled and foster preparedness to combat any disaster. The list of training programmes to be organised for different stakeholders are as follows.

**Table :8.1  
List of Training Programmes for the Stakeholders**

Sl. No.	Name of the Course/ Training Programme	Participants	Duration of the Training Programme	Month of Organization	To be Organized by
1	Orientation training programme on disaster management	ADM, Sub-Collector, All BDOs, Tahasildars, Head of line departments, Police & Fire Personnel.	1/2 Day	January	DDMA

2	Training programme on heat wave preparedness	All BDOs/ EE, RWS&S, CDMO, CDVO, NGOs	1 Day	February	DDMA
3	Hospital preparedness, mass casualty management and hospital management plan	Doctors and Hospital Administrators	2 Days	February	CDMO
4	Training programme on treating heat wave related health issues	Doctors and Paramedical Staff/ ANMs	1 Day	February	CDMO
5	Mass Casualty Management.	Para Medics/Police/ RPF/Home Guard/Fire and Civil Defense/ Railway Officials	1 Day	March	DDMA
6	Earth quake resistant construction	Asst. Engineers & JEs	1 Day	April	R&B/RD
7	Post disaster damage assessment	AEs of all Blocks and line departments	1 Day	April	DDMA
8	GIS mapping of utilities	Block Computer Programmers, Line Department MIS officials	1 Day	May	DRDA
9	Public health in emergencies, safe drinking water and sanitation	All BDOs, Block and district level officials of PHED/ RWS&S	1 Day	May	CDMO
10	Training of teachers on school safety including DM plan and conduct of Mock Drills	Principal/ Head Masters of all Govt. & Private Institutions	1 Day	June	DEO
11	Role of PRIs and ULBs in disaster management.	Members of ZP and ULBs, Chairman & Vice- Chairman of PS.	1 Day	October	DDMA
12	Block level training programmes on role of PRIs in disaster management	Sarpanchs & PS Members	1 Day	October	BDO
13	Role of NGOs/VOs/CBOs	District and block level NGOs/ VOs involved	1 Day	November	DDMA

	in disaster management.	with district administration in disaster management			
14	Training of ZKSS and BKSS members on basics of disaster management and creating community level awareness for dos and don'ts related to common disasters.	ZKSS and BKSS Members	1 Day	November	District Culture Officer
15	Search & rescue and safe evacuation.	Civil Defense Volunteers, NSS, NYK Volunteers, NCC	5 Days	December	Asst. Commandant of the nearest ODRAF unit
16	Role of Media in Disaster Management	Media Personal	1 Day	December	DIPRO

### 8.3 District/ Block level Mock Drills

**Table :8.2**

Sl. No.	Type of Mock Drill	Officials/ Institutions to be involved	Month/ Date	Remarks
1	Flood	DLOs, BLOs, High School, College Students, CSOs, NGOs, Fire Service, ODRAF, NCC, YRC Volunteers, etc	June, 19 <sup>th</sup>	-
2	Fire	High School, College Students, Fire Service Personnel	November-January	-
3	Industrial Accidents/ Industry Specific Mock drills	Workforce of Mangalam Timber, F&B, DLO, Fire Service Personnel	December	-
4	Crowd Management	Police Personnel & Festival Organisation Committee Officials, Volunteers, NGOs, CSOs	July, September, November	-

Mock drills are to be organized at district and block locations involving different stakeholders and institutions to assess capacity and preparedness to face certain disaster. The recommendations and findings from the Mock Drill exercises



will be incorporated in the next updation of DDMP. Proposed Mock drills at the district and block locations are as follows.

**Table :8.3  
List of Mock Drills for the Stakeholders**

Sl. No.	Type of Mock Drill	Officials/Institutions to be involved	Month/Date
1	Evacuation	Volunteers of NCC, NSS and Students of RCD High School	January, 21
2	Multi Incident Rescue	Officials and Mass Gatherings at the Selected Block Level R-Day Parade Ground	January, 26
3	Fire Fighting and Rescue	Principal, Staff and Students of Model Degree College	April, 14-20
4	Multi Incident Rescue	Officials and Mass Gatherings at the District Level I-Day Parade Ground	August, 15
5	Flood Rescue at Selected Flood Shelters	MFMMC, Community, Volunteers and Selected Line Department and Block Officials	October, 29

#### **8.4 Preparation of Village Disaster Management Plans (VDMPs)**

The State Executive Committee (SEC) in its meeting held on 05-01-2017 has been approved for preparation of VDMPs for Community Based Disaster Management (CBDM) in the disaster prone villages. The Village Disaster Management Committee (VDMC) and Task Forces at village level are to be formed and capacitate them to work for disaster management equipped with preparedness to minimise the loss of life and property of the target community.

**Table :8.4  
Preparation of Village Disaster Management Plans**

Sl. No.	Block Name	No. of GPs covered during 2019-20	No. of vulnerable villages covered during 2019-20	No. of VDMC and task force member to be oriented	No. NGOsto be involved in the process	Time Line
1	Chandahandi	12	-	-	-	-
2	Kosagumuda	19	-	-	-	-
	Total	-	-	-	-	-

## 8.5 Capacity Building of Flood Shelter Maintenance & Management Committee (FSMMC) and Task Force Members (TFM)

FSMMC and TFM members will be given training from time to time to update their knowledge and skills on shelter management, equipment management and disaster management.

**Table:8.5**  
**Capacity building of FSMMC & TFM**

Sl. No.	Name of the Training Programme	Total No. of Persons to be trained	No. of Training Programmes to be organized	Time Line
1	Basic orientation of FSMMC	200	10	November
2	Training of task force members on search & rescue and first aid	70	4	December
3	Disaster and shelter management skills, record keeping procedures	70	4	December

## 8.6 Shelter Level Mock Drills

Mock drills and operations will be organized at shelter level at different locations involving community to aware them preparedness in disaster management.

**Table :8.6**  
**Mock Drills at Shelter Level**

Sl. No.	Type	No. of Flood Shelters to be covered	No. of villages to be covered.	Month/ Date
1	Flood	10	30	June, 19 <sup>th</sup>



# Preparedness

Disasters can be minimized by a wellpreparedness and identification of the most vulnerable location is the foremost action in this regard. The communities itself are the first responders for rescue of disaster victims and their role is very crucial. Hence there is no alternate other than preparedness that they are competent to respond to any incident in an effective way. The service of NDRF, ODRAF, Fire, Police, Home Guard, NCC, NSS, NYK as well as entire Emergency Machinery of Government and Private are also bears importance in the local level activities to combat any disaster.

## 9.1 Relief Lines : District to Blocks

Table :9.1

Sl. No.	Name of the Road		Type of Road & Length	Vulnerability of the Route (Description of the Vulnerability)	Coverage (Blocks)
	From	To			
1	Nabarangpur	Nandahandi	RD - 19 Km.	Bridge-3, Nalha, Colverts	Nandahandi
2	Nabarangpur	Tentulikhunti	Black Tap - 25 Km.	Bridge-2, Nalha, Colverts	Nandahandi & Tentulikhunti
3	Nabarangpur	Papdahandi	NH - 14 Km.	Bridge-1, River-1, Colverts	Papdahandi
4	Nabarangpur	Kosagumuda	SH - 35 Km.	River-2, Bridge-2, Colverts	Papdahandi & Kosagumuda
5	Nabarangpur	Dabugam	NH - 14 Km. & SH - 18 Km.	River-3, Bridge-3, Colverts	Papdahandi & Dabugam
6	Nabarangpur	Umerkote	NH - 14 Km. & SH - 50 Km.	River-4, Bridge-5, Nalha-1, Colverts	Papdahandi, Dabugam & Umerkote
7	Nabarangpur	Raighar	NH - 14 Km. & SH - 80 Km.	River-4, Bridge-5, Nalha-1, Colverts	Papdahandi, Dabugam Umerkote & Raighar
8	Nabarangpur	Jharigam	NH - 14 Km. & SH - 70 Km.	River-5, Bridge-5, Nalha-1, Colverts	Papdahandi, Dabugam Umerkote & Jharigam

9	Nabarangpur	Chandahandi	SH - 120 Km.	River-5, Bridge-5, Nalha-1, Colverts, Ghat-5 Km., Bridge-4, Colverts	Nabarangpur, Papadahandi, Dabugaon, Umerkote, Jharigaon & Chandahandi
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## 9.2 Relief Line Channels : Block to GPs & Villages

**Table :9.2**

Sl. No.	Name of the Road		Type of Road & Length	Vulnerability of the Route (Description of Vulnerability)	Coverage (Villages)
	From Block	To GP			
1	Tentulikhunti	Pujariguda	Black Tap - 2 Km.	Nil	Pujariguda
2	Tentulikhunti	Anchalaguma	Black Tap - 7 Km.	Nil	Siraguda
3	Tentulikhunti	Patraput	Black Tap - 14 Km.	Nil	Chitrakote
4	Tentulikhunti	Amlabhata	Black Tap - 21 Km.	Nil	Timanpur, Gudra
5	Tentulikhunti	Jharigumma	Black Tap - 20 Km.	Nil	Padeiguda, Biriguda
6	Tentulikhunti	Kantagam	Black Tap - 23 Km.	Nil	Dengapadar, Nuaguda
7	Tentulikhunti	Kukudabai	Black Tap - 12 Km.	Nil	Mentry, Dhondra, Narsinghaguda
8	Tentulikhunti	Kongra	Black Tap - 17 Km.	Nil	Kongra
9	Tentulikhunti	Kamta	Black Tap - 21 Km.	Nil	Olma
10	Tentulikhunti	Digi	Black Tap - 5 Km.	Nil	Udayapur
11	Tentulikhunti	Lamtaguda	Black Tap - 7 Km.	Nil	Gondaguda, Charamula, Lokiguda, Konehimunda
12	Tentulikhunti	PB Padar	Black Tap - 13 Km.	Lamtaguda Nala	Aunligumma, Khatiguda, Photaguda
13	Tentulikhunti	G. Deopalli	Black Tap - 17 Km.	Nil	Paika Barangpadar
14	Tentulikhunti	Manchagam	Black Tap - 15 Km.	Nil	Manchagam
15	Tentulikhunti	Tentulikhunti	Black Tap - 1 Km.	Nil	Tentulikhunti

### 9.3 Resources Available : Response Force & Volunteers


**Table :9.3**

Sl. No.	Response Force	Capacity (In Nos.)	No. of Trained Person			Name of Nodal Person	Contact Details (Mobile / Phone)
			Search / Rescue	First Aid	Relief Line Clearance		
1	NDRF	0	0	0	0	Sri Arun Kumar Commandant	0671-2879710 0943796457 1
2	ODRAF, Koraput	41	41	8	41	Mr. Bhaskar Ch. Sahu	9437316078
3	Fire Service	110	110	110	110	Sri Subash Muduli	8249096469 , 06858-222233
3	Police Personnel	25	25	0	25	Sri Jayakrushan Behera, OPS-I	6370670237
4	Home Guards	30	30	0	30	Sri M.Marandi	9437977249
5	Civil Defence	0	0	0	0	0	0
6	NCC	632	0	0	0	Mr. G.S.P. Raju	7381009811 9848977296
7	NYK	11	0	0	0	Mr.V.Rames	9861916221 7008735563
8	Youth Red Cross	60	0	0	0	Mr. Akhila Kumar Bhatta	9937372303 9437372303
9	Trained Taskforce	0	0	0	0	0	0
	Total	966	181	20	166	0	0

## 9.4 Usefulness of Satellite Phone During Natural Disasters

Satellite Phone can be a life saver during natural disasters. A Satellite Phone on the premises is essential as it would be only means to communicate with others. It gives a communication access to local services, rescue operations and emergency services.

### Procedure for Using INMARSAT ISAT PHONE 2

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

## 9.5 Allotted Important Satellite Phone Numbers of Odisha

**Table :9.1**

Sl. No.	Details	Calling Numbers
1	Collector Angul	8991118454
2	Collector Balasore	8991118455
3	Collector Bargarh	8991118456
4	Collector Bhadrak	8991118457
5	Collector Bolangir	8991118458
6	Collector Boudh	8991118459
7	Collector Cuttack	8991118460
8	Collector Deogarh	8991118461
9	Collector Dhenkanal	8991118462
10	Collector Gajapati	8991118463
11	Collector Ganjam	8991118464
12	Collector Jagatsinghpur	8991118465
13	Collector Jajpur	8991118466
14	Collector Jharsuguda	8991118467
15	Collector Kalahandi	8991118468
16	Collector Kandhamal	8991118469
17	Collector Kendrapada	8991118470
18	Collector Keonjhar	8991118471
19	Collector Khorda	8991118472
20	Collector Koraput	8991118473
21	Collector Malkangiri	8991118474
22	Collector Mayurbhanj	8991118475
23	Collector Nabarangpur	8991118476
24	Collector Nayagarh	8991118477
25	Collector Nuapada	8991118478
26	Collector Puri	8991118479
27	Collector Rayagada	8991118480
28	Collector Sambalpur	8991118481
29	Collector Subarnapur	8991118482
30	Collector Sundargarh	8991118483

31	ODRAF Cuttack, OASP 6 <sup>th</sup> Battalion	8991118484
32		8991118485
33	ODRAF Bhubaneswar, OSAP 7 <sup>th</sup> Battalion	8991118486
34		8991118487
35	ODRAF Baripada, OSAP 5 <sup>th</sup> Battalion	8991118488
36		8991118489
37	ODRAF Rourkela, OSAP 4 <sup>th</sup> Battalion	8991118490
38		8991118491
39	ODRAF Koraput, OSAP 3 <sup>rd</sup> Battalion	8991118492
40		8991118493
41	ODRAF Jharsuguda, OSAP 2 <sup>nd</sup> Battalion	8991118494
42		8991118495
43	ODRAF Chatrapur, OSAP 8 <sup>th</sup> Battalion	8991118496
44		8991118497
45	ODRAF Balasore	8991118498
46		8991118499
47	ODRAF Bolangir	8991118500
48		8991118501
49	ODRAF Jagatsinghpur	8991118502
50		8991118503
51	State Fire Office	8991118504
52	Commissioner of Police	8991118505
53	Revenue & DM Department	8991118506
54	Managing Director, OSDMA	8991118507
55	Office of Chief Secretary	8991118508
56	Office of Chief Minister	8991118509
57	Special Relief Commissioner (SEOC)	8991118510
58	Managing Director, OSDMA	8991118511

## 9.6 Preparedness at District Level

Task	Activity
District Emergency Operation Centre (DEOC)	<ul style="list-style-type: none"> <li>• Test Checkup of all communication Interfaces in regular interval</li> <li>• Proper manning of the Control Room as per Para-10 of the Odisha Relief Code</li> <li>• A dedicated vehicle must be earmarked for Control Room</li> </ul>
Upward & Downward Communication	<ul style="list-style-type: none"> <li>• Have a list of Nodal person with contact details</li> <li>• Establish regular linkages with all important stakeholders</li> <li>• Contact SEOC regularly</li> </ul>
Meeting of DDMA	<ul style="list-style-type: none"> <li>• DDMA must meet twice every year &amp; before any disaster</li> </ul>



(Heads of the department & stakeholder)	<ul style="list-style-type: none"> <li>Fix time &amp; venue for regular Preparedness meeting to Assess preparedness of District /Department /Civil Society /Block Community /Family /Individual level regularly</li> <li>Circulate the minutes of the meeting with clear-cut role &amp; responsibility</li> </ul>
Capacity Building	<ul style="list-style-type: none"> <li>Identifying &amp; designating Nodal Officer for different Dept.</li> <li>Capacity building &amp; Skill up gradation of ODRAF/Fire services/ Police/Home Guard</li> <li>Identify Volunteer like Civil Defence/Cyclone shelter Task Force/NCC/NSS/Scout &amp; Guide &amp; train them on Search &amp; Rescue, First aid, evacuation etc.</li> <li>Take stake of required materials for search &amp; rescue, first aid, casualty management, evacuation, relief etc. &amp; update IDRN portal regularly</li> <li>Assess preparedness through Mock drill at District, Block &amp; Community level</li> </ul>
Shelter Management	<ul style="list-style-type: none"> <li>Take necessary steps for operation &amp; maintenance of shelters</li> <li>Test Check of various Equipment at shelter level &amp; repair of the defective ones</li> <li>Ensure regular meeting of Shelter committee</li> <li>Assess Shelter level preparedness through Mock drill I</li> </ul>
Planning & Reporting	<ul style="list-style-type: none"> <li>Collect &amp; transmit Rain fall data regularly</li> <li>Collect &amp; transmit weather report regularly</li> <li>Ensure preparation of Disaster Management Plans &amp; Safety plans at all levels</li> <li>Capacity building of all Stake holders</li> <li>Integrate the District plan with block &amp; Village disaster management Plans</li> <li>Develop healthy media partnership</li> </ul>

## 9.7 Preparedness at Community Level

Task	Activity
Early Warning Dissemination	<ul style="list-style-type: none"> <li>Build regular linkages with BEOC &amp; DEOC</li> <li>Test Check of various Equipment at shelter level &amp; repair of the defective ones</li> <li>Keep updates from BEOC/DEOC</li> <li>Monitor &amp; Transmit updates to BEOC</li> <li>Supply required information to BEOC &amp; DEOC</li> </ul>
Ensuring Preparedness	<ul style="list-style-type: none"> <li>Have a list of Nodal person deployed in the village with contact details</li> <li>Identification of safer routes &amp; shelters</li> <li>Identify possible ways to reach persons like Farmers/Fisherman/NTFP collectors etc. who ventures into fields, reservoir &amp; forest respectively</li> <li>Build teams among the task force on Search &amp; Rescue, First aid,</li> </ul>

	<p>Damage &amp; loss assessment</p> <ul style="list-style-type: none"> <li>Assess preparedness at Family/Individual level</li> <li>Test Check-up of equipments</li> </ul>
Capacity Building	<ul style="list-style-type: none"> <li>Understand local dynamics exposed &amp; vulnerable to different disaster</li> <li>Local social economic &amp; weather conditions</li> <li>Develop Village DM Plan</li> <li>List of Emergency contact No. &amp; display it in Centre places</li> <li>Participate in the activities of Preparing village Disaster Management Plan, Developing Safety Plan, Capacity Building Programmes &amp; Mock Drills</li> </ul>

## 9.8 Preparedness at Family Level

Task	Activity
Warning Communication	<ul style="list-style-type: none"> <li>List the minimum important requirements</li> <li>Keep all the important documents in a water proof polythene</li> <li>Record the safe &amp; alternative routes to shelter</li> <li>Keep News update in Radio/TV</li> </ul>
Preparedness	<ul style="list-style-type: none"> <li>Always keep in readiness a “Ready to go Emergency Kit” containing Dry food (for 72 hours x Family member), Drinking water (2ltr/per person per day), Hand wash/soap, Important Documents/Valuables, Whistle/match box/lighter/ torch/battery/ umbrella, Mobile &amp; charger / radio</li> <li>Family must have a “Ready to go First Aid Kit” containing Iodine/ Band aids/ Cotton/ Medicines/ ORS/ ointments/ scissor/ halogens etc.</li> <li>Assess preparedness on a regular basis by checking Radio / Mobile / Emergency Kit / First Aid Kit / Fuels, Kerosene, etc as per requirement</li> <li>Replace the damaged, outdated or expired materials with new ones</li> </ul>
Capacity Building	<ul style="list-style-type: none"> <li>Participate &amp; involve in the activities of Village Disaster Management Plan and Preparation of Safety Plans</li> <li>Participate in Capacity Building Programmes</li> <li>Involve in Mock Drills</li> </ul>

## 9.9 Preparedness at Individual Level

Task	Activity
Early Warning Dissemination	<ul style="list-style-type: none"> <li>List &amp; keep a ready to go minimum important requirements</li> <li>Record the safe &amp; alternative routes to shelter</li> <li>Keep News update in Radio/TV</li> </ul>
Ensuring Preparedness	<ul style="list-style-type: none"> <li>Every individual children must have a Personal Identity information like a copy of Aadhar Card / Voter ID / School Identity Card &amp; Contact Nos. preferably of two who can be contacted in time of emergency</li> <li>Family members especially kids must be sensitized about family gathering point during disaster &amp; crowded places</li> <li>Assess preparedness on a regular basis by checking Radio / Mobile / Emergency Kit / First Aid Kit / Fuels, Kerosene, etc as per requirement</li> </ul>
Capacity Development	<ul style="list-style-type: none"> <li>Participate and involve in the activities of Disaster Management</li> <li>Safety Plans</li> <li>Capacity Building Programmes</li> <li>Mock Drills</li> </ul>

## 9.10 Preparedness of Departments (SOP Prepared and Shared with the Departments for Confirmation)

Name of the Department	Normal Time SOP for the Department
Collector / ADM / Emergency Officer - R&DM	<ul style="list-style-type: none"> <li>Ensure regular meetings of District Disaster Management Authority</li> <li>Develop &amp; update Disaster Management Plan, carry out Hazard analysis in the district</li> <li>Identify safe alternate routes to Flood Shelters.</li> <li>Keep a list of Contacts of EOCs, Nodal Officer of different departments, Important Stakeholders, Village Leaders, Shelters</li> <li>List of Relief lines &amp; Storage places</li> <li>List &amp; Maintenance of SAR equipment</li> <li>Capacity Building of Stakeholders &amp; Volunteers</li> <li>Asses Preparedness through Mock Drills for different disasters at District Department, Block &amp; Community level</li> <li>Adopt Sustainable Mitigation Measures</li> <li>Integrate DM &amp; DRR features in Development Programmes</li> </ul>
CDM& PHO - F&FW	<ul style="list-style-type: none"> <li>Disaster Management Plans &amp; Safety Plans for Hospitals</li> <li>Capacity Building of Medical &amp; Para Medical Staffs</li> <li>Assess Preparedness through Mock Drills &amp; Familiar Exercises</li> <li>Integrate Department Plans with Village &amp; Block Plans and Development Programmes</li> <li>Develop Media Partnership</li> </ul>

	<ul style="list-style-type: none"> <li>Develop Capacity of Hospitals with Advance Equipment, Proper HR &amp; Disaster Resilient Infrastructures</li> </ul>
Superintendent of Police - Home	<ul style="list-style-type: none"> <li>Preparation of Department Disaster Management Plan</li> <li>Equipment and vehicle inspection to ensure working condition</li> <li>Regular skill development trainings to face different disasters</li> <li>Capacity building with various gadgets to act as early responder in a crisis situation</li> <li>Assess preparedness through mock drills and familiar exercises</li> <li>Develop Media Partnership</li> <li>Develop capacity of police stations with advance equipment and disaster resilient infrastructures</li> </ul>
EE - RWS&S	<ul style="list-style-type: none"> <li>Preparation of Disaster Management Plan for the Department</li> <li>Construction of raised tube well platforms in flood prone areas</li> <li>Plan for arrangement of truck and trolley mounted tankers to supply potable water submerged areas</li> <li>Survey of defunct tube wells and are susceptible to submergence during flood</li> <li>Preparedness measures to restore and renovation of piped water supply projects</li> <li>Awareness on safe water uses and disinfection of the tube wells, production wells</li> <li>Regular testing of water quality in tube wells and water supply projects</li> <li>Awareness generation and capacity building on community sanitation</li> </ul>
EE - Irrigation Division - WR	<ul style="list-style-type: none"> <li>Developing Awareness among Community on Flood Preparedness</li> <li>Awareness with School and College students regarding hydro-meteorological information and flood related activities</li> <li>Development of coordination for data sharing and dam release information</li> <li>Survey of levels of roads and typical floor level of properties in the flood plain</li> <li>Flood Risk Mapping by combination of Flood Hazard map with Land Use</li> <li>Preparation of Disaster Management Plans</li> </ul>
DAO - Agriculture & FW	<ul style="list-style-type: none"> <li>Preparation of Department Disaster Management Plan</li> <li>Adoption of coping strategies in drought and flood prone areas</li> <li>Arrangement of buffer seed stocks for the farmers</li> <li>Inspection of sub-ordinate offices, other centers and sub-centers which are damageprone</li> <li>Repair and maintenance of agricultural production, extension, seed growth centers and training centres</li> <li>Maintenance of departmental equipments to use during emergency</li> <li>Arrangement damage lessen measures for public properties</li> </ul>

	related to agriculture in the damage prone areas
EE - RD	<ul style="list-style-type: none"> <li>• Preparation of Department Disaster Management Plan</li> <li>• Pre monsoon inspection of roads, bridges, structures and buildings in flood vulnerable areas</li> <li>• Maintenance of equipments and infrastructures to use in emergency situations</li> <li>• Regular inspection of infrastructures to reduce hazard and vulnerability</li> <li>• Adoption of BIS standards in case of construction of new infrastructures</li> <li>• Provide safeguard measures to minimize various risk factors for the existing infrastructures</li> <li>• Training of supervising officers, contractors and masons on earthquake resistant construction</li> </ul>
EE - R&B	<ul style="list-style-type: none"> <li>• Preparation of Department Disaster Management Plan</li> <li>• Awareness generation and capacity building of supervising officers, contractors and masons on earthquake resistant construction</li> <li>• BIS standards adoption in case of construction of new infrastructures</li> <li>• Regular inspection of government and public infrastructures to reduce hazard and vulnerability</li> <li>• Provide safeguard measures to minimize various risk factors for the existing infrastructures</li> <li>• Pre monsoon inspection of roads, bridges, structures and buildings in flood vulnerable areas</li> <li>• Maintenance of equipments and infrastructures to use in emergency situations</li> </ul>
DTO - Telecom	<ul style="list-style-type: none"> <li>• Preparation of Department Disaster Management Plan</li> <li>• Regular monitoring and maintenance of equipments and telecom infrastructures which can be used during emergency and ensure periodically that these are in working condition</li> <li>• Vulnerability analysis before installing towers or telecom units</li> <li>• Ensure telephone lines at the hospitals, police stations, control room and other places of emergency services, which can be used during disaster, are not disrupted</li> <li>• Prepare a list of public properties related to the telephone department which are in damage prone areas and will make arrangements to lessen the damage</li> </ul>
CDVO - ARD	<ul style="list-style-type: none"> <li>• Disaster Management Plans &amp; Safety plans for Veterinary Institution</li> <li>• Capacity Building of Vet &amp; Paravet Staffs</li> <li>• Assess Preparedness through Mock Drill and Familiar Exercises</li> <li>• Integrate Department Plans with Village &amp; Block Plans and Development Projects</li> <li>• Develop Media Partnership</li> </ul>

	<ul style="list-style-type: none"> <li>• Develop Capacity of VDS with Advance Equipment, Proper Manning &amp; Disaster Resilient Infrastructures</li> <li>• Arrangement of necessary medicines, vaccines and other material, for treatment of animals.</li> </ul>
RTO - Transport	<ul style="list-style-type: none"> <li>• Prepare Disaster Management Plan of the Department</li> <li>• Placement of traffic sign board, control light, change in road engineering in identified black spots</li> <li>• Keep list of owners with contact details of all type of vehicles, excavators, bull-dozers, cranes, recovery vans, tractors, buses, trucks etc and a copy of same is to be made available at DEOC</li> <li>• Create awareness among the transport owner and general public on safety standards</li> <li>• Arrangement for additional buses for evacuation of people from the affected areas</li> <li>• Alternative routes for the transportation and roadnetwork.</li> <li>• Conduct road safety awareness training programmes for teachers, parents and students</li> </ul>
DFO (T) - Forest & Environment	<ul style="list-style-type: none"> <li>• Adopt measures for active involvement of the local communities, VSSs and youths in environment management, environmental stability and maintenance of ecological balance</li> <li>• Adoption of improved and modern management practices to deal with forest fire</li> <li>• Inspect periodically the buildings, residencies, damage prone roads, bridges, check dams and causeway under forest department</li> <li>• Construction of water storage vats for the animals in forest</li> <li>• Creation of fire lines in vulnerable areas of forest and adoption of silvi cultural practices</li> <li>• Maintain working condition of the equipments available with the department to use during emergencies</li> <li>• Prepare Disaster Management Plan of the Division</li> </ul>
EE - Southco Utility	<ul style="list-style-type: none"> <li>• Organize safety &amp; fire mock drills for the employees in maintenance, first aid and fire extinguishing techniques</li> <li>• Mock exercise for Line Clearance requisition/issue/return/cancellation procedure for maintenance work</li> <li>• Periodic Safety audit in grid sub-stations to check and install awareness on safety norms and standards</li> <li>• Verification of susceptible infrastructures to rectify defects if any including strengthening of weak points</li> <li>• Prior to monsoon Inspection of all PSS and DSS Equipments, HT and LT Lines for Maintenance</li> <li>• Identification of key personnel with their skills and experience for disaster management</li> <li>• Equip the control rooms with first aid including CPR</li> </ul>

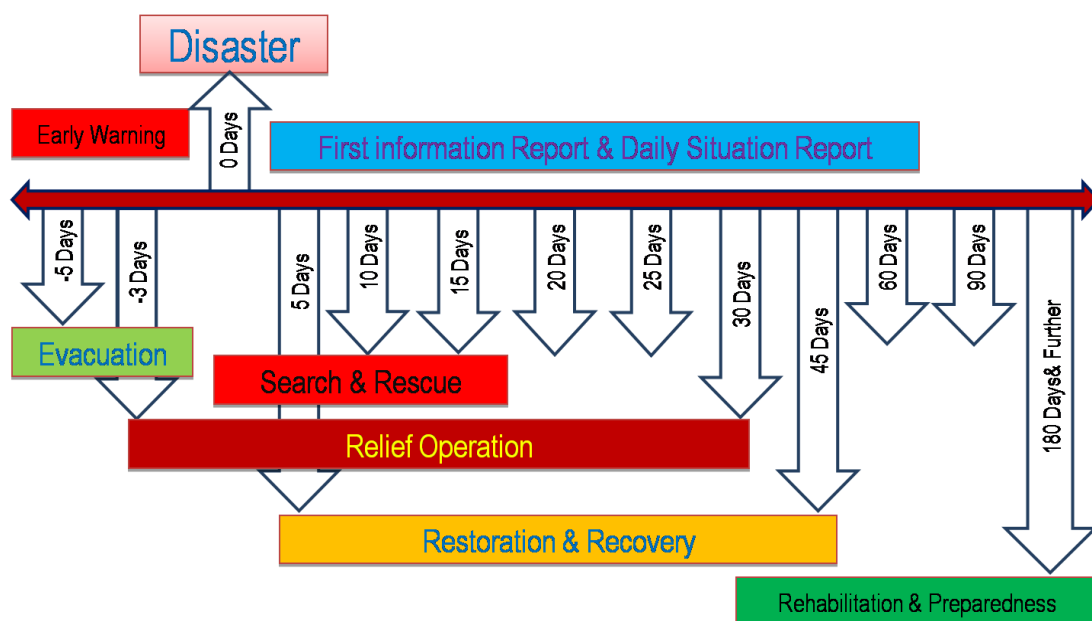
<p>EE - PHED</p>	<ul style="list-style-type: none"> <li>• Establish water availability, capacities, reliabilities and potability</li> <li>• Repair and installation of defunct, damaged water supply infrastructures</li> <li>• Create awareness on safe water use and conservation practices</li> <li>• Plan and prioritize water supply</li> <li>• Preparedness to arrange water tankers and other temporary means of water distribution in crisis</li> <li>• Assess status and damage to water system</li> <li>• Permanent plan for complete long-term safe water supply system</li> <li>• Preventive measures for water borne diseases and chlorination</li> </ul>
<p>DEO - School &amp; Mass Education</p>	<ul style="list-style-type: none"> <li>• Preparation of School Safety and Disaster Management Plans</li> <li>• Changing of School Timing Preferably 6.00 AM to 10.30 AM</li> <li>• Provision of Potable Drinking Water</li> <li>• Preservation &amp; Storage of sufficient ORS Packets from nearest Medical Officer/Health Worker/AWW</li> <li>• Maintenance of Electric Connection in the School where available</li> <li>• Prevention of Using Unsafe Dilapidated Class Room/Building &amp; Declare the same as Abandoned area with singe</li> </ul>



# Response

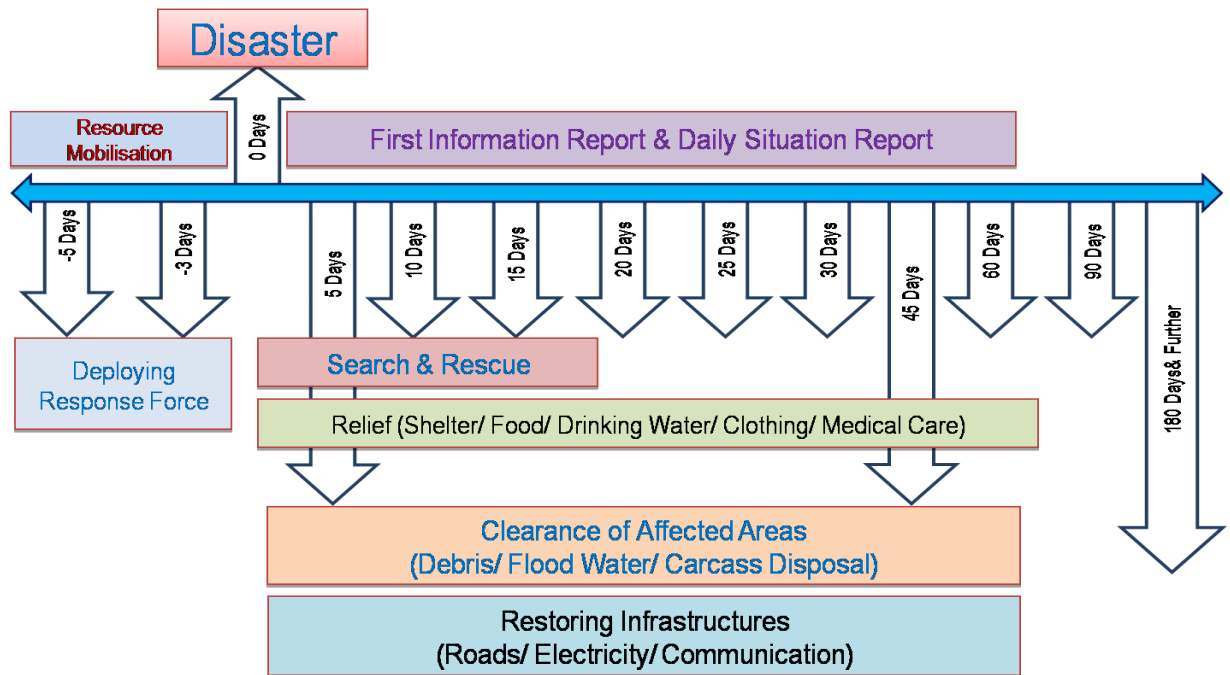
Response refers to activities done for handling disaster to bring the situation to normalcy not exceeding fifteen days from the abatement of disaster. The onset of an emergency creates the need for time sensitive actions to save life and property, reduce hardships and suffering, and restore essential 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. An effective response plan essentially outlines the strategy and resources necessity for search, rescue and evacuation activities.

Figure :10.1  
Timeline of Response Phase





**Figure :10.2**  
**Timeline of Relief Management**



**10.1 Response: District**

Task	Activity
Warning Communication	<ul style="list-style-type: none"> <li>Warning dissemination to the list of Nodal person &amp; concerned BDOs</li> <li>Recording the receipt of information &amp; regular Status update</li> <li>Transmitting updates to SEOC in regular interval as instructed</li> </ul>
Meeting of DDMA (Heads of the department & stakeholder)	<ul style="list-style-type: none"> <li>Collector to take up a department coordination meeting &amp; distribute works among all the Departments</li> <li>Collector issues circular to keep government offices open cancelling all holidays</li> <li>A fixed time to be finalized every day for reporting at all level</li> <li>A nodal officer is identified for media management</li> <li>Circulate the minutes of the meeting with clear-cut role and responsibility</li> </ul>
Pre-positioning of staff, resources & Evacuation	<ul style="list-style-type: none"> <li>Identifying &amp; designating Nodal Officer for different stages of disaster &amp; affected areas.</li> <li>Positioning of ODRAF/NDRF/Fire Services/ Police/Home Guard in the affected areas</li> <li>Pooling Volunteer services (Civil Defence/Task Force/NCC/NSS/Scout &amp; Guide)</li> <li>Take stake of required materials for search &amp; rescue, first aid, casualty management, evacuation, relief etc.</li> <li>Make necessary arrangements of shelters for evacuation</li> </ul>

	<ul style="list-style-type: none"> <li>Constitute a special team for special care to vulnerable section like Specially abled, Sr. Citizen, Pregnant &amp; lactating women, Infants &amp; children etc.</li> </ul>
Response	<ul style="list-style-type: none"> <li>EOCs to Ensure back up power/fuel/internet/communication at Dist/Dept. &amp; Block levels</li> <li>Response force under guidance of Nodal officers ensure complete Evacuation (Human/ Animal), carry out Search &amp; Rescue and clear relief lines</li> <li>Collector to submit requisition of vehicle/boat/ helicopters &amp; list of support from State &amp; Centre to all concerned authorities</li> <li>CSO to store required relief materials, Chhuda, Gur and Dry Foods in the nearby storage points</li> <li>CDVO to store, transport &amp; distribute required fodders for animals to the affected areas</li> <li>Flood shelter committee &amp; Village Disaster management committee to organize free kitchen in the shelters with help of revenue department</li> <li>EE- RWSS &amp; CDMO to ensure supply of drinking water, disinfection of water &amp; maintain health &amp; hygiene in the shelters</li> <li>CDMO to carry out first aid &amp; casualty management</li> <li>Collector to collect &amp; transmit First Information Report (FIR) &amp; Daily Situation Report as per requirement</li> </ul>

## 10.2 Response: Community Level

Activity
<ul style="list-style-type: none"> <li>DEOC to disseminate warning communication to BEOC and community</li> <li>Response force to ensure power/fuel/internet/communication at shelters back up</li> <li>Supply inspectors and marketing inspectors to distribute relief materials with response force, task force and volunteers</li> <li>Response force to carry out Search &amp; Rescue measures, emergent relief operation, relief line clearance, distribution of relief</li> <li>Doctors to carry out first aid &amp; casualty management, carcass disposal &amp; sufficient mortuary facility in the affected areas</li> </ul>

## 10.3 Response: Family & Individual Level

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

## 10.4 Response: Standard Operating Procedures for Departments (SOP Prepared and Shared with the Departments for Confirmation)

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

<p>Superintendent of Police - Home</p>	<ul style="list-style-type: none"> <li>Attend the emergency meeting at the DEOC</li> <li>Check the police communication network be in operative</li> <li>Issue alert to the resources to prepared for movement to the affected areas</li> </ul>	<ul style="list-style-type: none"> <li>Send the search and rescue teams as per the Incident Action Plan</li> <li>Maintain law and Order in the affected area</li> <li>Ensure the safety of the people and property of the affected areas</li> <li>Mange and restore traffic movement in the area</li> </ul>	<ul style="list-style-type: none"> <li>Assist the local administration in removing the dead bodies and the debris in the affected area</li> <li>Participate in the reconstruction and rehabilitation operation</li> </ul>
<p>EE - RWS&amp;S</p>	<ul style="list-style-type: none"> <li>Meet in the DEOC for preparing for the disaster</li> <li>Alert all the departmental teams to be ready</li> <li>Prima facie evaluation of situation and allocation of resources</li> <li>Disseminate the warning to the public and issue advisory accordingly</li> </ul>	<ul style="list-style-type: none"> <li>Participate in the DEOC meeting and preparation of the Incident Action Plan</li> <li>Send operation teams as per the situation to the affected areas and their monitoring</li> <li>Mobilize the resources as per the need the affected areas</li> </ul>	<ul style="list-style-type: none"> <li>Participate in the recovery and reconstruction of the affected area</li> <li>Participate in the process of psycho-social recovery of the community</li> <li>Ensure the safe drinking water supply</li> <li>Repair and restore the drinking water supply system</li> <li>Start disinfection works immediately</li> </ul>
<p>EE - Irrigation Division - WR</p>	<ul style="list-style-type: none"> <li>Alert DEOC and the district teams</li> <li>Watch the behaviour of the flood pattern and be in touch with the DEOC</li> </ul>	<ul style="list-style-type: none"> <li>Mobilize the resources as per the need to the affected areas</li> <li>Participate in the DEOC meeting and preparation of the Incident Action Plan</li> <li>Send the operation teams as per the situation to the affected areas and their monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Participate in the recovery and reconstruction of the affected</li> <li>Assessment of the damage</li> <li>Start the repair and restoration works immediately</li> </ul>

<p>DAO - Agriculture &amp; FW</p>	<ul style="list-style-type: none"> <li>• Depute one responsible officer to DEOC</li> <li>• Inform the farmers regarding dos and don'ts</li> <li>• Check and procure the materials which are required after the disaster</li> </ul>	<ul style="list-style-type: none"> <li>• Mobilize the resources as per the need to the affected areas</li> <li>• Estimate the requirements of the seeds and material required to mitigate the loss</li> </ul>	<ul style="list-style-type: none"> <li>• Quantify the losses of the crops</li> <li>• Take Measures to recoup the crop loss</li> <li>• Assist farmers to sow the less time period crop to recover the loss</li> <li>• Execute the schemes to eliminate the drought effect</li> </ul>
<p>EE - RD</p>	<ul style="list-style-type: none"> <li>• Send the nodal officer to attend the meeting of DEOC for preparation</li> <li>• Issue warning and alert to be ready to respond</li> <li>• Prima facie evaluate the situation and allocate the resources accordingly.</li> </ul>	<ul style="list-style-type: none"> <li>• Send the resources to assist the search and rescue teams</li> <li>• Send the Infrastructure restoration teams to the affected areas</li> <li>• Restore the roads to the motor able conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Carry out the detail technical assessment of the affected areas and prepare the recovery plan</li> <li>• Repair and reconstruction of the buildings and roads</li> <li>• Construct temporary shelters in the affected areas</li> </ul>
<p>EE - R&amp;B</p>	<ul style="list-style-type: none"> <li>• Send the nodal officer to attend the meeting of DEOC for preparation</li> <li>• Positioning of resources to the affected areas</li> <li>• Issue warning and alert to be ready to respond</li> </ul>	<ul style="list-style-type: none"> <li>• Send the Infrastructure restoration teams to the affected areas</li> <li>• Send the resources to assist the search and rescue teams</li> <li>• Restore the roads to the motor able conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Construct temporary shelters in the affected areas</li> <li>• Repair and reconstruction of the buildings and roads</li> <li>• Carry out the detail technical assessment of the affected areas and prepare the recovery plan</li> </ul>
<p>DTO - Telecom</p>	<ul style="list-style-type: none"> <li>• Meet in the DEOC for preparing for the disaster</li> <li>• Alert all the departmental teams to be ready for</li> </ul>	<ul style="list-style-type: none"> <li>• Send the different operation teams as per the situation to the affected areas</li> <li>• Mobilize the resources as per</li> </ul>	<ul style="list-style-type: none"> <li>• Carry out the detail technical assessment of the affected infrastructure and prepare the</li> </ul>

	<p>eventualities</p> <ul style="list-style-type: none"> <li>• Prima facie evaluate the situation and allocate the resources accordingly</li> <li>• Disseminate warning to the general public and issue of advisory</li> </ul>	<p>the need to the affected areas</p> <ul style="list-style-type: none"> <li>• Arrange for alternative communication networks</li> </ul>	<p>recovery plan and implement it</p> <ul style="list-style-type: none"> <li>• Repair and restore the communication network</li> <li>• Assessment of the damage</li> </ul>
CDVO - ARD	<ul style="list-style-type: none"> <li>• Disseminate the alert to all concerned</li> <li>• Arrangement of medicine, first aid kits &amp; teams</li> <li>• Mobile veterinary units for inaccessible pockets</li> <li>• Identifying &amp; shifting patients requiring intensive care to safer places</li> <li>• Supply of medicines pre-positioning of veterinary teams to vulnerable areas</li> <li>• Vaccination for prevention of communicable diseases</li> <li>• Measures to disinfect drinking water</li> </ul>	<ul style="list-style-type: none"> <li>• Mass Causality management units &amp; Triage</li> <li>• First aid centres</li> <li>• Mobile veterinary unit.</li> <li>• Measures to shift patients to VD</li> <li>• Additional laboratories</li> <li>• Carcass disposal team &amp; units</li> </ul>	<ul style="list-style-type: none"> <li>• Post Disaster Disease surveillance system</li> <li>• Special attention to vulnerable section</li> <li>• Networking with &amp; promote treatment with NGO (BAIF &amp; JK)</li> <li>• Carcass disposal</li> </ul>
RTO - Transport	<ul style="list-style-type: none"> <li>• To depute the officer to DEOC at the time of warning</li> <li>• Ensure the transportation teams along with the resources is ready to respond</li> </ul>	<ul style="list-style-type: none"> <li>• Arrange and organize the transport for the movement of the emergency support functions teams</li> <li>• Organize and facilitate the supply of the essential commodities and</li> </ul>	<ul style="list-style-type: none"> <li>• To assist in the transportation of the reconstruction materials</li> <li>• Deployment of different vehicles to assist in reconstruction works</li> </ul>

		<p>evacuation of the affected people</p> <ul style="list-style-type: none"> <li>Organize transportation for the supply of relief material to the affected areas</li> </ul>	
DFO (T) - Forest & Environment	<ul style="list-style-type: none"> <li>Depute one officer for DEOC.</li> <li>Rush the forest fire teams to the affected areas</li> <li>Issue of alert warnings to the general public</li> </ul>	<ul style="list-style-type: none"> <li>Send different operation teams to the affected areas and their monitoring</li> <li>Mobilize the resources as per the need to the affected areas</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of the damage</li> <li>Participate in the recovery and reconstruction of the affected</li> <li>Ensure plantation of the fodder and other trees in the affected areas</li> </ul>
EE - Southco Utility	<ul style="list-style-type: none"> <li>Meet in the DEOC for preparing for the disaster</li> <li>Alert all the departmental teams to be ready for such eventualities</li> <li>Prima facie evaluation of the situation and allocation of the resources</li> <li>Dissemination of warning to the general public and issue of advisory</li> </ul>	<ul style="list-style-type: none"> <li>Resource mobilization as per the need of the hour to the affected areas</li> <li>Alternate power supply arrangement to critical service areas</li> <li>Arrangement of quick response teams at the affected area</li> </ul>	<ul style="list-style-type: none"> <li>Participate in the recovery and reconstruction of the affected area</li> <li>Assessment of damage</li> <li>Repair and restoration of the power supply infrastructures</li> </ul>
EE - PHED	<ul style="list-style-type: none"> <li>Meet in the DEOC for preparing for the disaster</li> <li>Issue of alert to the departmental teams</li> </ul>	<ul style="list-style-type: none"> <li>Participate in the DEOC meeting and preparation of the Incident Action Plan</li> <li>Send operation teams as per the situation to the affected areas and their monitoring</li> <li>Mobilize the resources as per the need the affected areas</li> </ul>	<ul style="list-style-type: none"> <li>Repair and restore the drinking water supply system</li> <li>Ensure the safe drinking water supply</li> <li>Start disinfection works immediately</li> <li>Assessment of the damage</li> </ul>

DEO - School & Mass Education	<ul style="list-style-type: none"> <li>• Meet in the DEOC for preparation</li> <li>• Aware to the students and staffs</li> <li>• Display of does &amp; doesn't</li> <li>• Issue of alert to the departmental teams</li> </ul>	<ul style="list-style-type: none"> <li>• Provide First Aid</li> <li>• Immediate referral to the AWW/Health Worker/Nearest Medical Officer</li> <li>• Mobilize the resources as per the need the affected areas</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare recovery plan</li> <li>• Assessment of the damage</li> <li>• Participate in the process of psycho-social recovery of the students and community</li> </ul>

### 10.5 Format for First Information Report (FIR)

ON OCCURRENCE OF NATURAL CALAMITY  
(To be sent to the Special Relief Commissioner, Odisha  
within/maximum 18 hours of occurrence of calamity)

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

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

To

The Special Relief Commissioner, Odisha  
State Emergency Operation Centre (SEOC),  
Rajiv Bhawan, Ground Floor, Unit-5,  
Bhubaneswar  
Fax No: 0674-2534176  
E-mail: relief\_sr@yahoo.com& 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: NABARANGPUR

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).

### 8.6 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. RD Department.  
 Mobile vans deployed :  
 Water tanker deployed :  
 ORS powder distributed :  
 Halogen Tablets distributed :  
 Water pouches distributed :  
 Bleaching powder distributed :  
 Sintex Tanks available :  
 Tube wells disinfected :
  
3. **FS & CW Department**
  - .....Qtls. Chuda, .....Qtls. Gur supplied to .....

District	Chuda (Qty.in quintals)	Gur (Qty.in quintals)

- ..... Qtls. of Rice has been allocated to the Districts mentioned below:

Blocks	Quantity allocated (in quintal)
Total	

4. Fisheries& ARD 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. Water Resources Department

- Breach occurred :
- Breaches closed :
- Breach closing works in progress :



## Restoration & Rehabilitation

Rehabilitation and restoration comes 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 at 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 and submits financial requisition to the state government under SDRF & NDRF. The requisition must reach the SDMA & SRC office in the prescribed format as detailed below for smooth & quick processing.

### 11.1 Standard Operating Procedure : Restoration & Rehabilitation (SOP Prepared and Shared with the Departments for Confirmation)

Name of the Department	Normal Time
Collector / ADM / Emergency Officer - R&DM	<ul style="list-style-type: none"> <li>• Restoration of Critical Infrastructures to bring situation to normalcy</li> <li>• Ensure Restoration of roads &amp; channels, Communication network, Electricity &amp; Energy</li> <li>• Ensure health in the affected areas</li> <li>• Adopt sustainable mitigation measures in the restoration activities</li> </ul>

CDM & PHO - F&FW	<ul style="list-style-type: none"> <li>• Carry out Disease surveillance measures to check epidemic prone diseases</li> <li>• Disinfection of drinking water &amp; measures for health &amp; hygiene</li> <li>• Rehabilitation of deprived &amp; destitute</li> <li>• Carry out Trauma &amp; Psycho-social counselling</li> </ul>
Superintendent of Police - Home	<ul style="list-style-type: none"> <li>• Maintain Law and order in the affected/evacuated area villages and at shelters</li> <li>• Help and coordinate the search and rescue operation with other SAR agencies</li> <li>• Ensure protection of the property and valuables of the affected families</li> <li>• Provide assistance to people who are in a position to move from relief camps to their places where ever normalcy returns</li> </ul>
EE - RWS&S	<ul style="list-style-type: none"> <li>• Immediate restoration of the drinking water</li> <li>• Monitoring of water quality and determination of the chlorine residual in public water supplies</li> <li>• Damage assessment and take actions for long term safe water system in the vulnerable areas</li> <li>• Repair and reconstruction of the drinking water supply, sanitation and sewerage systems</li> </ul>
EE - Irrigation Division - WR	<ul style="list-style-type: none"> <li>• Assessment and restoration of the damaged infrastructures</li> <li>• Safe guard agriculture by making temporary restoration arrangements to the affected irrigation sources</li> <li>• Construction of dams, check dams and irrigation/drainage canals for long term irrigation purpose</li> <li>• Suggest measures for strengthening the river banks and canal bunds to avoid breaches</li> </ul>
DAO - Agriculture & FW	<ul style="list-style-type: none"> <li>• Quantify the losses of the crops and the measures to be taken to recoup the same</li> <li>• Assist the farmers to sow the less time period crop to recover the loss</li> <li>• Execute the schemes to eliminate the drought effects</li> <li>• Provide suitable technical advice to the vulnerable cropped area</li> </ul>
EE - RD	<ul style="list-style-type: none"> <li>• Carry out the detail technical assessment of the affected areas and preparation of recovery plan</li> <li>• Construct the temporary shelters in the affected areas</li> <li>• Repair and reconstruction of the damaged buildings</li> <li>• Creation of alternate road network connects vulnerable areas and selected nodal centres</li> </ul>

EE - R&B	<ul style="list-style-type: none"> <li>• Sanction and entrustment of temporary restoration works</li> <li>• Immediate restoration of the affected infrastructure i.e. roads, bridges, lifeline buildings etc.</li> <li>• Assessment of damages and reporting in higher authorities and preparation of its estimations</li> <li>• Creation of reliable road network connects vulnerable areas and selected nodal centres</li> </ul>
DTO - Telecom	<ul style="list-style-type: none"> <li>• Quick assessment of damages to communication network</li> <li>• Immediate restoration of temporary communication facilities</li> <li>• Adopt sustainable measures to protect telecom infrastructure in the damage prone areas</li> <li>• Bring normalcy in the affected area and development of capacities</li> </ul>
CDVO - ARD	<ul style="list-style-type: none"> <li>• Carry out Disease surveillance measures to check epidemic prone disease</li> <li>• Disinfection of drinking water and measures for health &amp; hygiene of livestock</li> <li>• Rehabilitation of deprived and destitute livestock</li> <li>• Carry out Treatment and extension programme</li> </ul>
RTO - Transport	<ul style="list-style-type: none"> <li>• Assist in transportation of the reconstruction materials</li> <li>• Restoration of transportation facilities</li> <li>• Rectification of hazard prone zones and adopt risk coverage</li> <li>• Enforcement of traffic rule and road safety standards in affected areas</li> </ul>
DFO (T) - Forest & Environment	<ul style="list-style-type: none"> <li>• Assessment of the affected areas and preparation of recovery plan and implementation</li> <li>• Adoption of effective measures to bring normalcy in the forest and ecology</li> <li>• Plantation of trees in the affected area and adopt preventive measures for minimising resource loss</li> <li>• Adopt sustainable mitigation measures in the restoration activities</li> </ul>
EE - Southco Utility	<ul style="list-style-type: none"> <li>• Carry out the detail technical assessment of electrical infrastructures and preparation of estimates</li> <li>• Arrangement of temporary power supply to the affected areas and to temporary shelter homes</li> <li>• Restoration of long term sustainable measures in the damage prone areas</li> <li>• Take effective measures to bring normalcy in power supply system</li> </ul>
EE - PHED	<ul style="list-style-type: none"> <li>• Constitution of teams for damage assessment and immediate restoration of drinking water</li> <li>• Monitoring of water quality and determination of the chlorine residual in public water supplies</li> <li>• Appropriate actions for long term safe water system in the vulnerable areas</li> <li>• Repair and reconstruction of the drinking water supply systems</li> </ul>

DEO - School & Mass Education	<ul style="list-style-type: none"> <li>• Identification and preparation of list of children affected in disaster</li> <li>• Arrangement of safe stay homes for the orphans and adoption of rehabilitation programmes</li> <li>• Damage assessment for repair and reconstruction of school infrastructures</li> <li>• Make attempt to bring the socio economic life back to normal in the affected areas</li> </ul>
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## 11.2 Damage Loss Assessment

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					

### 11.3 Calculation of Assistance for Agricultural Input Subsidy-SMF

(Rs. In lakh)

Sl. No.	Name of the Block	Area held by SMF (inHa.)	Total Agricultural area Affected[inHa.]	Total agricultural area where crop loss is > 50%	Crop Loss 33% & above			Expenditure incurred			Total
					Irrigated [in Ha.]	Rainfed [in Ha.]	Perennial	Irrigated @Rs.13,500/- per Ha.	Rainfed @Rs.6800/- per Ha.	Perennial@ Rs.18000/- per Ha.	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
Total											

## 11.4 Agricultural Input Subsidy- Farmers other than SMF

Farmers Affected First Year

(Rs. in lakh)

Sl. No.	Name of the Block	Area held by farmers other than SMF (in Ha.)	Crop loss > 33%							
			No. of Farmers	Irrigated area in Ha.	Amount spent @ Rs.13,500/- per Ha.	Rainfed Area in Ha.	Amount spent @ Rs.6800/- per Ha.	Perennial Area in Ha.	Amount Spent @ Rs.18000/ per Ha.	Total Amount Spent
1										
2										
3										
4										
5										
Total										

## 11.5 Farmers Affected by Successive Calamities

(Rs. in lakh)

Sl. No.	Name of the Block	Area held by farmers other than SMF (in Ha.)	Crop loss > 33%							
			No. of Farmers	Irrigated area in Ha.	Amount spent @ Rs.13,500/- per Ha.	Rainfed Area in Ha.	Amount spent @ Rs.6800/- per Ha.	Perennial Area in Ha.	Amount Spent @ Rs.18000/ per Ha.	Total Amount Spent
1										
2										
3										
4										
5										
Total										



## 11.6 Animal Husbandry (Replacement of Animals)

(Rs. in lakh)

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

Contd...

### 11.7 Assistance Sought for Repair/ Restoration of Damaged Houses

(Rs. in lakh)

Sl. No.	District	Fully Damaged/ Severely Damaged						Partially (15% & More)			Huts		Cattle shed attached with house		TOTAL			
		Plain Areas			Hilly Areas			Pucca	Amount @ Rs.-5200/-	Kutchha	Amount @ Rs.-3200/-	Nos.	Amount @ Rs.-4100/-	Nos.		Amount @ Rs.-4100/-		
		Pucca	Amount @ Rs.-95100/-	Kutchha	Amount @ Rs.-95100/-	Pucca	Amount Rs.-101900/-										Kutchha	Amount @ Rs.-101900/-
	Total																	

### 11.8 Assistance for Provision for Temporary Accommodation, Food, Clothing and Medical Care

Sl. No.	Name of the District	Average No. (in a day) of relief camps	Average duration of operation of relief camps	Average No. of people accommodated per day in the relief camps	Expenditure incurred on (Rs. in lakh)				
					Temporary Accommodation	Food	Clothing	Medical Care	Total Expenditure
	Total								

## 11.9 Extent of Damage due to Natural Calamities

District : \_\_\_\_\_ Nature and Period of Natural Calamity : \_\_\_\_\_

Sl. No.	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 land area affected (in lakh ha.)	
6.	Cropped area affected (in lakh ha)	
	i) Total cropped area affected	
	ii) Estimated loss to crops (Rs. in lakh)	
	iii) Area where cropped damage was more than 33%	
7.	Percentage of area held by SMF	
	i) In the State as a whole	
	ii) In the affected districts	
8.	House damaged	
	a) No. of houses damaged	
	i) Fully damaged pucca houses	
	ii) Fully damaged kutch houses	
	iii) Severely damaged pucca houses	
	iv) Severely damaged kutcha 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	

## 11.10 Format for Working out the Requirements under the Head of Repair of Damaged Infrastructure of Immediate Nature

(Rs. In lakh)

Sector		Damage in physical terms	Requirement of funds for repair of immediate nature	Out of (3), amount available from annual maintenance budget	Out of (3), amount available from related schemes/programs/	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 Water Supply	Rural Water Supply	No of Tube wells damaged - No of platforms damaged – No. of Rural pipe water supply system damaged -				

	Urban Water Supply					
Irrigation	River Embankment	No of breaches – Length of breach in Km – No of partial damage -	NIL	NIL	NIL	NIL
	Canal Embankments	No of breaches – Length of breach in Km – No of partial damage -	NIL	NIL	NIL	NIL
	MI projects	No of Minor Irrigation projects damaged-				
	Clearance of Drainage channels	Length of drainage channels congested with vegetative materials –				
Primary Education	Primary School Buildings	No of Primary School buildings damaged -				
<input type="checkbox"/>	PHCs	PHCs	No of Primary Health Centers damaged -			
<input type="checkbox"/>	Community assets owned by Panchayats	Community Halls	No of Panchayat Ghar/Community Hall damaged -			
<input type="checkbox"/>		AWWCenters	No of AnganwadiCenters damaged -			
Power	Electrical lines	No of Primary sub-stations damaged - 33 KV lines damaged – 11 KV lines damaged – Distribution Transformers damaged – LT lines damaged –				
Total						



# Recovery

The focus is to enable the area to start functioning again. A series of long term activities framed in the Reconstruction & Rehabilitation are covered under Recovery phase. Recovery includes all aspects of mitigation and also incorporates the continuation of the enabling process, which assists the affected persons and their families not only to overcome their losses, but also to achieve a proper and effective way to continue various functions of their lives. The Recovery process is therefore a long-term process in which everyone has a role, the Government, PRI members, non-government organisations and especially the affected people, their families and the community.

- Preparation of Recovery plan for displaced population, vulnerable groups, environment and 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 and other sources of the damaged infrastructures.
- Explore opportunities for external aids like International Agencies, Civil Societies and Corporate Sectors.
- Allocate funds for the stabilisation of the repaired & reconstructed infrastructure.
- Integrate Climate change & Disaster Risk Reduction features in the recovery programmes

The Collector & DM will be the Coordinator of all the Recovery activities in the District. The role of the Collector in recovery phase will be:

- To monitor the management of the recovery process.
- To ensure implementation of the recovery plan by line departments and blocks.
- To minimise overlap and duplication through effective service delivery.



# Financial Arrangement

## 13.1 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 Sub-committee NEC constituted under section 8 of DM Act, 2005, headed by the Home Secretary.
- Thereafter, the High Level Committee (HLC) comprising of the Finance Minister, the Agriculture Minister, the Home Minister and the Deputy Chairman, Niti Ayog considers the request of the State Government based on the report of the Central Team recommendation of the IMG thereon, extant norms of assistance and approves the quantum of assistance form NDRF.
- This is, however, subject to the adjustment of 75% of the balance available in the State's SDRF for the instant Calamity.

***(Please refer Figure No. 8.1 Page No.149of Volume-II for NDRF Items and Norms)***

## **13.2 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 13<sup>th</sup> Finance Commission, the Government of Odisha has constituted the State Disaster Response Fund (SDRF) replacing the Calamity Relief Fund (CRF). The amount of corpus of the SDRF determined by the 13<sup>th</sup> 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 installments of the subsequent year.

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

***(Please refer Figure No. 8.1 Page No.149 of Volume-II for NDRF Items and Norms)***

## **13.3 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.



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

#### **13.3.1.1 Poor and persons in distress**

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

#### **13.3.1.2 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.

#### **13.3.1.3 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.

#### **13.3.1.4 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.

### **13.4 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.

### **13.5 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.

#### **13.5.1 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.

#### **13.5.2 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.

### 13.6 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.

**Table :13.1**  
**Different State and Central Government Schemes and Programmes**

Sl. No	Name of the Scheme	Sector	Nodal Department	Objective of the Scheme
1	Scheme for Legal Services to Disaster Victims through Legal Services Authorities	Social Justice	NALSA	To provide legal aid to the victims of disaster. To help the victims and the administration for reducing risk and assisting them to adopt disaster mitigation policies and strategies.
2	Pradhan Mantri Fasal Bima Yojana (PMFBY)	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.

3	Pradhan Mantri Gram Sinchai Yojana (PMGSY)	Irrigation	AC & FW	Irrigating the field of farmers and improving water use efficiency and Enhance crop per drop by implementing water-saving technologies and precision irrigation
4	Sansad Adarsh Gram Yojana (SAGY)	Infrastructure Development	MoRD	Development of model villages and Social, cultural, economic and infrastructure developments in the villages
5	Swachh Bharat Mission (SBM)	Hygienic Environment	MoDW&S	For clean and hygienic environment and Protection health
6	Soil Health Card Scheme	Soil Productivity	AC & FW	Complete evaluation of the quality of soil and Corrective measures to improve productivity
7	JanashreeVimaYojna	Life Insurance	Life Insurance Corporation of India	To provide life insurance protection to the rural and urban poor persons below poverty line and marginally above the poverty line
8	PradhanMantriSurakshaBimaYojana (PMSBY)	Life Insurance	Bank	To provide insurance protection and risk coverage on accidental death and disability
9	The PradhanMantriJeevanJyotiBimaYojana (PMJJBY)	Life Insurance	Bank	To provide insurance protection on death
10	PradhanMantriAwasYojana (PMAY) - Housing for all by 2022	Housing	PR & DW	To construct disaster resilient houses and vulnerable risk reduction
11	Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)	Rural Employment	PR & DW	To reduce economic vulnerability and creation of rural infrastructures
12	National Health Mission (NHM)	Health	Health & FW	To provide accessible, affordable and quality health care services to all to reduce health hazards

13	PradhanMantri Gram SadakYojana (PMGSY)	Rural Road	PR & DW	To create all weather road connectivity to remote and unconnected villages
14	SarvaShikshaAbhiyan (SSA)	Education	School & ME	To provide education and school infrastructures at the infrastructure gap village/habitations
15	GopabandhuGraminYojana (Bijli, Sadak&Pani)	Water, Electricity & Road	PR & DW	To provide connectivity to critical gape of infrastructures in the habitations to reduce vulnerability
16	BijuSetuYojana (Rural Bridges)	Road	Rural Development	To provide an effective all weather road connectivity in remote areas & to reduce vulnerability
17	Integrated Child Protection Scheme (ICPS)	Child Protection	W&CD&MS	To provide a safe and secure environment for overall development of the children and Protection of child rights
18	Mission Shakti	Women Empowerment	W&CD&MS	Capacity building of women on adaptation and risk reduction behaviors through self helpinstitutions
19	Odisha Tribal Empowerment & Livelihood Programme Plus (OTELP Plus)	Tribal Empowerment	ST&SC	To create disaster resilient social capital and provide livelihood support to the tribal and vulnerable community
20	DAMAN ( DurgamaAnchalare Malaria Nirakaran)	Health	Health & FW	To control malaria in inaccessible areas to reduce disease and fatality
21	BijuKrushakKalyanYojana (BKKY)	Health Insurance for Farmers	Agriculture & FE and Health & FW	To provide financial support and low cost health care services to farmers family to reduce health hazards

22	PradhanMantriUjjwalaYojana (PMUY)	Women Health	PR & DW	To provide free LPG connection to BPL women for smoke and pollution free environment and protect women health
23	Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDUGKY)	Training & Skill Development	MoRD	To develop skills and productive capacity of the rural youth from poor families

### 13.7 Roles of District Planning Committee on Financial Outlay on Mainstreaming Disaster Risk Reduction (DRR) in Development Programmes

In Nabarangpur, District Planning Committee (DPC) is prioritising to focus 212 ZERO Connected Villages to provide the basic infrastructure gap as Bijili, Sadak, Panithrough GopabandhuGraminYajona&Biju KBK Schemes. These 212 ZERO Connected Villages are geographically vulnerable due to remote, cut-off and hilly terrain locations. 52 Villages have targeted in the 1<sup>st</sup> Phase of implementation during the FY: 2016-17. The projects are implementing through the ITDA and Blocks with emphasising to the disaster resilient measures. Also solar street lights were installed in these villages addressing to the environmental vulnerability as well as harness the renewable energy sources as a viable alternative to meet the energy requirement in inaccessible areas. The DPC is prioritising to provide total connectivity to all the villages of the district by the year 2020 and integrate Disaster Risk Reduction strategies in all its development projects.

### 13.8 Fund Provision for Disaster Preparedness & Capacity Building

The disaster preparedness and capacity building activities are carried out through periodic Mock Drills, Trainings, Workshops and Awareness Building Programmes as per the proposal in the previous chapters. During the year the funds provision for such capacity building and disaster preparedness programmes shall be proposed to meet out of the State Disaster Response Fund (SDRF).



# Lessons Learnt and Documentation

## Heavy Rain & Effective Disaster Management in Nabarangpur



The low pressure-induced heavy rains in 17-19<sup>th</sup> July 2017 and reoccurrence in a gap of forty days during 27-29<sup>th</sup> August 2017 had disrupted the normal life in the many parts of the district.

In the both stages of heavy rain caused a flood-like situation in the district and floods have disrupted surface communication in many parts of the district due to overflowing of River Indravati, Bhaskel, Turi, Bangel and Nullas at Soruguda, Ganithat, Patraput, Kukudabai, Aunliguma. Overflowing of Dhansuli Nullah and a breach on National Highway 26 near Maidalpur affected the vehicular traffic severely. It virtually snapped the road links between Nabarangpur with Bhawanipatna and western Odisha districts. Due to overflowing of Chikili River the people and vehicular movement was also paralysed between Nabarangpur and Umerkote blocks. Similarly, overflowing Turi River snapped road link between Papadahandi and Kodinga and overflowing of nullah between Lamtaguda and Aunliguma snapped all communication on the route to Tentulikhunti block.

The loss and damage caused by these floods in the district has been estimated at Rs 5159 lac. About 1.824 lac people in 359 villages were affected by these floods. Notably, there was no human casualty due to proactive steps of the district administration. As per assessment, 582 private houses have been damaged. Similarly, the flood water has badly affected to 2168.49



hectares of paddy and 976.15 hectares of non-paddy cultivated land. Agriculture land to the extent of 101.56 hectares has been sand casted in 7 blocks. Huge damage has been caused to public properties as roads, bridges, culverts, check dams electrical installations, education & health infrastructures and government buildings worth approximately Rs. 5005.83 lacs.

In both situations, the District Administration had responded effectively to the natural disasters with the participation of the community and local administration by managing zero human casualties. Advance alert message of the Special Relief Commissioner (SRC), Odisha and India Meteorological Department (IMD), Bhubaneswar for very heavy rainfall in Nabarangpur and other southern districts made the administration more active to keep a close vigil on the situation.

Hon'ble Chief Minister S.J. Naveen Patnaik had reviewed the preparedness of the district through the Video Conference on the 17<sup>th</sup> July 2017 evening which was attended by the Members of the DDMA and other key officers. Advance deployment of ODRAF team for rescue and relief works and timely deployment of the Fire personnel in the severe affected areas have saved many lives. Field level teams had been deployed to take up the evacuation, rescue and relief operation in the flood hit areas.

Emergency medicine stocks including anti-snake venom have been stored in all the Community Health Centres of the district. Police personnel had been deployed at places where flood water was flowing over the roads to advise people not to commute on the roads and thus avoided any untoward incident. Road Transportation personnel were diverted vehicular movement in the alternate routes. Severe house damaged families had been supplied immediately with the polythene sheets and first phase disbursement of house building grant has been made to bring back normalcy in their lives.

Also a meeting had been taken by the Hon'ble Minister ST&SC Development, Minorities and Backward Classes Welfare S.J. Ramesh Chandra Majhi to review the relief and restoration measures in the recent flood in the district at Nabarangpur on 02-09-2017. Among others, Collector Ms. Rashmita Panda, IAS; MLA & Chairperson DPC, Nabarangpur S.J. Monahar Randhari; Hon'ble MLA, Brahamagiri & OLA Estimate Committee Chairperson S.J. Sanjay Kumar Das Burma; Hon'ble MLA, Umerkote S.J. Subash Gond; President, Zilla Parishad Smt. Bhagabati Bhatra; all DLO, Tahsildar and BDOs were present in the meeting. Before commencement of the meeting, Hon'ble Minister, MLAs, ZP President with DLO and EEs were visited to the flood affected areas in Kosagumuda, Papadahandi, Tentulikhunti and Nabarangpur blocks to assess the damage of bridges, roads, culverts, etc. due to the flood.

As per the sources of the Nabarangpur Irrigation Division, a capital investment of Rs. 974.08 lacs have been proposed to the Government to construct structural measures for flood proofing in the six vulnerable areas of the district by December, 2018. For construction of Multipurpose Flood Shelter at Ghatbasuli in Kosagumuda block a proposal has been sent to the Government for the long term relief of the frequent flood hit people of Ghatbasuli. Constant support of OSDMA in capacity building such as regular Mock Drills, Table Top Exercises and observation of Disaster Risk Reduction Day on 29<sup>th</sup> October every year have been enhancing the stakeholder's awareness and preparedness to combat the disasters in the district.



# **Standard Operating Procedures**

# Standard Operating Procedures (SoPs) for District and Sub-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 area wise
- 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. Issue directions to line departments officials for taking measures to tackle heat wave situations in the month of February
- x. Issue direction to BDOs to convene meeting of PRI representatives-in the month of February
  
- xi. 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.
- xii. Convene meeting of the Civil Society Organization to seek their assistance in Heat Wave mitigation activities including opening of “*Jal Seva Kendra*”
- xiii. Issue direction to CDVO/BDOs for construction/repair of vats for ensuring drinking water for roaming livestock
- xiv. Issue instructions to BDOs, District Education Officer and District Social Welfare Officer for making drinking water arrangements in all schools
- xv. Principles of all Government and Private colleges are to be instructed to make drinking water arrangements in their institutions

- xvi. Rescheduling of timing of classes and examination in schools and colleges during summer as per the directions given by SRC/School & Mass Education Department
- xvii. 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
- xviii. District Labour Officer (DLO) 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
- xix. Ensuring restriction of working hours in works under MGNREGA and other schemes
- xx. 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
- xxi. 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
- xxii. If any information on casualty is received or report published in newspaper, it should be immediately enquired jointly by the medical and revenue officers
- xxiii. 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

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

- i. IEC activities and Public Awareness in the districts relating to Heat Wave conditions/ advisories to be done from the month of February onwards
- ii. 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
- iii. 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
- iv. Arrangement of separate wards and beds and cool rooms for treatment of heat stroke patients in different hospitals

- v. Continuous monitoring and preventive measures against diarrhoea and other health hazards during summer season
- vi. Daily reporting of cases and deaths to H&FW Department, SRC and Collector
- vii. 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. 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 gazed glass in buildings and vehicles.

### **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

## **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

## **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 themselves 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

## **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 visit 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

## **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

# **Standard Operating Procedures (SoPs) for District level Officials and other key stakeholders 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 through 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

### **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 SRC
- 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. Awareness generation activities on flood Safety (Dos and Don'ts)
- ix. 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 operability 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.
- xi. 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 kutchha 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 kutchha 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, 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 safe guard 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 the seeds 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 office 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

### **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 stakeholder's 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
- iii. DEOC in Charge or District Emergency Officer to intimate Collector, ADM(s), senior officers of District Administration
- iv. 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

- v. Decision on evacuation should be taken as per the followings 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
  - vi. Determining the estimated time of tsunami arrival on reception of tsunami message from INCOIS/ SEOC
  - vii. Ascertaining level of threat/impact
  - viii. Deployment of Response Forces if required
  - ix. In case of boats in harbours, estuaries and shallow coastal water should be advised to move from offshore to deep water
  - x. Vessels already at sea should be advised to stay well offshore and remain there until further instructions
  - xi. All Warning messages to be converted to local languages
  - xii. Preparing the message with “what is the current situation and what is the advice to public”
  - xiii. Evacuation plan is activated if threshold level is exceeded
  - xiv. Ensuring the evacuation is done properly through the designated evacuation roots
  - xv. Ensuring all possible evacuation modes to be used during evacuation
  - xvi. Continuous monitoring of bulletins from TWC
  - xvii. Reassess and review instructions
  - xviii. Assessing safety for return
  - xix. Issuing “*All Clear*” based on local evidence

## B. Post Tsunami activities

- i. After situation gets clear immediately assess the ground situations from filed officials
- ii. Response Forces to start the search and rescue and First-Aid to be given 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 root 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 needs 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

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# Heat Wave Action Plan

## HEAT WAVE ACTION PLAN IN RESPECT OF NABARANGPUR

### DISTRICT FOR THE YEAR 2022

#### **Introduction:**

#### What is Heat Wave: (Source: NDMA)

Heat wave is a condition of atmospheric temperature that leads to physiological stress, which sometimes can cause death as well. The World Meteorological Organization defines a heat wave as five or more consecutive days during which the daily maximum temperature exceeds the average maximum temperature by five degrees Celsius. Different countries define heat wave differently in context of their local conditions. In India, as per IND classification, heat wave is considered if maximum temperature of a station reaches at least 40°C or more for plains, 37°C or more for coastal stations and at least 30°C or more for hilly regions.

Following criteria are used to declare a heat wave:

#### **a) Based on Departure from Normal**

- Heat Wave: Departure from normal is 4.5°C to 6.4°C
- Severe Heat Wave: Departure from normal is >6.4°C

#### **b) Based on Actual Maximum Temperature (for plains only)**

- Heat Wave: When actual maximum temperature  $\geq 45^{\circ}\text{C}$
- Severe Heat Wave: When actual maximum temperature  $\geq 47^{\circ}\text{C}$

To declare a heat wave, the above criteria Should be met at least at two stations in a Meteorological sub-division for at least two consecutive days. A heat wave will be declared on the second day.

The level of heat discomfort is determined by a combination of meteorological (temp, RH, wind, direct sunshine), social/cultural (clothing, occupation, accommodation) and physiological (health, fitness, age, level of acclimatization) factors. There will be no harm to the human body if the environmental temperature remains at 37° C. Whenever the environmental temperature increases above 37° C, the human body starts gaining heat from the atmosphere. If humidity is high, a person can suffer from heat stress disorders even with the temperature at 37°C or 38°C as high humidity does not permit loss of heat from human body through perspiration.

Odisha had experienced the heat wave condition in the year 1998 in which 2042 human loss occurred. In Nabarangpur district there is a possibility of lot of risk of Sun Stroke death, but due to proactive measures & massive public awareness the loss has been decreased a lot.

## Standard Operation Procedure for Different Stakeholders:

SI No	Name of the Stakeholder / Officer Concerned	Actions to be taken
1	Collector -cum- Chairman District Disaster Management Authority (DDMA), Nabarangpur	<ul style="list-style-type: none"> <li>• Call for a preparatory meeting in the month of March.</li> <li>• Issue directions to all line departments to take actions and when required.</li> <li>• Overall monitoring of the situation in the district.</li> <li>• Ensure functioning of Control Rooms in all concerned offices.</li> <li>• Conduct review meeting with all stakeholders if situation arises.</li> </ul>
2	Project Director, DRDA, Nabarangpur	<ul style="list-style-type: none"> <li>• Issue direction to the BDOs for proper provision of water in water scarcity pockets through tanker</li> <li>• Proper maintenance of tube wells in the rural pockets</li> <li>• Instruct the BDOs to ensure that technicians are attending the call from the villages to repair the defunct tube wells.</li> </ul>
3	Dist. Emergency Operation Center, Nabarangpur	<ul style="list-style-type: none"> <li>• Organization of meeting at district level for review of preparedness by the Line departments.</li> <li>• Preparation of Heat Action Plan &amp; sharing to the Line Departments.</li> <li>• Ensure opening of Control Room from 1 April for the heat wave season</li> <li>• Issue of instruction for making Departmental plans to combat the situation.</li> <li>• Functioning of control room round the clock.</li> <li>• Dissemination of warnings received from ITD/SEOC to the lower quarters.</li> <li>• Collection of daily situation reports &amp; transmission to higher quarter.</li> <li>• Create Awareness through posters / leaflets supplied by OSDMA.</li> <li>• Action for payment of Ex-gratia at the earliest.</li> <li>• Grievance resolution.</li> <li>• Over all monitoring of the situation.</li> </ul>
4	Chief District Medical & Public Health Officer, Nabarangpur	<ul style="list-style-type: none"> <li>• Control Rooms to be opened</li> <li>• Create awareness activities</li> <li>• Alert all PHCs and CHCs</li> <li>• At DHH, 10 beds to be kept ready for heat stroke patients.</li> <li>• Earmark one bed in each CHC for Heat Stroke patients. The room must be attached with A/C or Cooler.</li> <li>• Capacity building of Doctors, Nurses, Pharmacists &amp; Health Workers etc.</li> </ul>

		<ul style="list-style-type: none"> <li>• Training of 108 Ambulance workers and Mobile Health Units for management of heat related cases.</li> <li>• Display of Do's &amp; Don'ts of Heat waves on Swathya Kantha of Villages</li> <li>• Orientation of Doctors &amp; medical staffs dealing with heat distress patients.</li> <li>• Stock piling of sufficient lifesaving medicines, ORS packets, Ice packs &amp; IV fluids at DHH and supply to the PHCs &amp; CHCs.</li> <li>• Arrangement of cold drinking water in the hospitals.</li> <li>• Adequate supply of ORS to the ASHAs, Health Workers &amp; Anganwadi Workers.</li> <li>• Mobile health unit must be kept in ready for the service.</li> <li>• Keep ambulances ready for transportation &amp; referral of heat stress patients.</li> <li>• Joint Enquiry report by the Local Revenue Officer &amp; Medical Officer on every death due to sunstroke within 48hrs. (Form I)</li> <li>• A weekly report needs to be submitted. (Form II)</li> </ul>
5	Chief District Veterinary Officer, Nabarangpur	<ul style="list-style-type: none"> <li>• Information Education &amp; Communication (IEC) activities for Animal Care during heat.</li> <li>• Activate field staff to create awareness among the Livestock farmers on the Animal Management during Heat Wave conditions.</li> <li>• Stock piling of required Medicines</li> <li>• Orientation of veterinary officials on diagnosis and management of heat related illness.</li> <li>• Ensure creating of water Chahala / VAT near the tube wells / water ponds where ever necessary for use of Cattles in consultation with concerned BDOs.</li> <li>• Mobile veterinary Teams to be formed in different blocks to treat the livestock</li> <li>• Make aware the fish farmers to maintain the water level in the ponds before summer.</li> <li>• Provision of shed nets over the ponds.</li> </ul>
6	District Education Officer, / Dist. Welfare Officer, Dist. Child Protection Officer, Nabarangpur	<ul style="list-style-type: none"> <li>• Reschedule school timing as per the department direction.</li> <li>• Ensure Avoiding physical activities during school hours.</li> <li>• Promote School Safety Plan in the schools.</li> <li>• Provision for safe drinking water, ice packs, ORS etc. at schools and examination centers.</li> <li>• Completion of all examinations by end of March.</li> <li>• Awareness creation among students how to overcome heat stress disorders.</li> <li>• Ensure provision of drinking water in those schools where water problem persists</li> </ul>

7	District Social Welfare Officer, Nabarangpur	<ul style="list-style-type: none"> <li>• Alert CDPOs</li> <li>• Educate young girls and mothers regarding the dangers of Heat Waves, its related health impacts and the precautionary measures to be taken.</li> <li>• Display IEC materials at Anganwadis and encourage Integrated Child Development Scheme (ICDS) workers to disseminate Heat Wave related information with special focus on infants, children below five years, pregnant and lactating mothers, and geriatric population to protect them from dehydration.</li> <li>• Provision of drinking water and first aid kits at all the Anganwadi Centers, old age homes, orphanages.</li> <li>• Sensitization of community on heat wave at Kishore Swasthya Meta, Village Health &amp; Nutrition Day and other similar community gatherings</li> <li>• Awareness campaigning &amp; distribution of IEC materials.</li> </ul>
8	District Panchayat Officer, Nabarangpur	<ul style="list-style-type: none"> <li>• Intimate all Gram Panchayats &amp; Zilla Parishad members to create awareness among PRIs / Ward Members etc.</li> </ul>
9	Asst. Fire Officer, Nabarangpur	<ul style="list-style-type: none"> <li>• Remain alert with man and machine to tackle any untoward incidents.</li> <li>• If required sprinkle water in places where birds congregate in consultation with Divisional ForestRanger.</li> </ul>
10	Executive Engineer, RWS&S / PHED, Nabarangpur	<ul style="list-style-type: none"> <li>• Identification of water scarcity pockets</li> <li>• Planning should be made to provide drinking water through water tankers</li> <li>• Junior Engineers need to be in alert to attend the defunct tube wells in Rural Area.</li> </ul>
11	Executive Engineer, TPSODL	<ul style="list-style-type: none"> <li>• Create awareness for energy conservation.</li> <li>• Repair of defunct machines for power supply.</li> <li>• Uninterrupted supply of electricity during day time.</li> <li>• Power cut timing should be reduced to evening.</li> <li>• If more time required for any repair work, the power cut time must be announced one day before.</li> <li>• Power cut timings must be informed to the people well in advance.</li> <li>• Line men should obey the guidelines to avoid heat stress.</li> <li>• Complaints regarding power supply issues should be attended immediately.</li> <li>• Accessories or instruments should be kept stocked for any immediate repair.</li> <li>• Steps should be taken to provide sustained electricity supply to ensure regular water supply.</li> </ul>

12	Dist. Labour Officer, Nabarangpur	<ul style="list-style-type: none"> <li>• Issue a direction to the implementing agencies, executants of public works and private employers for rescheduling the working hours to avoid exposure of labourers/ workmen from 1<sup>st</sup> April.</li> <li>• Ensure restriction of work.ng hour from 11.00 AM to 03.30 PM.</li> <li>• Ensure temporary shades are made at work sites.</li> <li>• Ensure arrangements like safe drinking water, First Aid &amp; protection from heat exposure etc are provided at work place.</li> <li>• Restriction of child labour at worksite.</li> </ul>
13	RTO Nabarangpur	<ul style="list-style-type: none"> <li>• Rescheduling of bus timing of the bus running at the peak period.</li> <li>• Ensure buses are not overcrowded.</li> <li>• Ensure provision of potable water, ORS packets &amp; First aids have been made available in publictransport vehicles.</li> <li>• Issue of directives for non-transportation of people in the open transport vehicles</li> <li>• Strictly restrict the bus owners not to ply passengers over the roof top of bus during peak hours.</li> </ul>
14	Block Development Officers of Nabarangpur District	<ul style="list-style-type: none"> <li>• Awareness Campaigning &amp; public announcement about the do's and don'ts issued by the department of Health and family welfare &amp; OSDMA.</li> <li>• Ensure safe drinking water for all.</li> <li>• Restrict the NGNREGA workers to work from 11.00 AM to 03.00PM.</li> <li>• Issue directions to the contractors to provide shelter at worksites and provide drinking water facility in worksites.</li> <li>• Encourage for alternative livelihoods.</li> <li>• A complaint register to be maintained to receive the complaints regarding the non-functional Tube wells.</li> <li>• Defunct tube wells need to be repaired at the earliest. Complaints regarding defunct tube wells needs to be attended immediately.</li> <li>• Opening of Paniya Mala seva Kendra in public gathering places. Involve NGOs in doing the same.</li> </ul>
15	Tahasildars of Nabarangpur District	<ul style="list-style-type: none"> <li>• Prompt reporting of the heat wave death cases if any to the DEOC.</li> <li>• Database management</li> <li>• Payment of Ex-gratia</li> <li>• Joint Enquiry report by the Local Revenue Officer &amp; Medical Officer on every death due to sunstroke within 48hrs. (Form I)</li> <li>• A weekly report needs to be submitted. (Form II)</li> </ul>

16	Executive Officers, Municipalities .	<ul style="list-style-type: none"> <li>• Ensure safe drinking water for all in Municipalities &amp; ULBs.</li> <li>• Provision of drinking water through tankers in water scarcity pockets.</li> <li>• Instruct the NGOs / Bus Owners Association if to open Paniya Jala seva Kendra in bus stands and market places</li> <li>• Keep parks open during peak hours to provide cool resting spaces for the public.</li> <li>• Construction of heat resistant buildings at Public places for long run prevention.</li> <li>• Opening of Paniya Jala seva Kendra in Public gathering places. Involve NGOs/CSOs in opening the Paniya Jala Seva Kendras in different public congregation places.</li> <li>• Defunct tube wells need to be repaired at the earliest. Complaints regarding defunct tube wells needs to be attended immediately.</li> </ul>
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Apart from the above, all the concerned Offices will ensure the action to be taken by them as per the discussions held in the Dist. Heat Wave Preparatory meeting and the minutes issued to all. The Minutes of Heat Wave Preparatory meeting is annexed herewith.

Annexure:

Form I

Information to be submitted with every joint enquire/ report of Heatstroke Deaths

SINo	Name of the Deceased with Address (if unidentified mention unidentified)	Age	Gender (Male / Female / Third Gender)	AP L / BP L	Occupation of Deceased (Farmer/ Labour/ Hawker/ Others to be specified)	Place of Attack					Date & Time Of Attack of Heat Stroke	Date and Time of death	Whether the Person was Hospitalized *		Whether Cause of death (heat wave) confirmed by the Medical Officer (Yes/No)	Any antecedent illness / chronic disease present (ask the family member)	Cause of Death as per joint enquiry report	Whether post mortem conducted? (Yes/No)	Remarks
						Name of the Block/ ULB	Name of the village / Ward	Rural/ Urban	Indoor/ Outdoor	Location (Crop Field / Market / Bus stop / Street / Home / Office / Any Other)			(Yes / No)	If Yes Name of the Hospital / Health Clinic					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

(Name & Designation of the Reporting Officer)

(Signature with Seal)





21

**PROCEEDINGS ON THE DISTRICT LEVEL COMMITTEE ON NATURAL  
CALAMITY (DLCNC) & DISTRICT DISASTER MANAGEMENT AUTHORITY  
(DDMA) MEETING TO MITIGATE HEAT WAVE CONDITION DURING  
SUMMER-2022 HELD ON 07.03.2022 AT 10.30 A.M. AT MISSION SHAKTI  
CONFERENCE HALL, NABARANGPUR**

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The District Level Meeting to mitigate the Heat Wave condition during Summer-2022 & District Disaster Management Authority was held on 07.03.2022 under the Chairmanship of the Collector & District Magistrate, Nabarangpur, Dr. Kamal Lochan Mishra, IAS at Mission Shakti Conference Hall Nabarangpur. The meeting was conducted in presence of Government Officials, Members, and Media Persons, the record of which in shape of attendance has been maintained in a separate permanent register.

Being allowed, the Collector-cum-District Magistrate, Nabarangpur read out the agenda one by one & The Deputy Collector, Emergency read SOP on which discussion was facilitated, the brief of the resolution taken are as narrated below

**Confirmation Of Last D.L:C.N.C. Meeting :-**

The last District Level Natural Calamity Committee Meeting on Heat Wave was held on 09.03.2021 and the proceeding of which has already been communicated to all concerned vide District Office letter No 3074 dated 17.03.2021. As no suggestions or objections received from any quarter, the Chairman announced that the resolutions of the last meetings have been unanimously accepted.

**Preparation of Heat Wave Action Plan:**

**Medical Arrangement & Functioning of Control Room**

- ❖ Control Room at the District Headquarter Hospital (06858-295418) & District Emergency Operation Center (06858-222434) is functionalised round the clock from 5<sup>th</sup> march 2022, to address the Heat Wave issues.
- ❖ A room with 2 beds have been identified in DHH, SDH, & CHC as Heat stress Disorder management Room for the heat wave patients with all the basic facilities to treat patients.
- ❖ Posters and IEC materials on safety tips relating to heat-wave are prepared and distributed by Department of Health & FW for general awareness of the public
- ❖ Massive public awareness on heat wave precautionary measures ( Do's & Don'ts) will be taken up by the Health & FW Department
- ❖ Sufficient Quantity of ORS packets, IV fluids will be made available with HW, AWW, ASHAs and all health institutions
- ❖ Civil Society Organizations and PRI members will be involved in the awareness Programme

**(Action: CDM & PHO, Nabarangpur)**

## Re-Scheduling Of Timings In Educational Institutions:

- ❖ All Education Institutions under Schools & Mass Education Department as well as Schools managed by ST&SC Department in the District shall re-schedule the timing of Schools and Colleges including timing for holding examinations to prevent the students from exposure in the intense-heat after obtaining necessary instruction from the concerned department.
- ❖ This year, Schools, Colleges and other Academic/Technical institutions may be required to continue classes during summer to compensate the loss due to COVID-19 pandemic. In case schools and educational institutions remain open, extra care has to be taken to ensure availability of drinking water in all schools and Colleges.
- ❖ Whenever required, tube wells inside the school campus should be repaired to ensure uninterrupted drinking water supply.
- ❖ Sufficient ORS packets are also to be kept in schools/Colleges etc.
- ❖ Schools are also advised to allocate some time during school hours for water recess.  
**(Action: Dist.Edu.Officer /DWO/Principals)**

### Drinking Water Supply:

- ❖ The Superintendence Engineer, RWS&S should ensure functioning of Control Room at District, Block and GP level with the name and contact numbers of the officials kept in charge of such control rooms should be circulated and proper registers be maintained at the GP Level Control Room with due intimation to the Project Director, DRDA, Nabarangpur & District Emergency Control Room.
- ❖ JALCHHATRA' should also be opened through Local Bodies/ Panchyatraj Institutions/ NGOs/ Voluntary/Religious Organizations at crowded i. e places like Markets, Bus Stands and Road junctions etc. if required . The BDOs/ Executive Officers of local bodies are instructed to submit the progress report on the opening of JALCHHATRA by end of each month during the Summer-2022 to Emergency Section, Collectorate, Nabarangpur.
- ❖ All BDOs and EO, Municipality, Nabarangpur & Umerkote may advised their Shop Keeper, dealers ,vendors ,private organisation and Govt. Organisation to arrange drinking water for the public at their own premises of business and offices.
- ❖ Preventive maintenance of tube wells and piped water supply stems should start immediately; if not already <sup>taken</sup> arrangements may be put in place for attending to the complaints on functioning of tube wells and piped water supply systems.



- ❖ The defunct Tube well should be repaired within 48 hours of receipt of complaint. Failing which the concerned BDOs /JE/SEM will held responsible There should be proper coordination in between SEM and JEs.
- ❖ The BDOs should procure sufficient spare parts centrally from authorised dealers with observing all formalities and made available in the GP Points.
- ❖ The Superintendence Engineer, RWSS, Nabarangpur & the Executive Officers of ULBs, Nabarangpur & Umerkote instructed to submit the progress report on deployment of water tankers, mobile van and status of maintenance of Tube wells in all the educational institutions and all other areas in the District in every month during Summer-2022.
- ❖ 9 nos of Water scarcity areas have been identified in the district.
- ❖ 15 nos of water tankers, 13 nos of PVC tank @ 1 per block & 3at District headquarter & 58 nos in Nabarangpur ULB are available for supplying of potable drinking water to water

**(Action :SE RWS&S,JE,PHED, Nabarangpur & Umerkote)**

**Worksite facility & Rescheduling of Time :**

- ❖ Workers at worksites may be rescheduled. No work should be executed during the peak hours of heat wave period. All the Executive agency and the employer should make necessary arrangements for supply of drinking water, ORS packets and provision of rest shed at worksite.

**(Action: SE,RWD/R & B/DLO)**

**Re- schedule of Bus Timing :**

- ❖ During severe heat wave condition, timings of public transport services should be rescheduled during peak hours.
- ❖ All the logistic arrangement should be made available inside the bus like water bottle, ORS pocket, first aid medicine and make awareness among the drivers.
- ❖ Besides, the above all the Bus Owner's union may be sensitized to arrange drinking water at Bus Stand.

**(Action :RTO, Nabarangpur)**

### **Power Supply:**

- ❖ EE , TPSODL to ensure uninterrupted power supply during summer months . In case load shedding is absolutely necessary the schedule must be announced for information of consumers.
- ❖ Uninterrupted power supply also to be ensured for critical facilities such as hospitals and urban health centers.

**(Action;- EE TPSODL, Nabarangpur)**

### **Publicity of Heat Wave Warning:**

- ❖ On receipt of such warnings on occurrence of heat wave condition from the Meteorological Department, the same will be communicated from District Office to all Tahsildars /Block Development Officer for general awareness of public in the area of their jurisdiction immediately.
- ❖ The DI&PRO, Nabarangpur will announce among general public soon after receipt of such report from the District Office or publication of such report (News) in any of the newspapers.

**(Action: CDMO/DI&PRO/ALL BDOs/ All CDPO)**

### **Enquiry into Death Due To Sunstroke and Payment of Ex Gratia:-**

- ❖ Provision for payment of ex-gratia assistance of Rs. 50,000/ (Rupees fifty thousand) only to the NOKs of deceased due to heat wave (Sunstroke). As, envisaged in the Letter. No. 1936/R&DM (SR) dated 1-06- 2015 of Principal Secretary to Government & Special Relief Commissioner, Odisha.
- ❖ Submission of the prompt report regarding casualties due to sunstroke to the District Office after making Joint Enquiry by the Tahasildar, Medical Officer and the Police Official within 48 hours.

**(Action: Supdt. Of Police, Nabarangpur BDOs/Tahasildars/MOs/BEOs/CDPOs)**

### **Veterinary Measure**

- ❖ Small water vats should be provided near the Tube wells in rural areas to stock water for providing drinking water to cattle during the summer.
- ❖ As most of the open sources of water like ponds, rivers and nalias would dry up; the BDOs should take immediate steps for construction of Chua/Chahala in River

bed/Tank/Pond through Gram Panchayats concerned to provide drinking water to the domestic animals.



- ❖ The DFO shall assess the availability of water for animals in Reserved/ Protected forests and make other provisions, where necessary.
- ❖ Drinking water shall be provided through tanker to human habitations facing water scarcity inside reserved forests.

(Action: DFO/ CDVO/ BDOs)

The meeting ended with a vote of thanks to the Chair and all the participants.

*Kim*  
08.03.22  
COLLECTOR, NABARANGPUR  
*SP*

Memo No. 2055 /VIII-01/2022

Date. 8 .03.2022

Copy to all concerned for information and follow-up action.

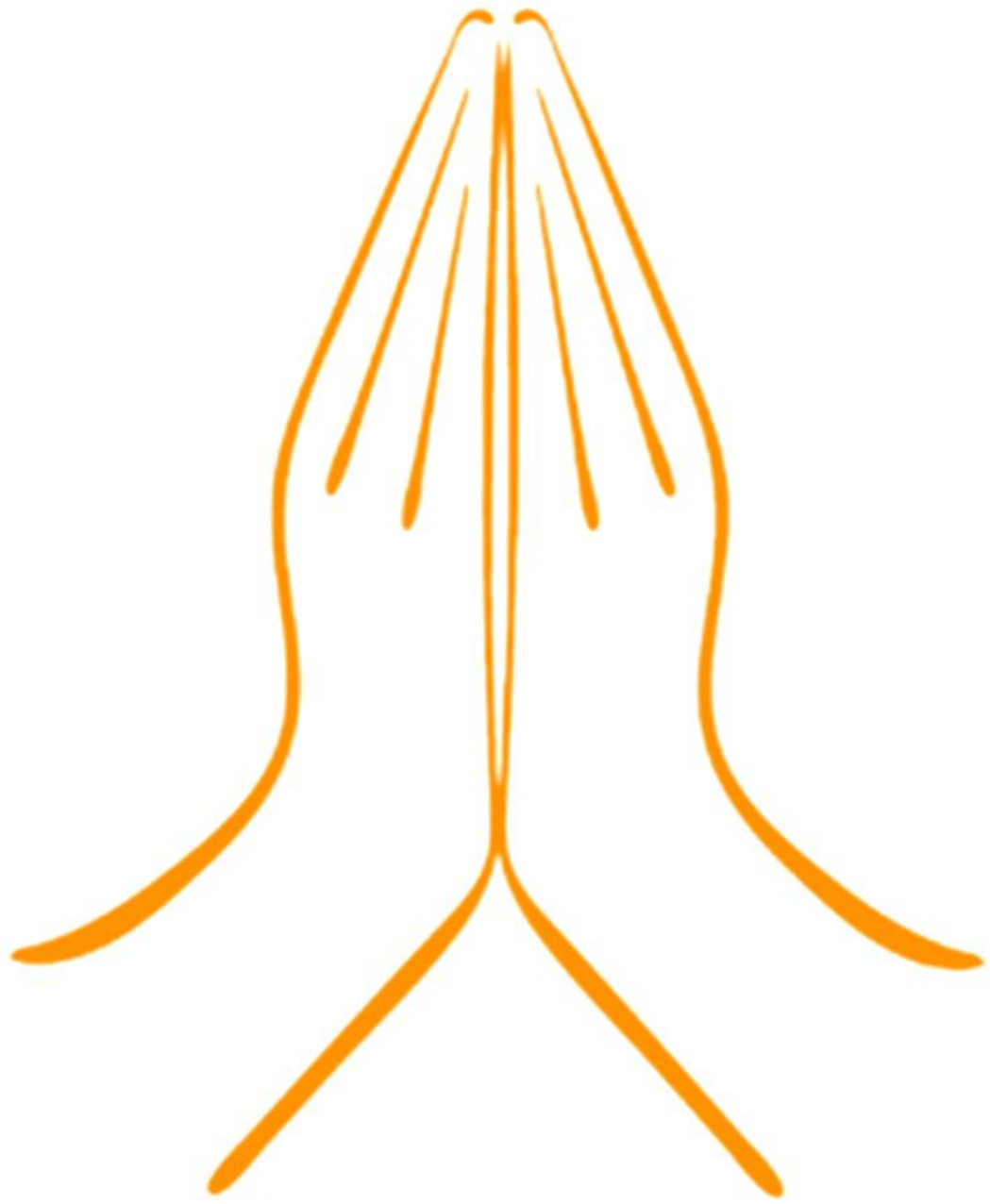
*Kim*  
08.03.22  
COLLECTOR, NABARANGPUR  
*SP*

Memo No. 2056 /VIII-01/2022

Date. 8 .03.2022

Copy submitted to the Special Relief Commissioner, Odisha, Bhubaneswar for favour of kind information. Copy submitted to the Managing Director, Odisha State Disaster Management Authority, Bhubaneswar for favour of kind information.

*Kim*  
08.03.22  
COLLECTOR, NABARANGPUR  
*SP*



**Thank You**